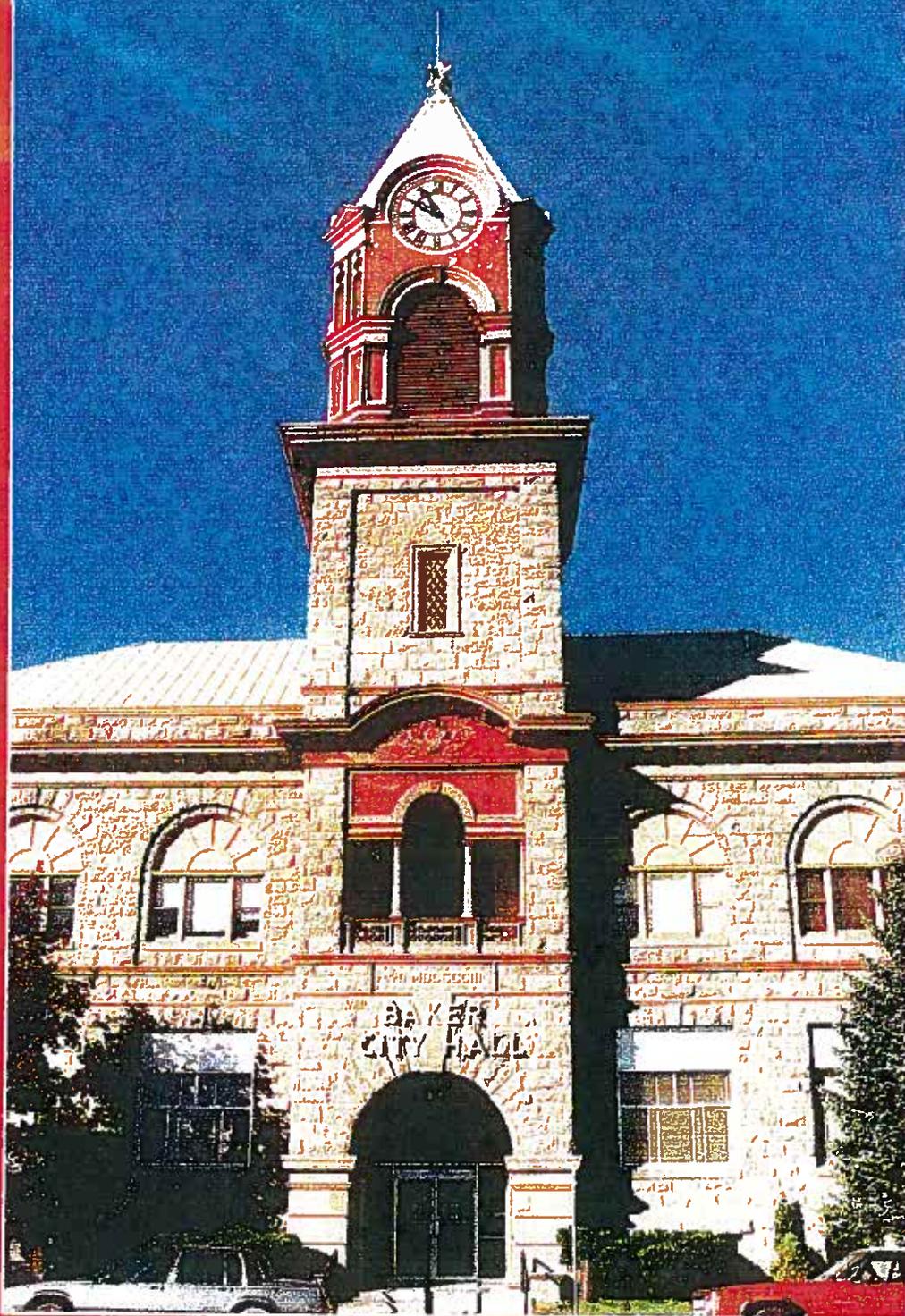
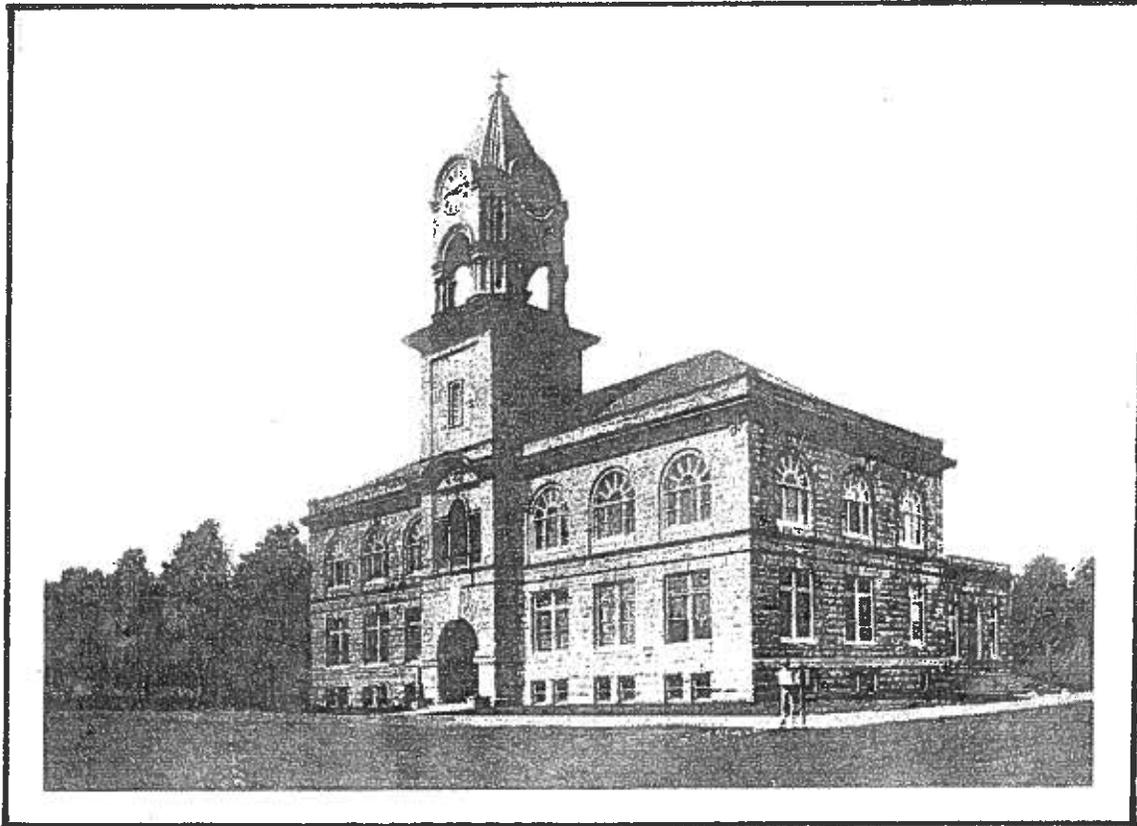


ARCHITECTURAL ASSESSMENT & HISTORY OF THE CITY HALL OF BAKER CITY



BAKER CITY CITY HALL RENOVATION PROJECT
BAKER CITY, OREGON

HISTORY OF BAKER CITY CITY HALL



prepared for

BAKER CITY, OREGON

Karen Woolard
City Manager

Randy Jones
Director of Public Works

prepared by:

• HDN Architects PC •
Portland, Oregon

Consultants:

Architectural Conservation • Frederick L. Walters
Planning and Urban Design • Planmakers
Structural Engineer • Roger McGarrigle
Mechanical Engineer • Accipio, Inc.
Electrical Engineer • Cundiff Engineering Inc.

History of Baker City City Hall

Prepared by Planmakers

Introduction: Baker City's handsome stone City Hall, located at 1665 First Street, is a direct link to the outstanding architectural heritage of the city. As the seat of city government, the structure is a highly visible landmark with an imposing tower that is an important component in Baker's picturesque skyline. It's dignified bell and clock tower stand out in a city that possesses an especially rich historical heritage. Perhaps no other city in Oregon can rival Baker City as a community of towers and spires.

Constructed in 1903-04, City Hall still stands as a grand monument to the Gilded Age. When City Hall was erected, Baker City was known as the "Queen City of the Inland Empire" and the building's proportions were meant to reflect the town's eminence. Reflecting its status, City Hall was placed on the National Register of Historic Places in 1978. Now, after ninety-two years of continuing service, this remarkable building is in need of repair and rehabilitation.

Baker City History: Platted in 1864-65, the small settlement began to flourish when gold was discovered in the nearby mountains, and it became the supply base for the mining towns in the vicinity. Also influencing community growth was the flow of emigrants on the Oregon Trail, as it passed through the Powder River Valley. In 1874, Baker City formed a city government. Rail connections arrived ten years later. A period of tremendous growth for Baker City began in the late 1880s and 1890s. The area experienced a second mining boom and many new, handsome business buildings were constructed of brick and stone, replacing earlier frame buildings. Lumber and cattle also became substantial parts of the local economy as Baker City became the trade center of a vast agricultural region. These prosperous years led to a building boom of public structures in the early 1900s. Beautiful and impressive cut stone buildings were dedicated in a period of strong civic pride. City Hall was built in 1903-04, St. Francis Cathedral in 1905, the Baker County Courthouse in 1906-08, and the Carnegie Library in 1909. This public building period was crowned by the handsome, classical styled U.S. Post Office built in 1910 and a large Y.M.C.A. constructed in 1912. An indication of the community's effort to become more modern came in 1911 when the citizens voted to drop the word "City" from Baker City. Baker City remains a hub of commerce and the county seat for Baker County. It is experiencing a revival of its heritage through a major downtown rehabilitation and the development of the Oregon Trail Interpretive Center. To emphasize its history the citizens voted in 1985 to restore the name "Baker City".

Selecting an Architect: In March, 1903, three finalists submitted plans for a new city hall to the city council. They included Baker City's M.P. White and J. V. Bennes and W.C. Knighton of Portland. Three sets of plans, including a side and front elevation and floor plans were exhibited in a downtown window. A special council committee selected John V. Bennes, and awarded him a contract for five per cent of the total cost. Mr. Bennes' plans were not accepted as they first appeared. Slight modifications included widening the main hall from ten to twelve feet, making the structure two feet wider.

Bond Election: City Hall was made possible through the support of Baker City's citizens. Special elections for the issuance of bonds to the extent of \$45,000, were held on April 13, 1903. The vote carried with 374 yes and 86 no, for a 77% affirmative vote for the City Hall. Mayor R. D. Carter took the vote as an indication that the majority of the community is composed of citizens who stand first for the advancement of the city's interest. In July the project was delayed when the city council

rejected the two construction bids as they exceeded funds available. The bonds sold provided \$46,000, of which \$8,500 has been expended for the site. In August of 1903 the project was re-bid and the contract for construction was let. The contract to build the city hall and jail was awarded to Newhaus Brothers and Gaston of Baker City for \$38,403. The heating plant was installed by the Gardner & Kendall Company of Portland for \$3,545, making a total of \$41,948. The deficit and cost of furnishings was covered by a \$12,000 bond election in May, of which 100 voted in favor and 41 against. Construction started in late August and City Hall was completed in March 1904.

Renaissance Revival Style: The Baker City City Hall is a building of Classical Renaissance style. Quickly recognized elements of the classical style are the balanced facade, central tower, arched openings and cornice line. City Hall appears to have been designed within a square of 112 feet. The height from grade to roof line is half the length of the building. The height of the tower, from attic line to peak, compared to the length of the building closely follows the "Golden Proportions" (1:1.6) often celebrated in Renaissance art. The occurrence of these design elements are seldom by chance, and indicate a strong interest or experience by the building's architect with a classic stylistic manner. Though quiet by nature, they give the structure strength, a symbolic posture, and a sense of presence.

Secular buildings in this style were usually large government buildings. This was a time when the public's taste for magnificence and expressions of history were growing and local governments followed suit with a lively interest in better architecture. Baker City's new city hall gave its residents the visual splendor of a picturesque tower, rock masonry and the symmetry of round-arches for many of the window and tower openings.

Clock and Bell Tower: City fathers paid \$1,500 for the Seth Thomas clock in 1905 and the bell still peals on the hour. In the old days, the four faces of the Baker City Hall tower clock would glow bright red to alert city policemen out on their beats to return to the station. Youngsters had a curfew horn at 10:00 p.m. Located on the top of the fire station's hose tower, the raucous horn meant youngsters out on the streets were expected to take heed and find their way home without delay. When the fire tower was torn down in 1981, the emergency siren was located in the city hall tower and is now tested at noon on Fridays.

The clock is one of only two weight-driven tower clocks in the state, the other located in Portland's Union Station. Power is transmitted to the giant hands of the four clock faces by a universal gear high inside the clock tower. The clock must be wound twice a week by turning a hand crank, which lifts a heavy weight. As the weight slowly descends inside the tower, it powers the gears of the ancient timepiece. The clock once was maintained by John Palmer, a long-time Baker jeweler. After his death the clock fell into disrepair. In 1976 a group of Pacific Northwest Bell employees accepted the challenge of renovating the clock as a volunteer project.

Architect John V. Bennes: City Hall architect, John Virginius Bennes, had a distinguished career in Oregon, designing over eighty buildings. Born in Peru, Illinois on August 23, 1867, he was raised in Chicago. He studied at Chicago University and spent a year at the School of Fine Arts in Prague, Bohemia. He began his architectural career in Chicago in 1890, working in his father's office before he started his own. His first big job was designing a school house in Matton, Illinois. In 1898, Bennes married Annice Smalley. He heard of the Eastern Oregon gold mines and in the fall of 1900, he and his wife moved to Baker City. He immediately invested his money in a mine and opened his architectural office for business.

Mr. Bennes designed a number of house in Baker City, the first for druggist, Louis Levinger. (Main St. - between Campbell and A). Later, he designed Levinger a larger house just south of first one. He designed a house for mining engineer Bella Kadish on the east corner of First and Madison and later a larger one at 2406 Second. This latter became the William Pollman House. He designed a Colonial Revival style house for Fred Bodinson located at 2520 First. Another house was the Imhaus house on Second St. between Campbell and A streets. In 1905 he lay out plans for a large square two story Classic Revival style house for Dr. William Lockwood Parker at 1775 Fourth. Another significant Colonial Revival house was planned for Charles A. Johns at 1500 Dewey St. near City Hall. C.A. Johns was Mayor of Baker City, once ran for Governor of Oregon and became Associate Justice of the Oregon Supreme Court.

Architect Bennes followed his City Hall commission by designing the Gothic Revival-style, twin towered, St. Francis Cathedral in 1905. Like the City Hall, the cathedral is built of native stone. He also had a hand in remodeling the Geiser Grand Hotel and the Baker High School. His fame was spreading and he was asked to design the Hot Lake Sanatorium and the first building at Eastern Oregon State College. Another Baker City stone building was the former Elks Hall, a beautiful and artistic building which was later demolished. When Mr. H. Liebes of Portland saw this building he was so impressed that he hired Mr. Bennes to design his ready-to-wear store in Portland. Mr. Bennes and family soon moved to Portland in 1906. Built in 1916, the ten story Liebes Building, located at 625 S.W. Broadway, features a glazed terra cotta exterior.

In the Portland area, Bennes is recognized as the principal exponent of the Prairie School for his single-family residences, especially the 1915 Maegley Residence. Bennes is remembered for designing buildings as diverse as the first reinforced concrete building in Portland and the fanciful, Hollywood Theater in the Spanish Colonial style (1925). Bennes skills with revival styles is exhibited in his Portland hotels such as The Cornelius, The Arthur, and Broadway Hotel. However, by far the greatest architectural legacy of Bennes is the 22 buildings he designed for Oregon State University between 1909 and 1939. For many years he served as architect for the Oregon State System of Higher Education. Bennes retired at the age of 74 in 1941 and died in Los Angeles in 1943, having relocated there with Annice in 1943 because of poor health.

First and Auburn Site: Baker City's first City Hall was a modest wood building built on the corner of First and Auburn. The City Council met on the second floor, affectionately referred to as "the loft." The old city hall was replaced by the current structure and the fire tower was moved across the street. The triangular structure had a fire bell in the tower and the lower part housed Hose Cart No. 1. The tower had small stone city jail beside it. The tower was moved for a third time, to become part of the fire station directly behind City Hall. Also lost to make way for city hall was an octagon shaped house of contractor Arthur A. Houston, which was built out of yellow sandstone. The Houston property extended through to Second Street where their brick barn, built to house their carriage and team of horses, was used for years as part of the Fire Station. During the construction of the new city hall, the city council meet in the Hayloft. The parking lot adjacent to City Hall was the site of P. Basche's home. In the early 1900s a City Green House, with a glass roof, was located on the block. See 1903 Sanborn map.

City Hall Past Uses: The first city library was located on the second floor of the City Hall in a large room on the west side, until the Carnegie Library was built in 1909. The first historical museum was located in the basement. The Old Red Cross Room was located on the southwest corner of the second floor.

Building Description: Built in the Renaissance Revival style, the two-story building is of volcanic tuff construction. The stone is rusticated rock-faced ashlar in regular courses. The plan is rectangular, with its long axis parallel to First Street. The building is five bays by three bays. The first floor elevation rises from a base story. The windows in the base story are sash with a central mullion. In the first floor, pairs of one-over-one windows, with transom lights have been replaced with aluminum windows. A belt course marks the second-story line. The windows at the second-story level are arcuated with double mullions and a flush fan. A sheet metal cornice with modillions is attached below the parapet. The hipped roof is metal-clad.

The main entrance is at the central bay of the front elevation, with a granite step and a marble tiled entry. Above the entrance is a recessed porch with a palladian opening. The bay breaks the cornice line, continuing as a tower which rises a full story above the parapet. The cornice above the tower plan becomes octagonal with arcuated louvered screens on four principal sides. Above each screen is a large translucent glass clock face in a hooded dormer which projects from the tower cap. The rear elevation is distinguished by a broad arched window at the landing between the first and second flights. The jail is a small, square, single story stone building attached to the northern half of the rear facade. It has a hipped roof with a cupola at its peak.

Rusticated rock-faced ashlar was laid in regular courses and provides a distinctive texture. The volcanic tuff used in the construction was quarried twelve miles southwest of the city, near Pleasant Valley. This stone, soft when quarried, hardens with exposure. The interior features a handsome council chamber and cast plaster ornament, such as Ionic-Composite columns, in the stairway.

Building Modifications: The building is close to its original state. Originally, the clock tower was open and the bell was a visual ornamentation as well as aural. Alterations to the exterior included the replacement of first floor wooden windows with fixed aluminum sash. The first floor transom and second floor fan windows were covered in 1973.

A study in 1979-80 by Griggs, Lee, Ruff, Ankrom PC Architects recommended a long list of improvements to the building from cleaning and re-pointing the masonry exterior to rearranging office space, including relocation of the police department to the basement. The cost was projected at \$700,000 if done at one time. In 1980 an elevator was installed. A five-month renovation in 1981 led to repairs to the roof with an asphalt roofing compound. The exterior stone joints were sandblasted and re-pointed. A rotting flag pole from the center of the building, above the open arches on the balcony was removed and the remaining hole was patched. The exterior was re-painted brown, tan, orange and medarro. The roof was painted tan, the trim was painted a dark brown and orange appeared below the clock tower and around the open arches and the windows. The orange color was controversial with the public. The entryway and hallways were all painted a beige color. Chandeliers were installed in some rooms. Since 1980, a new boiler has been installed, the cashier, photo copy room and Police Chief office were created in the old hallway and and a new ADA rest room and ramp at the front entrance installed.

More recently, the wooden louvers covering the bell were replaced in 1987. The tower was re-painted a reddish brown. In 1991 a few second floor offices on southwest corner were remodeled and the fan windows uncovered.

The Carnegie Library:

After the library's second year in City Hall it became evident that a library building was needed. The Alpha Club, a local literary society, composed of Baker City's leading ladies had the starting of a library as their goal. The first fundraising was a party given by the club and the admission price was one or more books. That was the start of the library collection. Another money-making project was publishing a cook book of choice recipes from the town's best cooks. Andrew Carnegie donated \$25,000 and the city provided a site and a sum not less than one-tenth of the amount of his gift to support the library. Built behind the Baker City Hall, the two-story library was erected in 1909. The library was constructed of rough, dressed stone and finished inside with native fir. The building is in the Colonial style and has a recessed entry in the center of its north elevation. The entry is situated under a roof gable, with a stone pediment decorated by a round window and the inscription "Carnegie Library". Two columns of the Ionic order and a pair of cast iron lamp posts are on each side of the entry stairway. The low, hip roof is covered with metal. The windows are oversize, one-over-one double hung sash and are set in three bays on either side of the entry bay. Similar but smaller windows are located in the basement. The window bays have flat voussoirs with keystones. The architects were Wayland and Fennell (now CSHQA) of Boise. The original linen plans are available at the Idaho State Historical Society.

The Alpha Club always met in the basement room. The lower floor held a meeting room with a small stage plus several work and storage rooms and a lavatory. Upstairs were shelves of books and facing the entrance was a three-sided desk where you returned books at one side and checked them out at the other, leaving the center section for other business. A new Baker County Library opened in 1971. For a period of time the building housed the Crossroads Arts Center. It is now under lease to the Elkhorn Family Fellowship Church.

Baker City Fire Department:

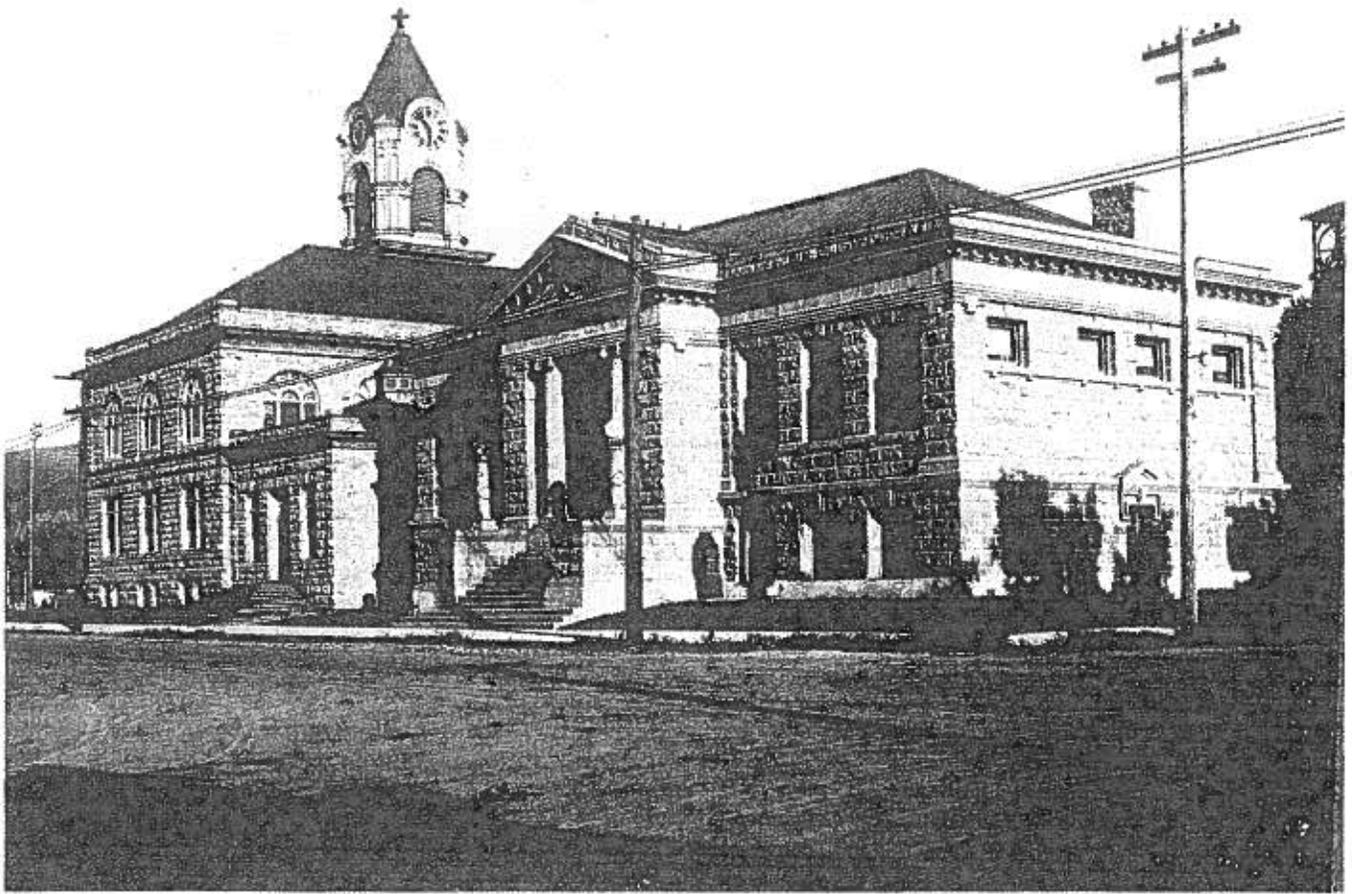
Hose Cart No. 1 and the Fire Bell Tower were located behind the old City Hall. Next to the hall was a hose and ladder truck shed. The earliest station was the old Houston livery stable. About 1915 a new brick fire station was built behind City Hall. The fire station was enlarged and remodeled in 1921. The old station was demolished in 1981 to make way for the current Fire Station. Funding for the new station came from a \$575,000 HUD grant and a donation from local philanthropist Leo Adler.



AN EARLY PHOTGRAPH SHOWING
THE CITY HALL AFTER THE TOWER
WAS ENCLOSED. NOTE THAT THE
BUILDING WAS ELECTRIFIED BY
THIS TIME.



IN THIS PHOTO THE JAIL ANNEX AT THE REAR OF CITY HALL IS CLEARLY VISIBLE. IT WAS PROBABLY BUILT WHEN THE MAIN BUILDING WAS CONSTRUCTED. THE EMERGENCY FIRE TOWER ON THE RIGHT WAS TORN DOWN.



FIVE YEARS AFTER THE BAKER CITY CITY HALL WAS BUILT (1903) THE CITY ERECTED THE CARNEGIE LIBRARY WHICH EMPLOYS THE IDENTICAL STONE. IT CURRENTLY STANDS VACANT EXCEPT FOR LOCAL TENANT USE.

CITY HALL RENOVATION PROJECT
BAKER CITY, OREGON

ARCHITECTURAL CONSERVATION
ASSESSMENT REPORT



prepared for

BAKER CITY, OREGON

Karen Woolard
City Manager

Randy Jones
Director of Public Works

prepared by:

• HDN Architects PC •
Portland, Oregon

Consultants:

Architectural Conservation • Frederick L. Walters
Planning and Urban Design • Planmakers
Structural Engineer • Roger McGarrigle
Mechanical Engineer • Accipio, Inc.
Electrical Engineer • Cundiff Engineering Inc.

Executive Summary

Few buildings in the intermountain west define the vision of prosperity and hope for the emerging 20th century in a small rural town as the Baker City City Hall. The highly elegant lines of classic Renaissance style enabled architect J. V. Bennes to design a structure of extraordinary quality and presence. It fit a city with promise.

Today, Baker City is on the verge of entering the 21st Century, and once again the citizens of the community and their local government envision the City Hall as a continuing symbol of the democratic promise. As a structure, City Hall has endured with remarkable stamina, constructed with some of the best materials for its time. But materials do eventually deteriorate. Intervening years have also produced advanced knowledge in building technology to increase the capacity of a structure to withstand the forces of earthquakes, gravity, wind, age, and weather. Civic services have evolved too, with increased responsibility, complex societal needs, and electronic data requirements.

To both conserve a century old symbol of democratic promise and small town rural life style, and provide the functions of modern government, Baker City City Hall needs to be rehabilitated. A new roof is required. Seismic strengthening improvements should be undertaken. Windows are in need of restoration and rehabilitation. Internal design elements require repair. Electrical wiring upgrades are needed to meet increasing electronic demands. Offices need remodeling to improve efficiency and function of services. It is a comprehensive program. Early estimates for all anticipated construction work lie between two and three million dollars. Certainly a large investment, but to postpone conservation efforts will only allow future costs to increase exponentially. The complete loss of City Hall can not be estimated.

Baker City is a stable, quiet community, proud of its western heritage, and ready to carry that tradition into the next century. A thoroughly planned and executed program of conservation for the City Hall is a practical and forward looking reflection of the citizens of Baker City who wish to preserve this great building while continuing the democratic promise into the 21st Century.

Table of Contents

• Executive Summary	.....	i
• Introduction	.....	iii
• Developmental History	.....	1
• Existing Condition Assessment and Analysis	.....	5
• Exterior	.....	6
• Interior	.....	22
• Project Goals and Definitions	.....	31
• Evaluations and Recommendations	.....	39
• Cost Estimate Summary	.....	40
• Division 1 - General Requirements	.....	41
• Division 2 - Sitework	.....	42
• Division 3 - Concrete	.....	45
• Division 4 - Masonry	.....	46
• Division 5 - Metals	.....	50
• Division 6 - Wood and Plastics	.....	53
• Division 7 - Thermal and Moisture Protection	.....	55
• Division 8 - Doors and Windows	.....	57
• Division 9 - Finishes	.....	60
• Division 10 - Specialties	.....	62
• Division 11 - Equipment	.....	64
• Division 12 - Furnishings	.....	65
• Division 13 - Special Construction	.....	66
• Division 14 - Conveying Systems	.....	67
• Division 15 - Mechanical	.....	68
• Division 16 - Electrical	.....	69
• Conclusion	.....	70
• Appendices		

Introduction

Statement for Conducting Study

In the late summer of 1995, the City of Baker City decided to undertake a building study and grant assessment project for the City Hall. Officials of Baker City believed the study was required to collectively address the subjects of: (1) restoring aspects of the original building that have been lost over time, (2) investigating improvements to energy efficiency, (3) preserving the structure, and (4) more efficient utilization of building space.

In addition, city officials recognized the need to explore outside funding opportunities for completion of work identified in a building study.

Combining these two concepts, a request for proposals was put forth in the fall to complete a project entitled "Restoration Plan and Funding for the Baker City, City Hall Restoration Project.". The firm of HDN Architects PC of Portland, Oregon, was awarded a contract in the spring of 1996 to complete the first phase of the project: A Renovation Assessment. The Renovation Assessment had four project elements:

- Consulting with Baker City officials to identify goals and elements of a rehabilitation program, integrating recommendations from the Architectural Condition Assessment study.
- Conducting an Architectural Condition Assessment study of the Baker City Hall including rehabilitation recommendations, discussion of project phasing and sequencing where appropriate, and "Order-of-Magnitude" Cost Estimates for project elements.
- Assisting the City of Baker City in identification of grant funding sources which financially support rehabilitation programs compatible with the needs of the City of Baker.
- Assisting Baker City Officials in the preparation and submission of a select number of grant requests to those funding sources which appear to hold the greatest promise for support of a rehabilitation program.

The Architectural Condition Assessment presented herein responds to the second key project element as presented above.

Methodology of Architectural Condition Assessment

The architectural condition assessment involves two (2) primary objectives:

- Conduct field investigations of the existing structure to assess the impact of age and alterations upon the building fabric as originally conceived and executed.

The field investigations involve close observation of the building's materials, supplemented with a review of historic material and discussions with key personnel. The observations are normally limited to visible and accessible areas of a structure. Exploratory demolition or physical testing maybe conducted depending on the nature of observations and the character of the buildings materials and assemblies.

- Evaluate the condition of the building materials/assemblies, and make recommendations in concert with building project goals.

The evaluation involves making judgments on the material and assemblies of the building relative to continued performance within the overall context of the structure and the project goals.

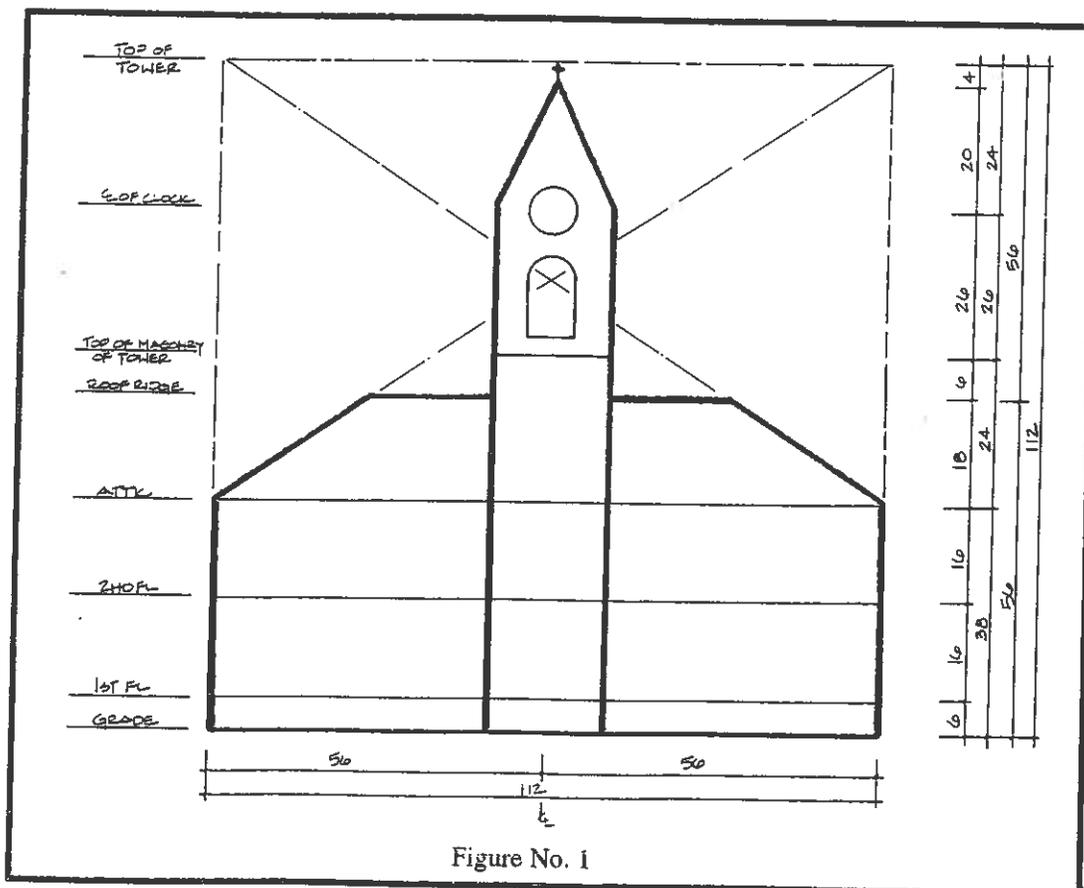
Developmental History

Introduction

There are several features within the design and history of the Baker City City Hall important to recognize when formulating a building program. They lie somewhat outside the commonly accepted view of the building's history, but lend some revealing insights into issues which may not have been recorded in written or photographic form.

Building Design:

The Baker City City Hall is a building of classical Renaissance style. Certain elements of the classical style quickly recognized are the balanced facade, central tower, arched openings and cornice line. Additional elements, although present, are not so apparent. They require a study of a schematic outline of the front elevation of City Hall (See Figure No. 1). City Hall appears to have been designed within a square of 112 feet (at a scale of 1/16th of an inch equals one foot, the square was seven (7) inches). The height from grade to roof line is half the length of the building. The



height of the tower, from attic line to peak, compared to the length of the building closely follows the "Golden Proportion" (1 : 1.6) often celebrated in Renaissance art. Further, the slope of the hips of the roof fall approximately along the line of the diagonal of a rectangle formed by the building width and tower height. The point of crossing of the diagonals locate the approximate center of the open arches in the tower. The occurrence of these design elements are seldom by chance, and indicate a strong interest or experience by the building's architect with a classical stylistic manner. Though quiet by nature, they give the structure strong visual proportions, a symbolic posture, and a sense of presence.

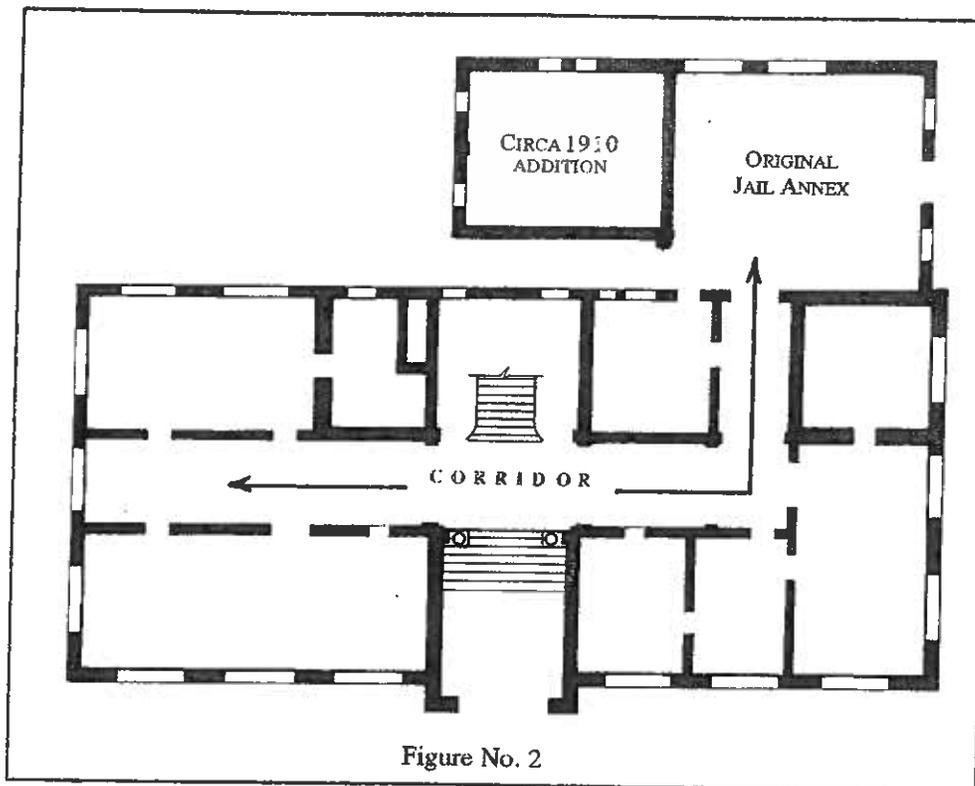
Jail Annex

A second design issue concerns the construction of the jail annex . Current historical accounts state that the jail annex at the northwest corner of City Hall was built five to ten years later than the City Hall structure. A Study of the building's construction, along with a number of circumstantial pieces of information indicate the jail annex was built in two phases. The front portion was constructed at the same time as City Hall. The rear portion was constructed later, presumably being the circa 1910 addition.

Every existing photograph or drawing of the north elevation of City Hall shows the jail annex. The facade of the jail annex appears in a published picture of the City Hall dated as early as 1908 in the *Resources of Baker County*, published by the Commercial • Industrial Committee.

In the *Baker City Herald* newspaper of August 19, 1903, the City Council was noted as awarding a contract for the new municipal building to "Newhaus Brothers and Gaston" for \$41,949, which includes the cost of the "City Hall and jail".

A third element is the actual design of the first floor plan. (See Figure No. 2) The public corridors of the City Hall building, both first and second floors, are ornamented along the wall and ceiling with classical details consisting of pilasters, or engaged columns, with composite capitals. The pilasters carry a classical moulding through the public corridor spaces. Much of the moulding, and several capitals, are hidden from current view by a drop ceiling. Most of the original north corridor has been enclosed with recent remodeling for additional offices. Above the hung ceiling, though, one can see the design of the original first floor north corridor. Unlike the first floor south corridor which runs in a straight line, the north corridor made a right angle turn about midway toward the north half of the building, and continued west to the exterior wall of the building. The corridor provided the circulation link to the jail annex. A similar corridor



design is present in the basement. The location, design, continuity of detail and ornamentation strongly suggests that the front portion of the jail annex was designed integral with City Hall, and most likely constructed at the same time as the City Hall.

Finally, it can be seen within the construction of the jail annex that the metal roof cornice of the earlier portion of the jail annex was covered over by the roof of the later addition.

Construction History & Chronology:

- March 5, 1903 Special City Council Committee Report: estimated cost of new city hall to be \$46,000¹
- March 19, 1903 Architects M.P. White and J. V. Bennes, both of Baker City, and W. C. Knight of Portland submit designs of a new city Hall to City Council ²
- April 13, 1903 Bonds pass for construction of new city hall³

¹ *Baker City Democrat*, Baker County Library

² *Ibid*

³ *Ibid*

- April 16, 1903 Architect J. V. Bennes awarded design of new city hall⁴
- April 18, 1903 Carnegie Library announced for Baker City⁵
- August 19, 1903 City Council awards construction contract for new City Hall and jail to Newhaus Brothers and Gaston for \$41,948.⁶
- circa 1910 Rear addition construction to Jail Annex
- (The newspaper records for the period of the City Hall construction are not available)
- C. ? Sprinkler system installed in hallways, stairs, and basement (in situ at time of 1980 elevator installation)
- 1973 Aluminum windows replace wood windows on 1st floor
- 1980 Elevator installed; handicapped ramp at front entry, new stairs to basement.⁷
- 1981 Renovation Project
- a) Interior entry, Stairs, and corridors painted beige
 - b) Mortar joints repointed.
 - c) The building was sandblasted.
 - d) Flag pole removed from facade
 - e) Tower painted: Colors light tan, tan, orange, and brown.
 - e) 1st floor metal windows painted white.
 - f) Main Roof painted tan.
 - g) roof coated with asphaltic emulsion.
 - h) Clock mechanism repaired
- 1987 Tower painted
Louvers replaced
- 1989 New gas fired boiler installed⁸
- 1991 Portion of 2nd floor offices remodeled

⁴ Ibid

⁵ Ibid

⁶ Ibid

⁷ Griggs, Lee, Ruff, Ankrom (Architects) PC construction drawing check-set, May 3, 1980.

⁸ City Hall staff, April, 1996

Existing Condition Assessment and Analysis

Introduction

The methodology applied in conducting an assessment of the extant conditions of the Baker City City Hall encompassed understanding the function, properties, and operation of various systems, assemblies, and materials. It looks upon a structure as a collection of various selected materials, like masonry, metal, wood, glass, concrete, etc., combined together in assemblies for particular aesthetic and performance requirements. Collectively, assemblies are combined to address specific system requirements of a structure. A building assessment can be assisted by understanding the characteristics of individual materials, their compatibility within an assembly, and the relationship of assemblies in a system.

The following assessment incorporates discussion of individual materials and aspects of particular assemblies for various systems within the Baker City City Hall. The section on Evaluation of this report will review the performance and treatment options for these materials and assemblies.

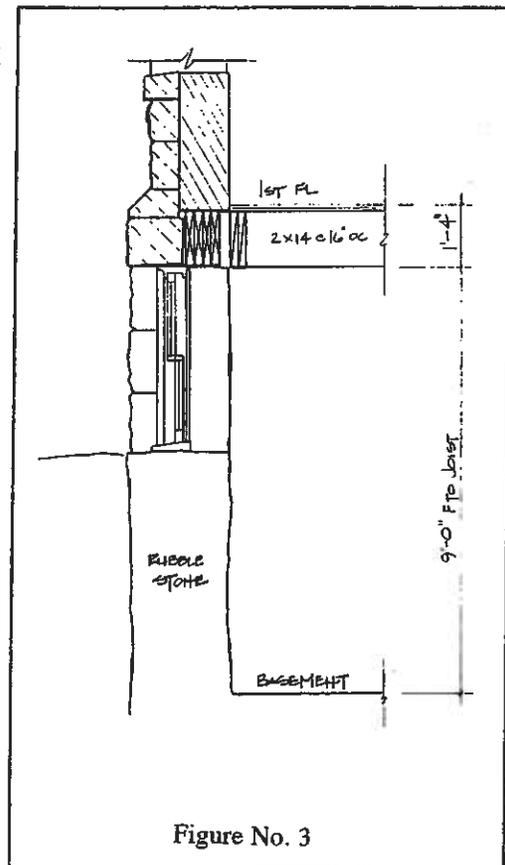
Exterior

• Exterior Masonry Walls •

The exterior walls of the City Hall are a composite of brick and stone. The primary depth of the wall is a standard red brick laid in a durable lime mortar. The exterior surface of the wall is a veneer stone of local volcanic tuff. The stone appears to vary in depth from five to eight inches depending on its location within the wall.

In addition to mortar, the veneer stone appears to be fastened to the internal brick by metal cramp anchors. From within the masonry portion of the tower, and along some exterior mortar joints, the turned-down ends of a typical cramp anchor can be observed. Where they can be seen, the anchors vary widely in placement and spacing, from twelve (12) to thirty-six (36) inches on center, H & V. The standard anchor is 7/8" wide. At the northeast and southeast corners of the tower the anchors are 1 1/2" wide. These corners have heavy concentrations of anchors, though no anchors can be seen on the entire west wall of the tower.

The walls of the basement are two feet thick (2'-0") and composed entirely of stone (See Figure No. 3). The interior is a rubble stone. The veneer goes down to grade. The tradition of this type of structure would be to continue the rubble below grade down to a spread footing made of either single large stones or brick. There are a few cracks near the base of the wall associated with footing settlement. The grade at the base of the building has grown since initial construction. The sill stones of the basement windows, now covered by grade, are pitched face, indicating there were originally exposed. This raised grade condition has created a negative slope against the basement wall in several locations. At the southeast corner of the basement, deterioration of the mortar has been occurring from moisture accumulation. In addition, the close proximity of plants next to the base of the basement wall has most likely led to some other areas of internal mortar disruption. Plants will hold moisture next to their root structure,



and should always be located a good distance away from the base of a building.

The exterior wall narrows at the first floor level to nineteen inches with the inset of a five inch water table course (See Figure No. 4). Water table courses were a design element to visually note a floor level, while trying to provide a physical element to direct water away from the base of the building. The size of brick, as observed on the interior of the tower, is roughly four (4) inches wide and eight and one-half (8 1/2") long. A wall three bricks thick would measure in the vicinity of 13" to 14". This would allow for a 4 to 5 inch stone veneer plus mortar joint. At the first floor, the joists bear on a wood ledger built into the top of the basement rubble wall. The basement window openings have an interior wooden lintel composed of 4- 2 x 14s. On the exterior, the basement windows have a single stone lintel. Eleven of these lintels are cracked. Shear cracks are present in one of the stone mullions, and numerous cracks can be found in the water table course around the building. Being a long, flat stone, the water table course is highly susceptible to differential building settlement. With the absence of cracks in the walls above, it appears most of the settlement of the building has been taken up in the water table course and the lintels. The water table cracks can merely be repointed, as many have already, but the lintel should be cross-pinned for stability.

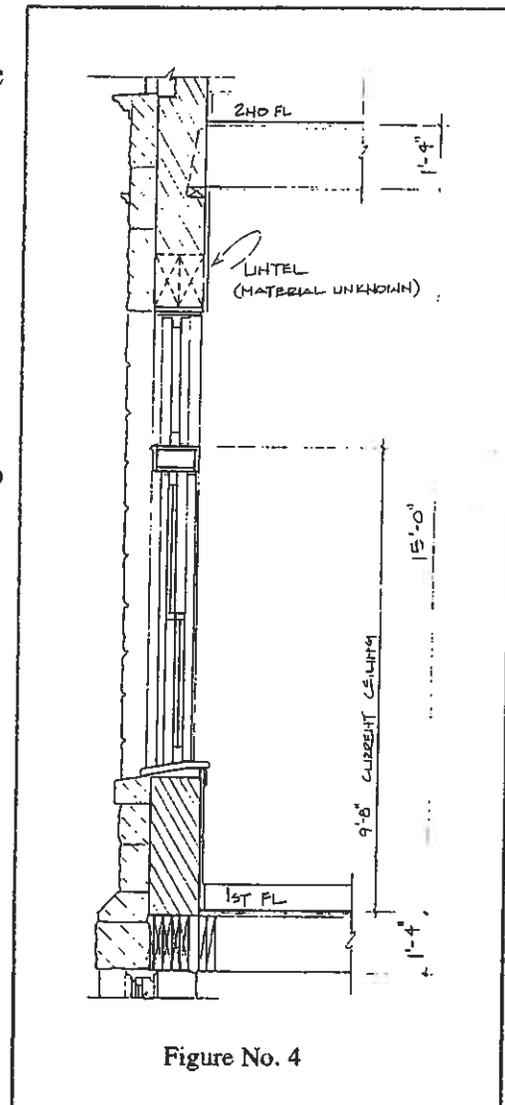


Figure No. 4

At the top of the windows, the veneer stone is set in a flat arch. Several flat arches, most noticeably on the south elevation, are sagging. This condition may be due to a number of causes: (1) loss of mortar in the joints, (2) settlement of the abutments, or (3) deflection of the lintel to the interior of the wall. The walls at the side of the windows show signs of settlement as the stone lintels on either side are cracked. For the center window of the south elevation, the lintel is believed to be a continuation of the concrete floor of the 2nd floor vault. The material of the other

interior lintels is unknown. It could either be wood, steel, or iron. All lintels in City Hall, where exposed (basement and tower), are wood. The building was repointed in 1981. Currently, a crack is present in the repointing mortar of 1981, indicating movement of these arches is continuing. The movement of the lintels is most likely from building settlement in combination with slight lintel deflection, both actions causing cracking of the mortar joints.

The second floor level is defined on the exterior by two metal moulding bands. Composed of galvanized metal, these mouldings are (or should be) flashed back into a mortar joint against water penetration. Though decorative, both mouldings are most likely extensions of wall flashings for the first floor window lintels and the bases of the second floor windows. The bearing of the second floor joists can not be verified without removal of interior finishes. Based on the conditions of the first floor, and given the thickness of the wall above, it is speculated the joists must be pocketed in the wall, resting on a built-in wood ledger.

Above the second floor, the exterior masonry walls make a number of step-backs, or inset, to high-light the windows and articulate the composition of symmetrical bays (See Figure No.5). The building corners are formed to appear to be engaged columns. The columns are in the same plane as the first floor wall. The columns continue upward past the sheet metal cornice where they once terminated with a capstone. The capstones, which can be seen in early photographs of City Hall, were probably removed during roofing repairs. Away from the corners, the wall steps back three (3) inches across the face of the wall. Each window is further recessed three (3) inches within a nine (9) inch archway. Both the inner archway, and the arch over the window, are primarily composed of

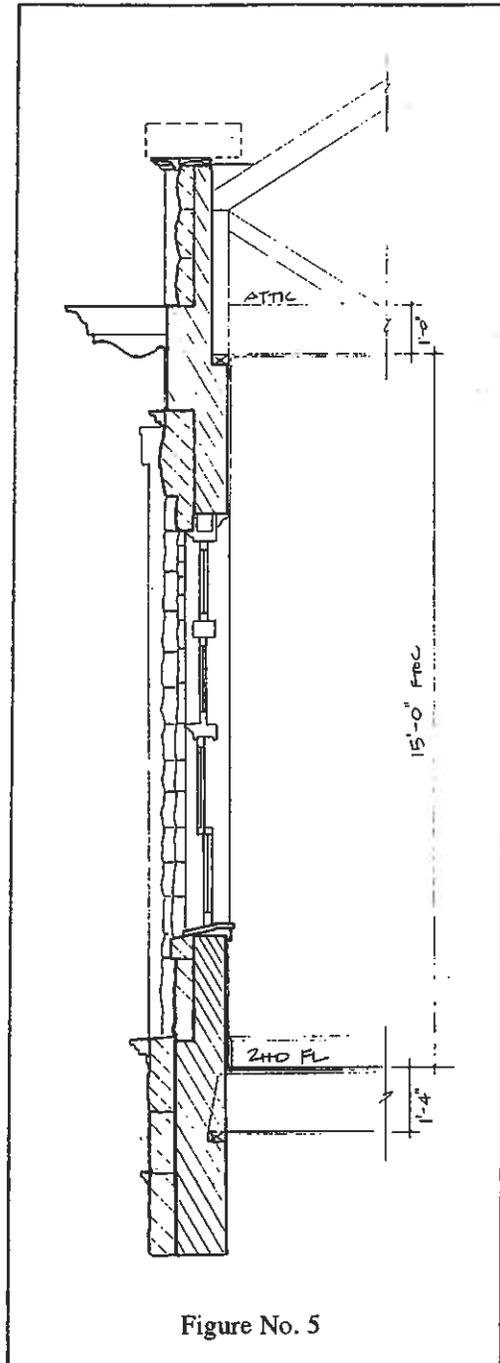


Figure No. 5

stone. Along the haunches of the arch, the individual archstones are squared to align with the regular coursing of the stone veneer. The brick interior portion of the wall appears to reduce to nine (9) inches along the second floor, with the possible exception of at the corners and behind the metal cornice. Behind the stone arch of the windows, the brick is also expected to be arched. The large galvanized metal cornice at the attic level would be expected to be supported from a wooden framework anchored into masonry pockets along the run of the cornice. The metal is merely anchored to the wooden framework by nails or screws. Details like the brackets, or modillions, would be soldered to the main cornice body. It was common to sandpaint such a cornice in imitation of stone.

At the cornice line, the wall insets both from the exterior and interior, reducing the parapet wall to only nine (9) inches. On the interior this is done to provide a bearing shelf for the attic joist and roof structure. On the exterior, this reduction allows for the continuation of the corner engaged columns to extend into the parapet.

The walls of the tower are also brick and stone. The north, south, and east walls bear on masonry walls below. The west wall of the tower terminates at the attic level. At this point it is supported on a pair of five and half (5 1/2) inch by fifteen (15) inch steel "I" beams.

There were two quarries operating southeast of Baker City, near the Pleasant Valley rail station, which produced stone like that used in the construction of City Hall. The Ideal Quarry was located north of the rail station and was owned by James Grant, a prominent local builder. The second quarry, Oregon Lava Stone Company, was just south of the rail line.

Though both quarries were producing a stone of similar material and color, they were not the same deposit. The Grant quarry stone had been formed with planes of bedding, similar to a limestone, while the Oregon Lava Stone was more homogeneous and did not have bedding planes.

Tests conducted on these stones by the National Bureau of Standards, circa 1900, indicate both the percent of moisture absorption and crushing strength. (See Figure No. 6) In general, the tests show both stone types, though the Grant quarry stone in particular, have acceptable strength for use in a structure as a veneer. The high moisture absorption is only a relative indicator of a stone's resistance to weathering. Actual weathering resistance is more a factor of how the pores within a stone are positioned and interrelated. Some rocks with very high levels of moisture absorption show little or no effects from freezing weather.

The stone of City Hall exhibits a bedding plane structure, and therefore most likely came from the Ideal Quarry.

The general field of the stone veneer is a pitched-face ashlar, varying in well proportioned coursing depth on the front and side elevation. On the rear of the building,

the stone is rougher in character. The sills of the front elevation are squared and dressed, while they are pitched face on the other sides of the building. The wall depth is slightly reduced on the second floor, allowing for the expression of columns at each building corner. Just below the formal metal cornice at the roof line, classic Ionic columns capitals are carved in the final block. The corners of the entry arch at the base of the tower are finely tooled blocks with moulded crowns. The finished keystone of the entry arch supports a Roman Numeral date stone of A • D • MDCCCIII (1903).

TESTS OF OREGON VOLCANIC TUFFS.					
Name and location of quarry.	Percentage of Absorption	Crushing strength in pounds per square inch			Specific Gravity
		Specimen tested dry	Specimen tested saturated with water	Tested after freezing and thawing 10 times	
Grant Quarry Pleasant Valley, Ore.	22.68	2916	2861	2816	1.81
Oregon Lava Stone Co., Pleasant Valley, Ore.	28.96	.....	1212	.....	1.64
" "	29.29	1724	1160	1261	1.33

Figure No. 6

• Exterior Fenestration •

Windows

Following a formal system of symmetrically balanced bays on the building's elevations, the windows progress upward in a hierarchy of detail and design (See Figure No 7). The basement bay has small double hung wood windows with a central stone mullion. Most of the windows are original. Four units in the southwest corner have been replaced with new insulated windows closely resembling the original. The extant windows are in fair condition, requiring a moderate level of rehabilitation.

The first floor window bays are rectangular in shape, and originally supported a pair of wooden double hung windows with matching transoms. These have been altered by replacement of the double-hung portion with fixed framed aluminium windows. A metal pan covers the original

transom windows which still are extant. Where accessible, the transoms have a natural wood finish on the interior and appear to be in good condition.



Figure No. 7

At the second floor, the windows are rectangular with a fully arched top. The wooden frame has a mullioned tri-part base with a centrally fixed pane and double-hung wing sections. The arched top is a six sectioned fan light. Most of the fan lights of the second floor have been painted over from the interior, essentially above the interior dropped ceiling. Two second story windows at the southeast corner have had the lower sections replaced with an aluminium frame. The extant wood windows are in fair condition. Moderate repair and insulated glass sash would be required for rehabilitation.

The original wooden sash of the main staircase window of the west elevation has been replaced with fixed aluminum frames. The primary mullion and transom frame are still present, though covered on the exterior with aluminum panning. A historic photograph indicates this window was similar in design to the rest of those on the second floor (See Figure No. 8) While the interior of the primary mullions appears in good condition, the presence of aluminium panning on the exterior suggests some deterioration. This window will require extensive rebuilding and replacement for rehabilitation.



Figure No. 8

It should be noted that the historic photograph also shows some of the second floor windows had awning shades. There is currently concern by the staff about excessive heat gain from the upper portions of the windows. Apparently this was a recognized concern early in the history of the building. New replacement awnings may be useful in modest heat gain reduction and visual glare.

There are four tall linear windows in the masonry section of the tower. These windows are a diamond mullion pattern. While the sash is in moderate repair condition, excessive deterioration can be found in the sills, and probably to some extent in the jambs. The frames will require extensive rebuilding along with replacement a several glass panes.

Exterior Doors

The main entry doors currently are aluminium store front glass doors with integral sidelights. To fill out the arched opening, the original arched wooden mullioned transom is still present. The date of the removal of the original entry assembly is unknown. Based on the date and style of City Hall, the original design would have consisted of a pair of wooden panelled doors with glass panels. The sidelights would have

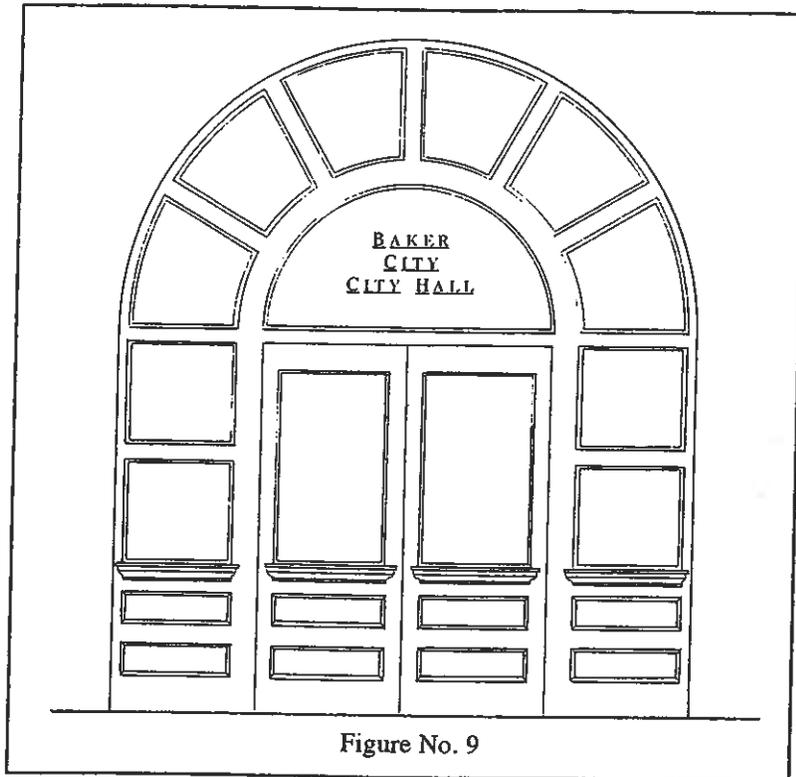


Figure No. 9

been expected to continue the rhythm of the mullion from the arch (See Figure No. 9) Protected within the alcove of the entry, the existing arched portion of the original assembly is in good condition. The missing section will require a complete rebuild.

The central corridor of the basement has a door opening at the north and south ends. The opening on the south elevation appears original, with its shallow stone arch head. The frame and assembly of the south doorway has been replaced. A steel "I" beam lintel supported by pipe columns has been installed beneath the stone arch, with a cementitious infill between the arch and lintel. A crack is present in the mortar joint of the west haunch of the arch, stepping upward through the joint of the ashlar. This appears to be minor settlement, and may have some contribution to the movement of the flat arch of the first floor window above. In the wall above the doorway, the stone has been cut in the past for installation of a flat canopy. From the design of the building, it is doubtful the canopy was original. It appears to have been something that came and passed during the life of City Hall. As part of a rehabilitation program, repair of the arch, removal of the steel lintel/columns, and the fabrication of a new, more sympathetic doorway would be desirable, but not critical.

At the north end of the basement, a complete new doorway was cut into the foundation at the location of an original basement window. The concrete area retaining wall and overhead canopy corresponding to the period of the doorway. The doorway is needed for exiting requirements. A more compatible doorway assembly would compliment the structure, as would an improved canopy design.

The door off the southwest corner is also an alteration to the original design, developed from a first floor window. This door is very important though for exiting requirements and staff entry. To compliment a rehabilitation program of the buildings fenestration, this opening will need some appearance improvements.

• Roofing •

Main Roof

The wood frame roof of City Hall supports a standing seam, terneplate roof. Terneplate was a common roofing material at the turn-of-the-century. It was installed in small, 24" wide sheets (See Figure No. 10). It consists of iron or steel sheets coated with a lead-tin alloy. It is a lightweight, strong roofing material which is still being manufactured today. While it has a small rate of thermal expansion, design details require careful attention to insure long-term performance.

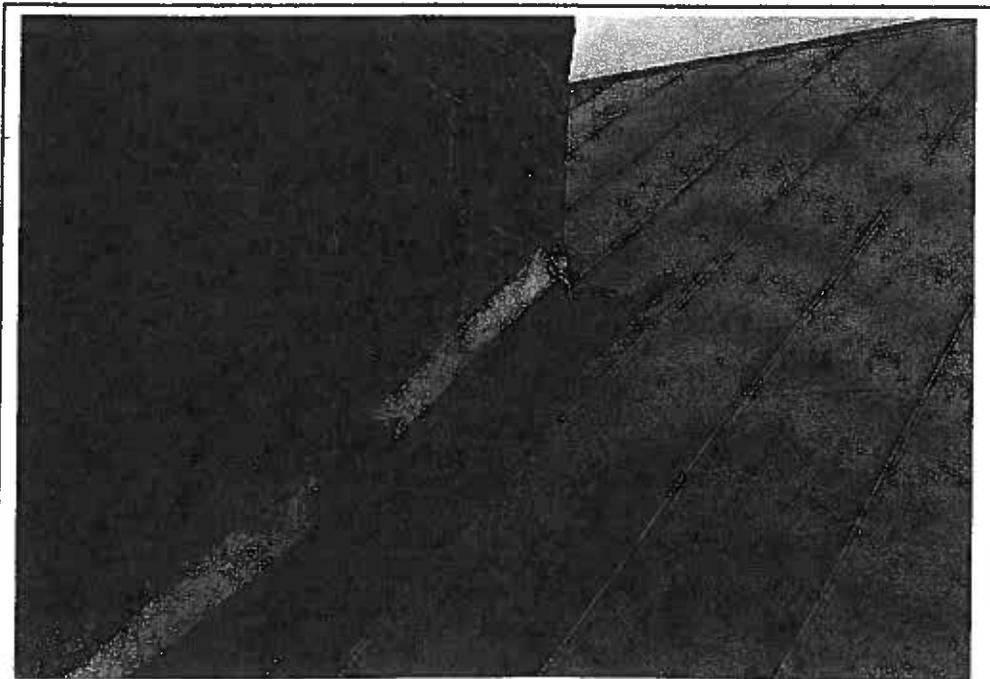


Figure No. 10

Immediately following installation, terneplate must be painted with a rich oil-base paint. Maintenance painting is required on a five-year schedule. If exposed for a period of time without a paint coating, the lead and tin coating will accelerate corrosion around penetrations or pin holes. Terneplate is also susceptible to reaction from contact with acids and aluminium.

With its vertical seams and rich painted color, the roof is a strong element in the building composition. Properly installed and maintained, a terne roof can last for years. The current roof on City Hall is probably the original roof. In the 1980 building report, it was recommended the roof be examined and repaired as necessary. Presumably in response to this recommendation, the roof was coated with an emulsified asphaltic roofing compound, and then painted a tan color.⁹ The current condition of the City Hall roof is suspect. Where the asphaltic compound has either been lost or has deteriorated, large sections of the terneplate are rusting (See Figure

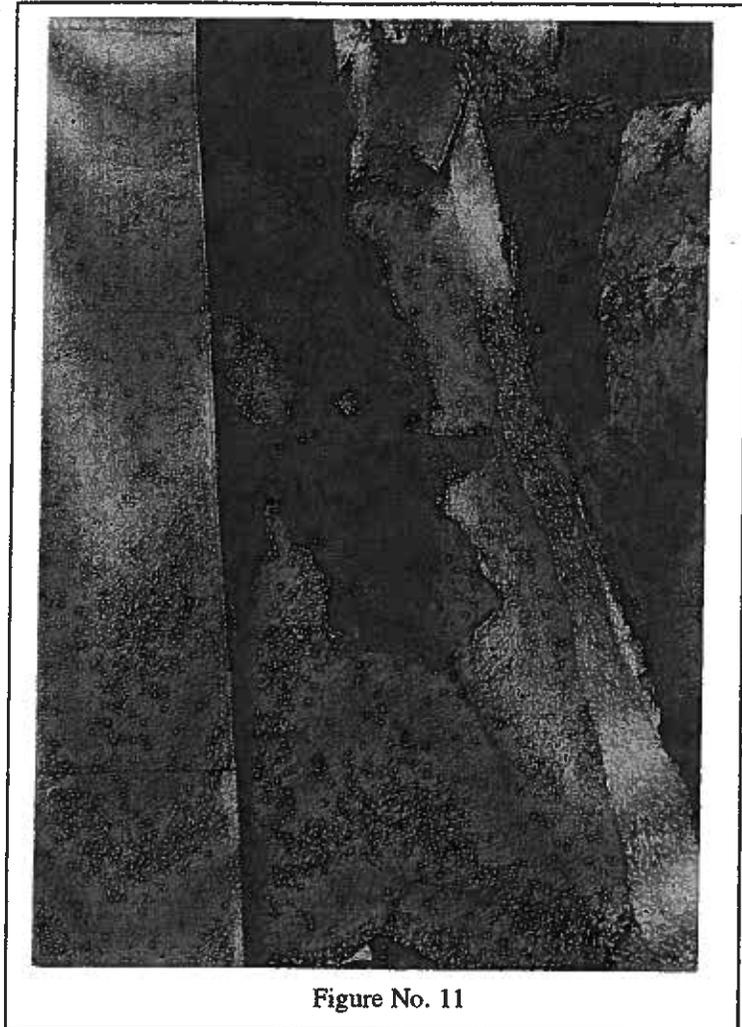


Figure No. 11

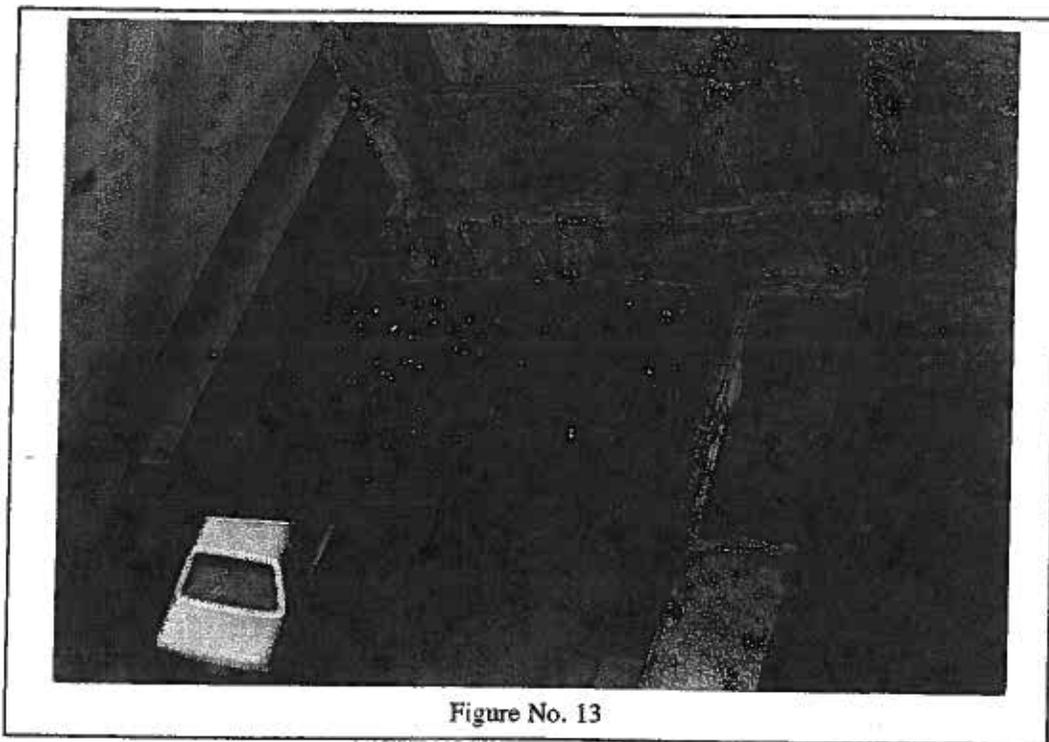
No. 11). To rust, the terneplate needs to lose the protective paint coating and have the integrity of the tin/lead coating broken through surface damage, thermal movement, or simple erosion. Oxygen can then reach the steel, and corrosion begins. Where the recent asphaltic coating has been removed or lost, substantial portions of the sheets are rusting. Exactly what the condition of the terneplate was prior to the application of the asphaltic coating can not be precisely determined.

⁹ Record Courier Newspaper, Baker City, Oregon, October 22, 1981.

Perhaps as an expedient emergency repair to get through one winter, the existing gutter has done its job. It was never designed, though, for yearly service. It will continue to leak and cause accelerated damage to interior spaces. It should be replaced with a properly designed gutter.

Cornice Roof

The large exterior sheet metal cornice around the building at the attic level was fabricated with soldered flat seam metals sheets, with a periodic standing seam for thermal movement. Along the main body of the building, the sheets have been coated with the asphaltic emulsion and painted with an aluminium paint. The asphaltic coating is severely deteriorated in many places. Around the tower, the sheets have been left exposed, and exhibit extensive oxidation (See Figure No 13). There are numerous leaks through the cornice, creating a serious concern for the wood that forms the frame to which the metal is attached.

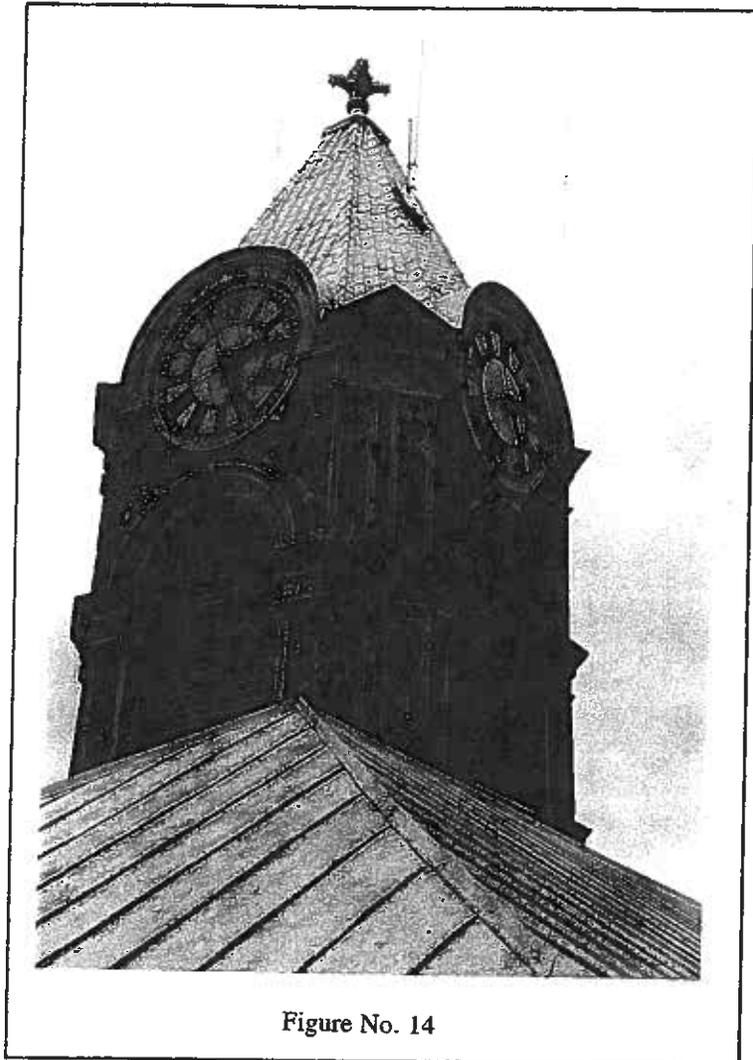


Tower Roof

The tower roof is sheet metal formed to represent clay tiles (See Figure No. 14). From a limited inspection, the metal appears in salvageable condition. Some degree of deterioration is anticipated from a closer inspection, but the relatively dry conditions of the bell loft gives reason to be optimistic.

Bell Loft Roof

At the top of the masonry walls of the clock tower, where the structure changes to wood frame, a flat seam terneplate roof is present. The roof is in fair condition. Perimeter flashing are suspect due to moisture stains on the walls below.



Jail Annex Roof

The early portion of the jail annex has a standing seam pyramid roof with a lovely central octagonal ventilator (See Figure No 15). Similar to the main roof, the standing seam areas have been coated with an asphaltic compound. The gutters have been overlaid with what appears to be a single-ply, synthetic rubber sheeting. Originally there were two downspouts, one in the northeast corner and one in the southwest corner. On the day of field inspection, standing water was over the northeast downspout indicating restricted drainage or that the drainline is completely plugged. The original southwest downspout has been abandon to allow roof connection to the rear portion of the annex. The roof appears to be in fair condition for the moment, but the presence of the asphalt on the original terneplate

suggests some problems have been covered over with an increased potential for failure.

The rear portion of the roof is a shed roof. There is a relatively new single-ply roof installed with a new galvanized gutter and downspout along the lower south edge. In general, the roof appears functional, but without proper control of internal condensation, single-ply roofs have a tendency to collect water beneath the membrane.

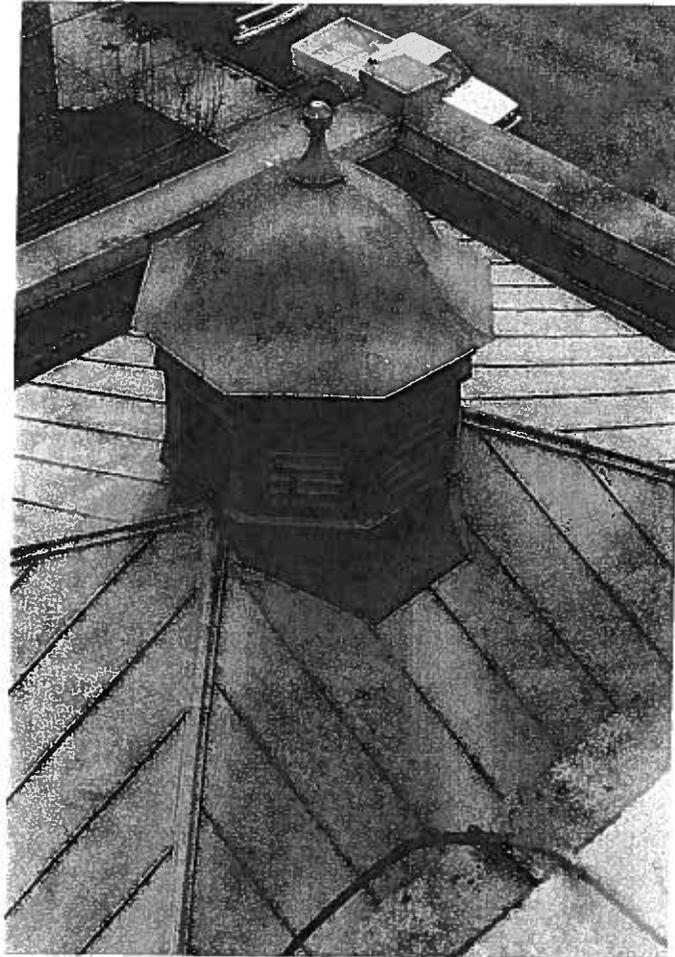


Figure No. 15

• Architectural Metal •

Cornice and Moulding of Main Building and Jail Annex

While there are observable localized areas of deterioration, the main portion of the large cornice on the main building looks to be in good condition. With the exception of the roof and small areas of deterioration, the main sections of the cornice should be reuseable. At the first floor line, the two metal moulding courses do not show signs of deterioration.

Repointing and application of sealant should be conducted as a maintenance preventive measure where the metal meets the masonry wall. The paint coating on all the metal is failing, but can be easily replaced.

Tower Facades:

Above the masonry portion of the central tower, the heavy timber frame of the bell loft supports an extensively articulated exterior galvanized metal facade which defines and emphasizes the four clock faces (See Figure No. 16). While the paint coating is in poor condition, the metal itself looks to be serviceable with the possible exception of two twisted sections on the north elevation. These twisted sections may have just been installed that way, or represent some alteration within the wooden support frame. Closer investigation will be required.

2nd Floor Palladian Porch:

An exterior Palladian porch is enclosed within a portion of the second floor level of the tower (See Figure No. 16). The porch is wood frame and clad in painted, galvanized metal of decorative form. The exposed porch floor is flat seamed terneplate. The roof has a base flashing nailed to the masonry side walls and rear framed wall. Only at the juncture with the base of the front balustrade is there a counter flashing. A single drain hole is present in the north, central areas of the roof. The upper portions of the north and south walls have peeling paint from moisture penetration of the tower roof.

Though suffering extensive paint failure, the porch metal appears in fair to good condition. A few soldered mitres at the corners of decorative elements have come open. These should be cleaned and resoldered. A number of sheet metal screws penetrate the assembly from past attachments and should be removed with the holes plugged. Extensive preparations will be needed in the repainting process. Counter flashings should be installed where absent.

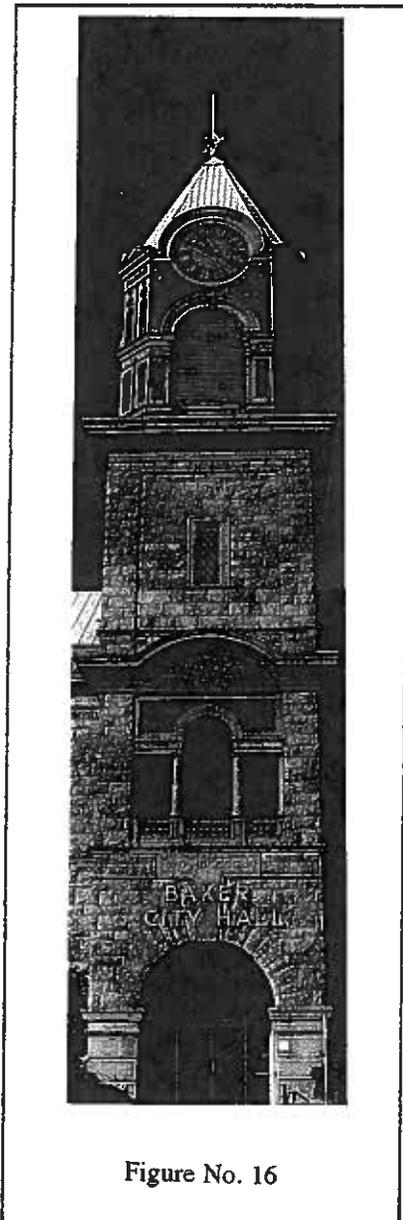


Figure No. 16

• Site Features •

Sidewalks

City Hall has sidewalks on the east and north elevations. At the front door, the original granite steps have been partially overlaid with a concrete ramp. The remaining sidewalks are concrete. Portions of the sidewalk at the northwest corner of the site, and along west half of the north side are in poor condition. The street curb is missing along the northwest corner. The small concrete sidewalk leading to the basement stairs of the north elevation is also in poor condition.

The north elevation entry steps of the Jail Annex are replacement concrete steps. The original pyramidal step's outline can be seen on the front wall. Historic photographs also show original step design. The material of the steps is unknown. The door threshold is granite, similar to City Hall. The current concrete steps are in poor condition and need to be replaced.

Landscaping

The lawn areas of the north and east elevations contain a variety of plantings, primarily juniper, but hosting a couple of maple trees and a fir. Over a period of years, the lawn has risen in elevation as noted when discussing the original sill height of the basement windows. The plantings close to the base of the building are too close and should either be removed or transplanted so the boll of the plant is six to eight feet away. This will allow room for moisture runoff from the building and keep plants roots away from the basement walls.

• Exterior Lighting •

Historic Lamp Posts

In the original design of City Hall, a pair of decorative light standards with round globes flanked the front entryway. Constructed of cast iron, and having a 15" square base, the lights were electrified through a feeder conduit in the stone base. Judging from historic photographs, the light standards were about five feet in height.

Security Lighting

Two modern security lights for the south parking lot are mounted on the south elevation of City Hall. The fixtures are serviced by surface mounted conduit penetrating from the attic.

Tower

Within the tower, incandescent light bulbs are position behind the obscure glass of each clock face to backlight the faces at night

Interior

• Basement •

With the exception of the northeast corner workroom used for computer training, the basement is essentially an unfinished space. In most of the spaces, the rubble stone walls of the basement are exposed. There is no finished ceiling. Extensive mechanical ducts, old steam lines, sprinkler piping, and electrical conduits are fastened to the exposed joists of the first floor.

Beneath the main stairs, an 8" x 12" primary beam is supported by two 4" diameter pipe columns. At the front entry stairs, the marble steps are supported on wood stringers.

In the vault at the northwest corner of the basement, the ceiling is cast-in-place concrete reinforced with wire rope and wire mesh. Two wooden beams with pipe columns provide mid-span support. The wooden floor is in a very deteriorated condition. Support stringers appear to rest on grade and suffer from dry-rot. The plaster walls are extensively cracked.

• First Floor •

• Main Entrance Lobby

The main entry lobby includes a mid-floor landing and a staircase to the first floor. The ceiling and walls are painted plaster. The ceiling/wall juncture has a classical moulding typical of the building. The base moulding is also plaster. The landing floor is a white hexagonal tile bordered by rectangular trim tile. The staircase,

running from wall to wall, is 7/8" thick white Alaskan Tolkeen Marble. The marble runs sit loose upon wooden stringers while the risers have brass screws secured to the stringers. The staircase is bordered at the top by two smooth face classical composite columns with plain necking (See Figure No. 17). A coffered ceiling beam extends across the columns and terminates at the sidewalls. The beam, column, and pilasters are all plaster.

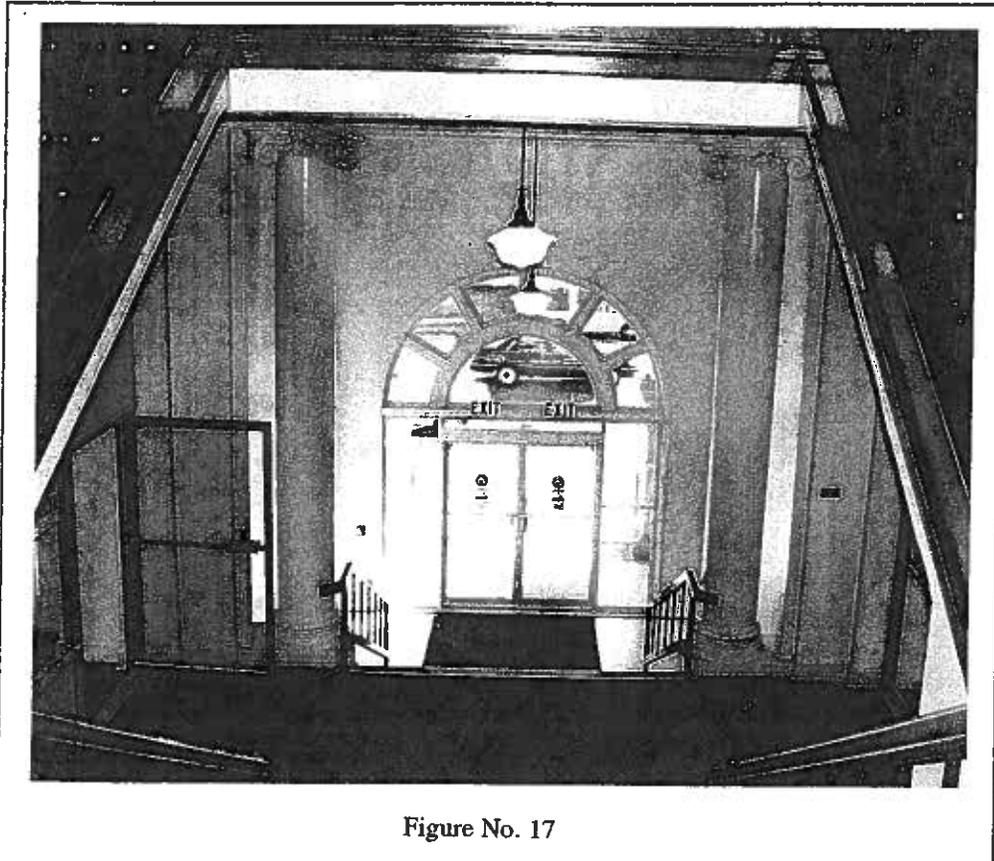


Figure No. 17

Several pieces of the landing tile are missing. Almost 25% of the border tile is gone. There is a large crack running through the center of the landing, presumably from the settlement of the tower. The walls and ceiling of the landing, including the coffered beam and columns are in good condition. It is uncertain whether the structural beam within the coffer is steel or wood, as both are used in the building.

The marble steps are a problem. Several marble pieces are extensively cracked. This is due to the thinness of the material. When inspected from underneath, the wooden stair stringers have been fitted with small extensions to accept the marble. The marble steps do not appear to be original, though the marble is a type used extensively in Oregon at this period. Steps of stone are supported on

either masonry or concrete. The current wooden structural supports strongly indicate the original steps were wood.

The present handrails are not original, and need to be replaced with a more compatible design.

Central Corridor and Staircase

At the top of the entry steps is a broad landing for the main staircase to the second floor. The landing serves as the cross connecting the corridor to the north and the one to the south wing of City Hall. The plaster ceiling is encompassed by the typical classical moulding on coffered beams. The original wood floor is covered with a half-inch plywood overlayment and an unpaddinged carpet.

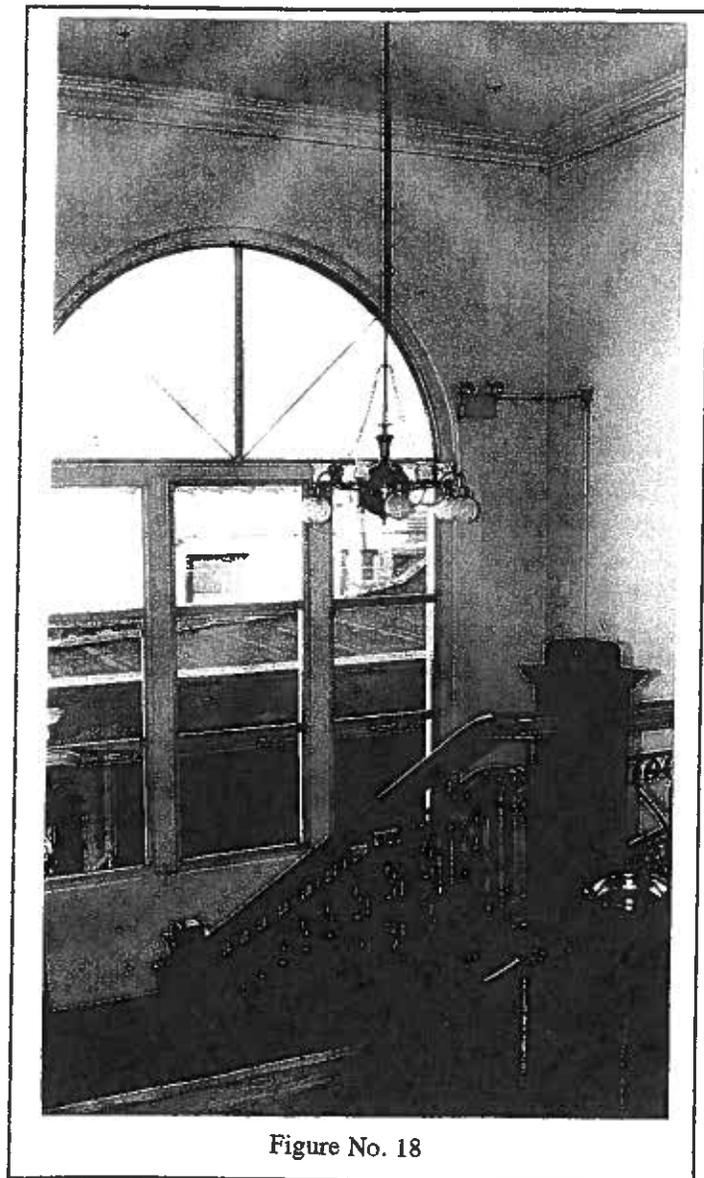


Figure No. 18

The central staircase is wooden. The center portion of each step has been covered with vinyl sheetgoods. The exposed wooden edges are painted red. Each step has a metal nosing strip. The newel post at the intermediate landing and each floor (See Figure No 18) is wood with a dark stain

of natural finish. The baluster is decorative metal scrollwork. The wooden banister is a light natural finish. At the 2nd floor level, the stringer beam is carefully detailed into a typical classical stair shelf finished to match the newel posts.

The ceiling and walls of the central stairway are plaster with the classical moulding. At the southwest corner peeling paint is indicative of roof leakage. On the north and south walls of the landing are capped gas lines where original light fixtures were located.

From the landing at the base of the staircase, the north wing was served by a dog-leg corridor which led to the Jail Annex. The corridor was defined by a series of pilasters and classical ceiling mouldings matching those of the entry. Presently, an aluminium frame and glass storefront partition closes off the entry to the corridor. Behind the partition, the corridor has been altered into office and work space with dropped ceilings and minor wood partitions. The floor has been overlaid with plywood and a carpet installed.

Similarly, the south extension of the corridor has been enclosed with an aluminium storefront to create further office space. The south corridor originally ran straight, with an office at its far end and to each side. Classical stylistic elements of ceiling moulding and pilasters also defined the south corridor. At its termination, the office partition was dark stained wood and glass. The base mouldings of the corridor are plaster. The original wood floor is overlaid with plywood and carpet.

North and South 1st Floor Offices:

The general office spaces of the 1st floor have all been altered with the addition of various wall finishes and lowered ceilings. The ceilings are framed and support acoustical tile. The ceiling height averages 9' - 10", which matches the primary cross bar on the original wood window frame. Above these acoustical ceilings, where accessible, the wooden frame of the original window can be observed. The plaster walls have a number of different types of wood paneling or surface trim. All the rooms have plywood overlayment and carpet.

Within the office areas, only the two vaults still have their original ceiling height. The vaults have masonry walls with smooth plaster and no mouldings. The ceilings and floors are poured-in-place

reinforced concrete. The north vault has a linoleum floor, while the south vault is carpeted. A small mezzanine has been inserted into the south vault.

The alterations to the first floor office areas have been relatively minor. Removal of the acoustic tile ceilings, plaster repair, window rehabilitation would recapture much of the original character.

Second Floor

Central Corridor

At the top of the staircase, a central corridor runs north and south. Retaining its original ceiling height, the plaster walls and ceilings continue the classical style of ceiling mouldings and pilasters with composite capitals (See Figure No. 19). Structural beams are coffered for integration into the moulding. To the south, the corridor provides access to offices on both sides and terminates at a cross partition. Originally the partition was solid, but currently has a new door opening into an existing cross corridor. Off this cross corridor is a small vault. Like the other vaults in the building, it has solid masonry walls, and a concrete floor and

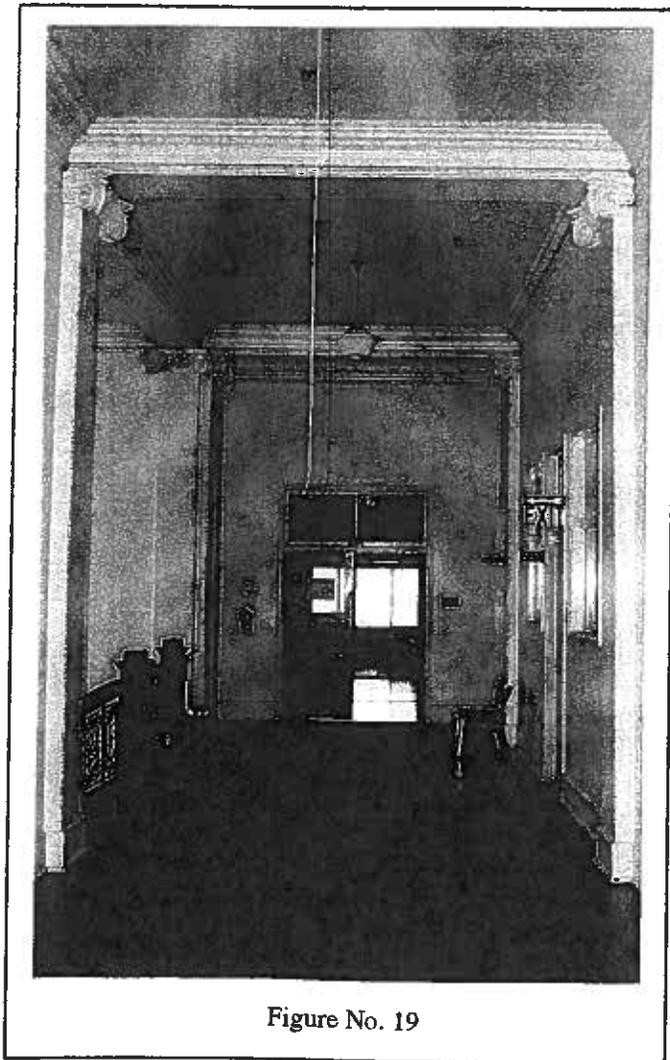


Figure No. 19

ceiling. The ceiling height is reduced to approximately 11' -0".

To the north, the central corridor is short in length, terminating at the vestibule of the Council Chambers. To the east is the new elevator inserted in a former office. Off to the west, is a multi-purpose ante-room, containing a modern restroom, a stairway to the attic and bell tower, and an entry to the business end of the Council Chambers. The door to this ante-room, the attic access stairway, and the remaining portion of a low partition retain a dark mahogany wood finish and original hardware.

Throughout the second floor corridor, the plaster walls, ceiling, and base are in good condition. The floor is 2 1/4" straight grain fir over a sub-floor. The floor appears to have been originally finished in either a stain or paint along the borders. The central portion was never finished, lying under a carpet. At each office entry and at the head of the stairs, "shadows" in the floor locate the position of the carpet laterals off the center runner.

Council Chambers

The small vestibule leading into Council Chambers lacks any decorative treatments. The plain plaster walls and ceiling were a space of passage. The two sets of double doors with original transoms provide a central side entrance to the rectangular oriented space of the Council Chambers.

The present metal grid, lay-in ceiling system hides the original tri-

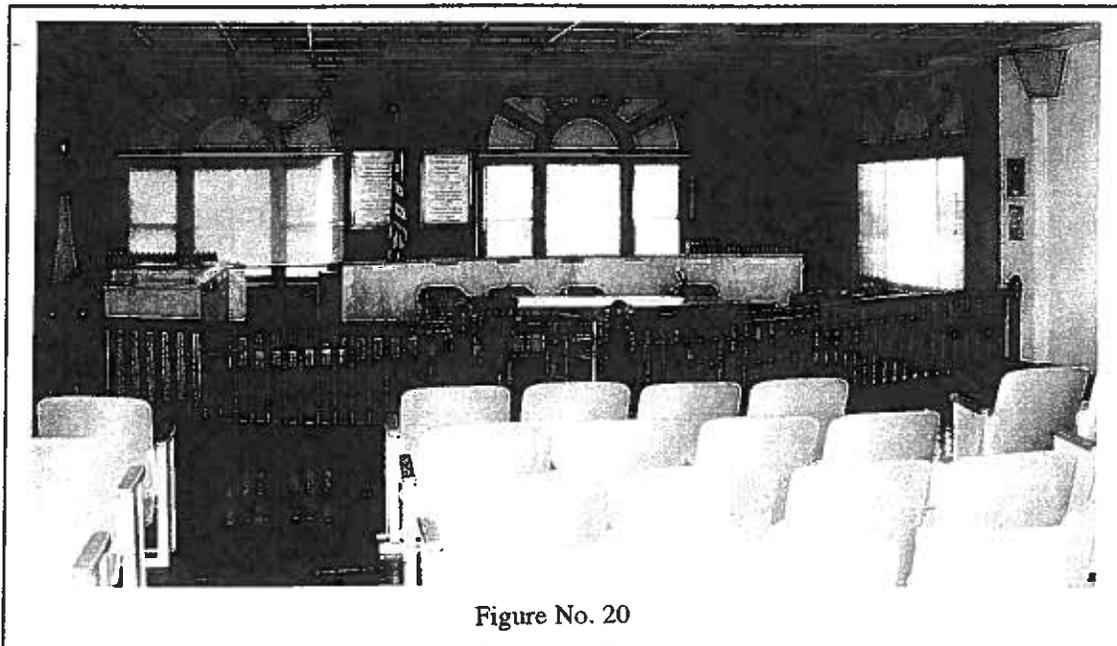


Figure No. 20

part design of the chamber space. At the third points along the long axis of the room, moulded coffer beams resting on classical pilasters are present in the 15' -0" ceiling. The beams encase the lower chord of heavy timber trusses used to support the ceiling joists. The coffer beams, pilasters, walls, ceilings, and base are all plaster finished. Beneath the current rubberized floor sheet is a 2 1/4" unfinished fir floor. The west end of the council chamber has a modern, elevated platform with a counter for council hearings. The presence of an original elevated platform could not be determined. A reverse curved, wooden balustrade with central opening defines the western third of the Council Chambers. The balustrade has a dark mahogany finished stain (See Figure No. 20).

2nd Floor Offices

The typical original second floor offices had high 15' plaster ceilings. A picture moulding surrounded the room on the plaster walls at twelve feet. A plaster base transitions to a wood floor. The slow accumulation of alterations has led to a variety of current conditions. In the offices of the southwest corner, recent rehabilitation efforts have included a wooden wainscot, carpeting, and new partitions. Original ceiling heights were reinstated with the exception of a small storage room.

At the southeast corner and east side offices, extensive use of wood paneling has covered most of the walls while an 8' acoustical ceiling has been inserted in every space. Original window and door trim and hardware have survived in most instances. The floors are carpeted over a plywood underlayment.

Opposite the head of the stairs, the office facing the central exterior Palladian porch has a series of fixed windows along the corridor, allowing for views through to the porch. Within this office, the plaster ceiling and walls are exposed, and original trim retained. The floor is carpet.

• Building Systems Summary •

Specific building systems were assessed project by engineering consultants. Their reports are included in the appendices. The following is a general summary of the engineer's observations.

• Structural

The City Hall is an unreinforced masonry structure. This type of structure has a low level of resistance to structural damage during a seismic occurrence. Reinforcing and improving the connections between the various assemblies of the structure (i.e. walls, roof, floors, tower, etc.) would lessen the risk of damage during an earthquake.

• Mechanical

• HVAC

The existing heating and cooling systems for City Hall are comprised of a various elements. The heating system serves the complete building, but is not zoned to provide balanced environmental comfort throughout the building. Localized areas of City Hall are cooled in the summer months by individual mechanical units. The assessment concludes that a new water source heat pump system would allow for heating and cooling spaces and zones concurrently throughout the year with the least impact on the historic character of the structure.

• Plumbing

Observations of the present plumbing lines show many to be original to the building and are anticipated to be reaching their useful life expectancy. Replacement of all plumbing lines should be highly considered.

- Electrical

The electrical engineer's observations noted that existing branch circuits and electronic data lines are in need of improvement for the whole building. In addition, a fire alarm system and emergency backup system is recommended. General and task lighting can be improved and enhanced through the use of new fixtures compatible with the building's historic character.

Project Goals and Definitions

Introduction

The Baker City City Hall is a highly distinctive historic building within Oregon and the Pacific Northwest. Listed on the National Register of Historic Places, it is a prominent structure in the streetscape and skyline of Baker City. Constructed when Baker City was known as the "Queen City of the Inland Empire, it reflected the community's status as a major commercial, mining, and agricultural center along one of the country's most important rail lines. Due to its historic significance, the evaluation and recommendation discussion has been developed within the context of the following historic guidelines and standards:

- National Park Service *NPS-28 Cultural Resource Management Guideline*, Release No. 4, July 1994.
- Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation
- The Secretary of the Interior's Standards for the Treatment of Historic Properties, 1992
- The General Services Administration's "Historic Building Preservation Plan Comprehensive Building Report.

Treatment Strategy:

A high degree of original design integrity in both materials and program has been retained within the Baker City City Hall.

It continues to function as the seat of government for a growing community. The first floor is occupied by offices to manage city government. The second floor contains the Council Chambers and the office of the city attorney. The State of Oregon Economic Development Department leases office space on the second floor, recognizing the continued prominent locale of Baker City and the increasing economic interest in eastern Oregon.

While some fenestration alterations and interior modifications have occurred, a high percentage of the original structure's historic fabric is present. The brick/stone exterior walls, the metal clad wood framed bell tower, tile floors, a large percentage of original fenestration, exceptional

examples of wood/plaster trim, classical mouldings and columns all survive with little alteration.

In establishing a building program for improvements at the Baker City City Hall, a program of intervention will include several different forms of historic structure treatment. Establishment of the level and depth of the selected treatments are unique to each structure. They are based on the level of significance of the structure, its design and character, the nature and qualities of original historic fabric, and requirements of intervention.

Three standards of historic structure treatments are proposed for the Baker City City Hall:

1. Restoration
 2. Preservation
 3. Rehabilitation.
- Restoration is a treatment designed to accurately depict the form, features and character of a property at a particular time. It may involve removal of material from other periods of the building's history.
 - Preservation is a treatment designed to sustain the existing form, integrity, and materials of a historic property.
 - Rehabilitation is a treatment which allows for a contemporary or compatible use for a structure, or space therein, through repair, alterations, and additions, while preserving elements or features of historic value.

The Baker City City Hall has a very high degree of significance and historic fabric. Though alterations have occurred, they have not significantly affected the historic appearance or character of the building. Thus, when interventions are made, they should contain a program focus of either retaining historic material when improving an assembly/system performance, or designing with the original historic appearance in mind when complete new systems are required. The building program will be a combination of various levels of restoration, rehabilitation, and preservation.

Building Zoning:

The Baker City City Hall has been divided for planning and treatment purposes into several spaces, or zones, of historic significance.

- **Zone 1: High Significance - Treatments: Restoration/Preservation**

The entry, lobby, first and second floor corridors, main staircase, second floor Council Chambers, and exterior envelope (walls and roofing) are considered to be the zone of highest degree of preservation. In this zone, all original material is to be preserved, or if damaged beyond conservation or having been subjected to alteration, to be replaced with material matching the original in appearance, if not also function. Within this context, it is recognized that the louvers of the bell tower do not appear to have been an element of the original. From historic photographs though, it would seem that they were installed fairly soon after the initial construction (say within five years). The presence of a non-original floor at the level of the bell frame suggests the louvers were possibly installed as a visual screen to hide measures meant to strengthen the structure of the bell tower. The position could be made that the louvers and strengthening measures are alterations which has acquired a significance in the building history. Acknowledging this position though, it also must be observed that the louvers substantially altered the citizen's interpretation of the appearance of the building in scale, texture, and color. Given the remaining high degree of historic integrity for the rest of the structure and the character of the original tower design, the position has been taken in the following discussion to remove the louvers from the tower and provide less obtrusive structural reinforcement. A similar viewpoint, though more direct in analysis, has been taken for the aluminium first floor windows. They neither match the design or character of the original windows, and should be returned to the original design. See Figure No. 21

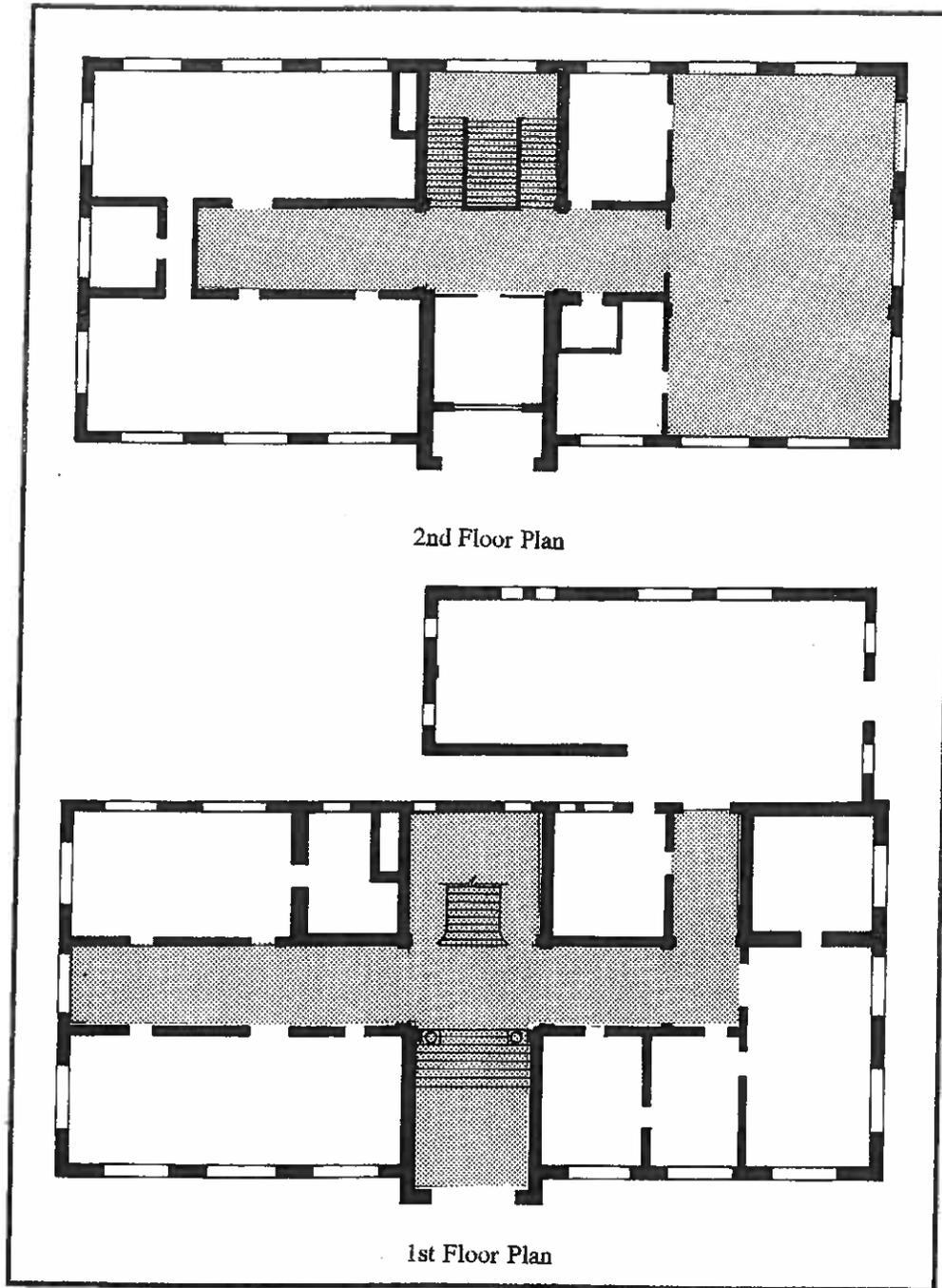


Figure No. 21
Zone 1: High Significance - Treatment: Restoration/Preservation

• Zone 2: Moderate Significance - Treatments: Preservation/Rehabilitation

The second level of preservation has been assigned to the offices of the first and second floor, the second floor restroom/attic access room, and limited portions of the first floor of the jail annex. These areas have distinguishing qualities and materials, like the exterior windows, trim moulding, hardware, and ceiling heights, but are slightly less appointed than the primary spaces. These spaces are open to rehabilitation, but require a respectful integration of the existing historic fabric, restored features, and new design.

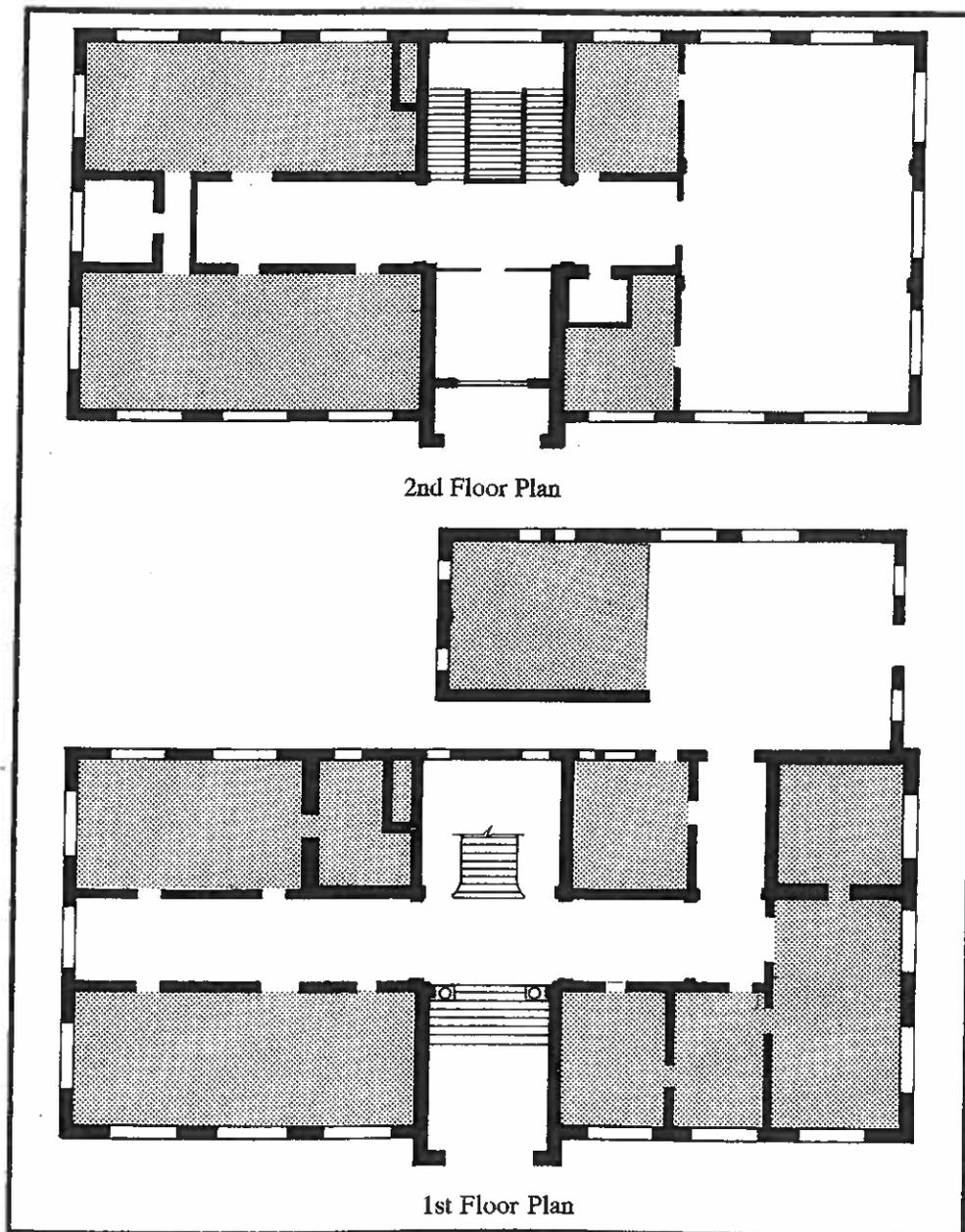


Figure No. 22

Zone 2: Moderate Significance - Treatment: Preservation/Rehabilitation

- Zone 3: Low Significance: - Treatment: Rehabilitation.

The third level of preservation for the Baker City City Hall includes the offices, storerooms, corridor, restrooms, mechanical room, and vault of the basement, and most of the first floor of the jail annex. These spaces are viewed as areas which can be subject to a high degree of rehabilitation and adaptation. See Figure No.23

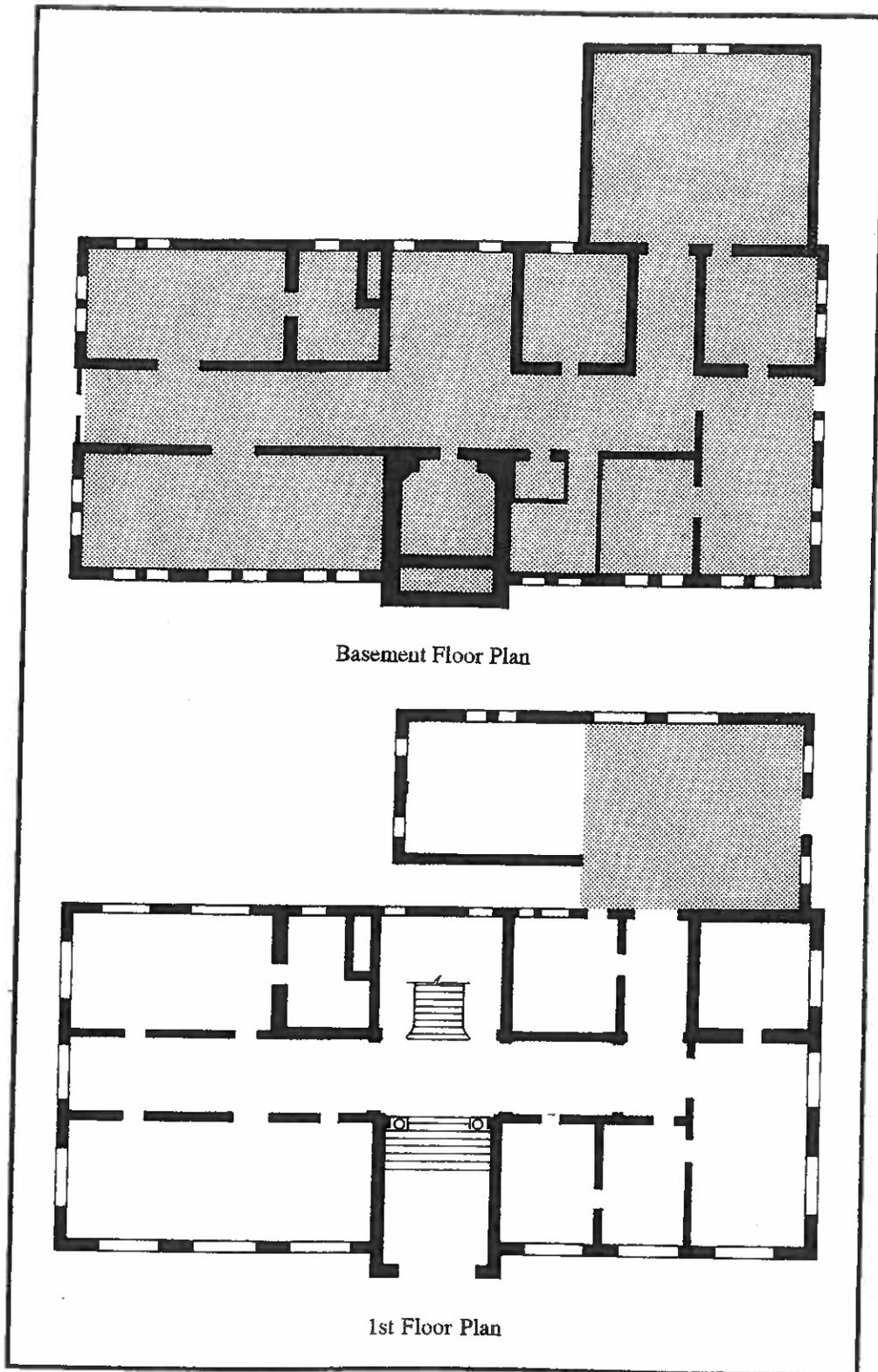


Figure No. 23
Zone 3: Low Significance

Treatment Requirements:

A rehabilitation plan for the Baker City City Hall is subject to compliance with the following regulations:

- Uniform Building Code, 1994 Edition, ICBO, as amended by State of Oregon Structural Specialty Code, 1996 Edition.
- The City Building Inspector has stated the City of Baker will accept the Uniform Code for Building Conservation, 1994 Edition, ICBO, as a referenced standard.

Special areas of importance in regard to the Baker City City Hall include:

- A) Second Floor exiting
- B) Seismic strengthening
- C) Security
- D) Spatial Planning to satisfy existing needs and accomodate future growth.

The Building Program

The assessment study has identified areas of building systems improvements and developed an historic context for a future building program. The next phase is the preparation of restoration construction documents for City Hall. The first stage in the development of construction documents is to conduct a space utilization study. Looking both at current functions and expected future needs, the space utilization study will be the framework upon which to develop a revised building plan and subsequently produce the construction documents.

Evaluations and Recommendations

Evaluations and Recommendations:

Based on the Existing Condition Assessment, the building systems of the Baker City City Hall have been evaluated for recommended renovation work. The evaluation and recommendations are presented in the Construction Specification Institute's (CSI) Masterformat. The Masterformat is composed of sixteen (16) broadscope Divisions of related construction elements. Within each Division are intermediate Sections that provide a more focused aspect of the larger Division.

For each Division and its Section, as appropriate, sidebars have been inserted along the right hand margin to summarize the discussions. A complete Cost Estimate, summarized by Division, is presented at the beginning of this section.

At the beginning of each Division, a general commentary discusses the scope of Work and how it relates to the City Hall Renovation Project. Where appropriate, specific discussion is provided under each Section heading. "Order-of-Magnitude" cost estimates are provided for each Division. The recommendations are prioritized according to the following system:

- | | |
|--------------------|--|
| Priority - High: | • Work which is essential to establish a sound and weathertight structure. |
| Priority - Medium: | • Work which is important to improve the function and operation of the building. |
| Priority - Low | • Work which is desirable in restoring the historical character and quality of City Hall; this work should be integrated with the medium priority work whenever possible |

Cost Estimate Summary

<u>Division 1 - General Requirements</u>	\$300,000
(This covers contractor administration, equipment, coordination, and planning of the project. It represents 15% of the total of Division 2 thru 16 work)	
<u>Division 2 - Sitework</u>	47,000
<u>Division 3 - Concrete</u>	15,000
<u>Division 4 - Masonry</u>	359,000
<u>Division 5 - Metals</u>	115,000
<u>Division 6 - Wood and Plastic</u>	175,000
<u>Division 7 - Thermal and Moisture Protection</u>	105,000
<u>Division 8 - Doors and Windows</u>	191,000
<u>Division 9 - Finishes</u>	175,000
<u>Division 10 - Specialties</u>	80,000
<u>Division 11 - Equipment</u>	35,000
<u>Division 12 - Furnishings</u>	98,000
<u>Division 13 - Special Construction</u> (not used)	0.00
<u>Division 14 - Conveying Systems</u> (not used)	0.00
<u>Division 15 - Mechanical</u>	380,000
<u>Division 16 - Electrical</u>	<u>155,000</u>
Sub-Total	\$2,230,000
Contractor Profit 10%	<u>225,000</u>
Sub-Total (say)	\$2,450,000
Contingency @ 20%	<u>500,000</u>
TOTAL	\$2,950,000

Division 1 - General Requirements

Division 1 addresses the general administrative elements of a construction project. It establishes the basic understanding for communication, administrative records, submittals of information, and the overall context of construction. Though the provisions of this Division are similar for most construction projects, some important distinctions are made when addressing work on a historic building.

For general planning purposes, an allowance of 15% of the base construction cost is allocated to this Division.

Section 01040 Coordination

-045 Cutting and Patching

The coordination of "Cutting and Patching" in historic structures requires careful planning by the General Contractor.

Section 01100 Special Project Procedures

-180 Temporary Protection of Historic Fabric

In new construction, sensitive finish work is installed late in the project, after high impact work of electrical, mechanical, and structural systems has been erected and installed. In historic buildings, important decorative and detail interior and exterior elements are exposed to potentially damaging conditions throughout the project. Extra protection measures must be used by the contractor to insure that the existing historic fabric is not damaged.

General Requirements
Priority: High
Estimate: \$300,000

Division 2 - Sitework

Sitework involves two basic elements. The first is the removal of material and equipment no longer needed, or which needs to be discarded or recycled as part of the building improvement program. Care is required in designing the building program to insure the preservation of historic features so they are not unnecessarily altered or removed.

The second element of sitework concerns supportive features for various building systems, along with aesthetic considerations of site presentation.

02050 Demolition

-070 Selective Demolition

As an unreinforced masonry building in a relatively moderate seismic zone, a degree of structural upgrading will be required as part of the building program. It is anticipated that some selective structural demolition will be required to integrate new strengthening elements and connections.

Estimated Cost (Allowance): \$15,000

To improve building functions and operation, while restoring historical features, selected interior elements will be removed. These usually include hung ceilings, such as is present in the Council Chambers, and non-bearing partitions which have accumulated over time.

Estimated Cost (Allowance): \$10,000

Sitework
Priority: High/Medium
Estimate: \$47,000

02700 Sewerage and Drainage

-710 Subdrainage Systems

The roof drains into four primary internal downspouts around the building. The drains drop down from the roof inside walls to an underground drainage system. The condition of this underground drainage system needs to be tested. Given the age of the building, some repairs are anticipated.

As part of the repair of the roof, two new drains should be installed in the gutter, requiring connection to the underground drainage system. Excavation will be required to connect these new drains.

In addition to the downspout drainage system, a foundation drainage system needs to be installed along the perimeter of the basement wall to insure all surface water is collected and controlled.

Estimated Cost: (Allowance) \$15,000

02800 Site Improvements

-810 Irrigation Systems

The current site irrigation system requires modification to eliminate watering the ground next to the building foundation and to serve the revised landscaping.

Estimate: \$2000.00

-2900 Landscaping

-910 Shrub and Tree Transplanting

Much of the landscaping around City Hall is planted too close to the base of the building. Plant roots will accelerate sub-surface masonry deterioration by holding moisture in the ground. The existing plantings need to be moved away from the building and transplanted under a new landscape plan.

Estimate: \$5000.00

Division 3 - Concrete

Concrete work involved the construction of formwork, preparation and installation of reinforcement, and the placement of concrete. It requires close coordination with other trades and design features.

03300 Cast-in-Place Concrete

-330 Architectural Concrete

The present marble steps, just inside the front doors, are supported by a wood frame assembly. The flexibility of the wood is not compatible with the relative stiff nature of the thin marble steps. This has resulted in the cracking and breaking of the marble sections. It is recommended that the wood framing be removed and a new steel frame be installed to support the marble steps. This steel frame will require a series of new reinforced concrete footings.

On the exterior of City Hall, it is recommended that the north basement entry be rehabilitated as part of the redesign and installation of a more compatible entry canopy.

The entry steps of the jail annex are in poor condition and need to be replaced. While the steps were most likely granite in the original installation, new compatible concrete steps would be an acceptable substitute.

Upgrading of floor structure in the jail annex addition will require new concrete footings

Estimate: \$15,000

Concrete
Priority: High/Medium
Estimate: \$15,000

Division 4 - Masonry

Masonry addresses the stone and brick walls of City Hall. The exterior walls are a composite of local volcanic tuff stone and brick. Primary interior walls are brick with plaster finish. This division deals with the following treatments: repair, replacement, and reinforcement.

04100 Mortar and Masonry Grout

Mortars and grouts comprise an extremely important component of masonry building systems. Mortars are used to bed masonry units and transfer building loads in a uniform manner throughout the wall. Mortar also is a barrier to air and water, while providing an important aesthetic element to the buildings appearance. Grouts are special types of mortar which flow into voids and are most commonly associated with modern reinforced masonry. But grouts also can perform an important function in the repair of historic masonry by filling in holes and spaces within a wall that have been created by roof leaks or failed flashing.

While mortars and grouts are composed essentially of sand, lime and cement, the formulation varies with the type of masonry units and where it will be used in the wall. For City Hall, there will be mortars for stone, brick, and grouting. The cost of the mortars are included within the treatments proposed for masonry restoration below.

Masonry
Priority: High
Estimate: \$359,000

04400 Stone

-420 Replacement Stone of Local Tuff

Within the original building design, cap stones were present at the corners of the parapet walls. These stone

caps were an important design element in defining the termination of the engaged corner columns. The stones were most likely removed during roofing repairs and never replaced. New stone should be obtained from the original local quarry, dressed and sized, and installed. The stone should be anchored with stainless steel fasteners to the wall below.

Estimate: \$4000.00

-455 Replacement/Resetting Marble Steps

Existing marble entry steps need to be removed, a new support structure installed, and the marble reset. All broken sections should be replaced. The steps are of Alaskan Tolkeen marble which is available through suppliers in the Northwest. The cost of the new support structure is included under Concrete and Metals.

Estimate: \$5,000

04500 Masonry Restoration & Cleaning

-520 Masonry Restoration

The exterior stone of City Hall was repointed recently. Unfortunately, a mortar with too high a percentage of Portland Cement was used, creating a strong, but very inflexible mortar. Movement of the tuff stone exterior relative to thermal forces has caused a number of localized failures of this repointing mortar. All areas of cracked and loose mortar need to be replaced.

On the interior of the tower, several localized areas of brick mortar failure require replacement.

Along the lower portion of the parapet of the rear elevation (west), brick covered with stucco was used in the area just above the cornice line. It was not uncommon to use this technique on an elevation of lesser

exposure. The stucco has deteriorated, along with a number of bricks, and both require replacement.

Repair work on the upper surface of the primary metal cornice, the installation of the new gutter, and all flashing around the tower and chimney, collectively included as part of roofing repair, will require coordination with masonry restoration work for water-tight assemblies.

Twelve of the lintels over the basement windows are cracked. They need to be pinned with stainless steel pins and the crack repointed.

There are numerous cracks in the belt course stones of the first floor. They appear to have originated from minor building settlement. Being long and thin, the stones were very susceptible to the slightest deflection. The cracks need to be repointed.

The flat arch over the main door of the jail annex is sagging. This is usually caused by mortar deterioration. The arch needs to be releveled, deep grouted, and repointed, and a new internal lintel installed.

Over the south basement entry, settlement of west abutment appears to have occurred, causing the arch to open. The arch is currently shored with a steel beam and pipe columns, although this is not preventing the arch from moving apart. This situation requires further investigation to insure any apparent settlement has stopped. Once stopped, the arch can be shored and grouted for stability.

Also along the south elevation, the flat arches of two first floor windows are sagging. The mortar joints have cracked since the last repointing. Investigation will be

needed to confirm the type of lintel behind the arch so that the arch can be shored, reset, and grouted.

The upper third of the chimney is deteriorated and requires rebuilding. This rebuilding will require incorporation of reinforcement for seismic purposes.

The parapet of the jail annex addition is in poor condition and requires rebuilding.

Estimate: \$250,000

The tuff stone exterior is essentially a veneer over the brick backing. Some "through" stone quite possibly exists which provides a connection between the stone and the brick portions. In addition, some iron "cramps" are visible for additional connections, though the "cramps" are intermittent and spaced irregularly. Adequate and uniform anchoring of the veneer is important for resistance of lateral and shear forces.

Estimate: \$100,000

Division 5 - Metals

The Metals division addresses both structural application for primary loads, connections and bracing, as well as metals used for ornamental purposes. The design of City Hall utilized extensive ornamental fabrications on the exterior.

05100 Structural Metal Framing

-120 Structural Steel

Structural steel may be used for strengthening the structure for seismic and wind resistance. This will definitely occur in the tower. The full extent of structural steel fabrications can not be determined until a full analysis is completed, but for estimating purposes, an allowance has been included.

Estimate: (allowance) \$50,000

05500 Metal Fabrications

There is only one means of egress from the 2nd floor of City hall. In planning for an anticipated code required second exit, a variety of solutions are available. To insure the cost estimate is complete, an allowance has been included for a metal fire stairs.

Estimate: (allowance) \$20,000

A new steel supporting structure will be required for the marble entry steps. In addition, some replacement of wooden lintels with new steel lintels is anticipated.

Estimate: (allowance) \$20,000

Metals
Priority:High/Medium
Estimate: \$115,000

05700 Ornamental Metal

-720 Ornamental Handrails and Railings

New handrails will be needed for the entry steps of the main building, the jail annex, and both the north and south basement entries.

Estimate: \$10,000

-730 Ornamental Sheet Metal

The principal articulated exterior ornament of City Hall is painted architectural galvanized metal in the form of tower walls and the building's cornice. From a distance, the metal appears to be in fair to good condition, with only noted localized deterioration. A complete judgment of the condition cannot be made until a very close inspection is conducted. It is anticipated that some minor repair/replacement work will be required.

The Tower facades will need possibly refabrication of two sections on the north elevation, and most likely a number of connections re-soldered/riveted. Thermal stress, along with wind movement of the tower, will have opened up joints and torn some connections. In addition, an allowance has also been added to cover anticipated cost of removal and replacement of existing metal to access repairs to the wooden frame of the tower.

Estimate: (allowance) \$10,000

The Palladian Porch at the second floor of the front facade is in fair condition, and should only require minor repair efforts, but will require a good cleaning prior to painting.

Estimate: \$2500

The main cornice around the building appears in reasonable condition, with the noted exception of the upper surface (which will be addressed under Division 7 - Thermal and Moisture Protection). Several small localized areas of the cornice face will need repair prior to painting, but these renovations are minor.

Estimate: \$2500

Division 6 - Wood and Plastics

The Wood and Plastics Division for City Hall addresses components and assemblies associated with both wood as a structural material and as a finish element.

06100 Rough Carpentry

-110 Wood Framing

The structural framework of the upper portion of the bell tower is a heavy timber assembly. There are observable portions of some members which exhibit dry rot from wind blown moisture and snow. At the base of the wooden frame, where it attaches to the masonry wall, signs of moisture accumulation are present on members to the west and south sides. These areas cannot be physically accessed without removal of some of the exterior sheet metal. These areas need closer inspection to verify condition, and may require replacement. The estimate includes an allowance for further investigation and limited frame member replacement.

Estimate: \$20,000

Upon analysis, improvement to the roof framing is expected. This effort will involve additional connections and bracing.

Estimate: \$10,000

The support framing for the main central stairway requires improvement for structural and fire safety reasons.

Estimate: \$5,000

Wood and Plastic
Priority: High/Medium
Estimate: \$175,000

In replacing the roof (see Division 7), the wood sheathing will most likely need to be replaced. As new office space is created in the basement, and existing offices are redesigned in the first floor, some minor, non-bearing framing will be needed (these studs may also be steel studs).

Estimate: (allowance) \$20,000

For seismic requirements, strengthening of the horizontal diaphragms of the 1st floor, 2nd floor, and 2nd floor ceiling will be needed.

Estimate: \$80,000

06200 Finish Carpentry

-220 Millwork

Replacement millwork will be needed in the 1st and 2nd floor areas to replace that damaged or missing due to installation of lowered ceilings, previous alterations, and temporary partitions.

Estimate: \$20,000

06400 Architectural Woodwork

-410 Custom Casework

As the character of the Council Chambers is returned to the historic appearance, and new audio/visual equipment is integrated into the room, it is envisioned that a more compatible series of desks and podiums would be installed.

Estimate: (allowance) \$20,000

Division 7 - Thermal and Moisture Protection

Thermal and moisture protection addresses materials and assemblies within the envelope to prevent water intrusion and control internal environments.

07100 Waterproofing

-110 Membrane Waterproofing

Any new penetrations, or abandonment of old penetrations, in foundation for utilities or mechanical lines will require protection from water intrusion.

Estimate: (allowance) \$5000

07200 Insulation

-210 Building Insulation

Insulate needs are anticipated for the basement walls. Sound control attenuation blankets may be required to meet sound standards for meeting rooms and various offices.

Estimate: (allowance) \$5000

07600 Flashing & Sheetmetal

-610 Sheet Metal Roofing

The main roof of the City Hall needs to be replaced. To match the original building design, a new terne metal roof will be installed

Estimate: \$75,000

Moisture Protection:
Priority: High
Estimate: \$105,000

-620 Sheet Metal Flashing

In conjunction with the new roof, the upper surface of the primary cornice around the building will be replaced.

Estimate: \$15,000

07900 Joint Sealers

Sealants will need to be installed around all new windows, existing openings, and in conjunction with various masonry repairs.

Estimated: \$5,000

Division 8 - Doors and Windows

08100 Metal Doors and Trim

Transom windows in exit corridors of historic structures are required to have a metal backframe and wire glass.

Estimate: \$8,000

08200 Wood and Plastic Doors

-210 Wood Doors

New wooden front doors matching originals, with new frame and side lites, as shown in historic photographs are planned for the main entry. New wooden entry doors will also be installed in the basement and the street access of the Jail Annex.

Estimate: \$20,000

The doors along an exit corridor in a historic building, while not required to meet fire resistance levels of new construction, should strive for the highest level attainable in all but the most exceptional situations. For planning purposes, it is proposed that all existing panelled doors with glass inserts be replaced with solid wood panelled doors.

Estimate: \$10,000

08305 Access Doors

Access doors to various mechanical and operational functions are anticipated for new building systems.

Estimate: (allowance) \$3000

08610 Wood Windows

New wood windows matching the originals in design and configuration, but with insulated glass, will be installed in those basement windows which have not

Doors and Windows
Priority:High/Medium
Estimate:\$191,000

been upgraded. On the 1st and 2nd floors, new windows to match existing will be fabricated with insulated glass for those opening where the originals have been lost. The windows will be painted on the outside and naturally finished on the interior.

Estimate: \$50,000

08650 Wood Window Restoration

The large staircase window frame will be retained. The frame will be repaired and new insulated sash installed to match the historic configuration.

For those extant windows on the 1st and 2nd floors, the frames and transoms will be retained. They will require moderate to extensive repair. It is proposed to fit the transoms with interior 'storm' window for energy efficiency. The existing sash will be either replaced with new operable/fixed insulated sash to match the original or fitted with operable storm sash.

Estimate: \$70,000

08700 Hardware

-710 Finish Hardware

Throughout City Hall, much of the original hardware is still existing on doors and windows. This hardware would be retained. Where original hardware was missing, reproduction components will be installed to provide a uniform series throughout City Hall. New hardware required by code, finish, profile, and appearance will be considered to complement the historic hardware.

Estimate: (allowance) \$25,000

-0730 Weatherstripping and Seals

Openings which retain historic frames will be weatherstripped and sealed for energy conservation.

Estimate: \$5000

08800 Glass and Glazing

The glass faces of the Tower Clock are cracked and broken. the faces would be replaced with new to match the originals.

Estimate: \$6000

Division 9 - Finishes

The Finishes Division is devoted to coatings, substrates, and materials that present a final appearance of a building's walls and floors.

09200 Lath and Plaster

-210 Gypsum Plaster

Anchorage for various alterations and hung ceilings damaged original plaster ceilings and wall surfaces. Renewal of original ceiling heights will require repair of these areas.

Estimate: \$15,000

09211 Plaster Restoration

Decorative Historic plaster elements are to be restored where damaged or lost from past work. This will include columns, column capitals, mouldings and bases.

Estimate: \$15,000

Finishes:
Priority: Medium/Low
Estimate: \$175,000

09250 Gypsum Board

New walls for fire rated assemblies will require installation of new gypsum board.

Estimate: (allowance) \$10,000

09300 Tile

The historic entry tile floor will be restored.

Estimate: \$5,000

09550 Wood Flooring

The original corridor floors appear to have had a central carpet runner with natural wood finished borders. Due to past remodels and carpet installations, rehabilitation of portions of the floor are anticipated.

Estimate: \$15,000

09650 Resilient Flooring

-665 Sheet Flooring

Limited areas of the building are anticipated to require sheet flooring for sanitary and utilitarian functions.

Estimate:\$7500

09680 Carpet

New carpet will be installed in both circulation, Council Chambers, and select offices.

Estimate: (allowance) \$40,000

09900 Painting and Finishing

-910 Exterior Painting

All exposed exterior metal and wood surfaces are to be painted. Colors will be based upon a historic paint analysis.

Estimate:\$40,000

-920 Interior Painting

All interior surfaces will be painted as part of the interior finish plan. Paint colors and/or natural finishes for public and circulation spaces will be based on historic paint studies.

Estimate: \$20,000

09940 Decorative Finishes

Decorative plaster details of columns, coffer beams, and cornices will be restored with original faux finishes.

Estimate:\$7500

Division 10 - Specialties

The Specialties Division covers a variety of components to complement basic functions and systems of building functions.

10160 Compartments & Cubicles

New toilet compartments would be installed for the up-graded existing facilities.

Estimate: \$5000

10200 Louver & Vents

Depending on the mechanical system devised for the City Hall, and the possible utilization of the attic space for some mechanical units, roof vents housed in modest dormer frames on the rear roof elevation may be required. Such vents may also be required to reduce attic heat build-up.

Estimate: (allowance) \$2000

10520 Fire Protection Specialties

Fire extinguishers, cabinets housing, and accessories will need to be incorporated at various locations within the building.

Estimate: \$5000

10530 Protective Covers

A new entrance canopy should be installed to complement the historic character of City Hall

Estimate: (allowance) \$15,000

Historic photographs illustrate early use of canvas awnings on the 2nd story windows of the west elevation to reduce summer heat gain.

Estimate: \$5000

Specialties:
Priority: Medium/Low
Estimate: \$80,000

10670 Storage Shelving

Double face mobile unit storage shelving on floor tracks would offer an efficient space utilization for the storage of public records in new basement offices

Estimate: \$45,000

10800 Toilet and Bath Accessories

Accessories to compliment restrooms improvements

Estimate: (allowance) \$3000

Division 11 - Equipment

11130 Audio-Visual Equipment

Audio-Visual equipment improvements to Council Chambers can be made to allow for computer, video, slide, and graphic presentations.

Estimate: (allowance) \$35,000

Equipment:
Priority: Medium/Low
Estimate: \$35,000

Division 12 - Furnishings

The Furnishing Division includes elements of comfort and functional quality for the civic and business activities of the public while providing an efficient and productive environment for county staff

12380 Interpretive Display

Interpretive display depicting the historic development of Baker City, the City Hall, and the role of democracy at the local level.

Estimate: \$30,000

12500 Window Treatment

For comfort and glare control, exterior windows are recommended to have a shading system for each window. Shades, blinds, or draperies, depending on the use and orientation of the space, will be installed.

Estimate: (allowance) \$20,000

12610 Furniture

As part of the functional improvements of the offices and departments, it is anticipated there will be a requirement for new furniture.

Estimate: (allowance) \$30,000

12710 Auditorium Seating

As one of the most important spaces within City Hall, the council chambers will be renovated to enhance civic functions as well as rehabilitate its historic character. Public seating will be replaced as part of the improvements.

Estimate: \$18,000

Furnishings:
Priority: Medium/Low
Estimate: \$98,000

Division 13 Special Construction

13080 Seismic Control

The subject of this Section has been incorporated with other areas of the estimate.

Division 15 - Mechanical

The plumbing, heating, ventilation, and cooling systems of City Hall require considerable attention to elevate them to modern standards and an efficient operation. A significant upgrade of the heating/cooling system is required to provide year-around comfort for all building spaces and equipment. Plumbing systems need replacement as part of an improved maintenance management program. (See Appendix for complete Mechanical Engineering Assessment)

Estimate: \$380,000

Mechanical
Priority: High/Medium
Estimate: \$380,000

Division 16 - Electrical

Electrical improvements to the City Hall will encompass minor modifications to the primary service and extensive work on the building's system of branch wiring. In addition, work will address telephone and computer network systems, a new fire alarm system, a code approved emergency generation system, and an overall energy efficiency program for all lighting plans. (See Appendix for complete Electrical Engineering Assessment).

Estimate: \$135,000

16510 Lighting Fixtures

The design, light quality, and appearance of lighting fixtures are an important characteristic of a well planned renovation project. The important public spaces of the building, both interior and exterior, require lighting that complements and enhances the historic City Hall.

Estimate: \$20,000

Electrical
Priority: High/Medium
Estimate: \$155,000

Conclusion

The assessment and evaluation of the building systems and assemblies of City Hall reveal that there is a broad spectrum of improvements required to conserve the structure and provide efficient governmental functions to the citizens of Baker City.

The envelope of the structure has performed exceptionally well since it was built. Quality materials were chosen and have weathered well over the years. Improvement requirements for the exterior of the building center on two issues: 1) replacement of materials that have simply exceeded their ability to continue to perform effectively, and 2) increased standards of building construction technology.

With only minor repairs, the original terne metal roof has lasted over ninety years. But serious deterioration is beginning to occur, and replacement is warranted. The original fenestration of the building has been modified through the years in search of increased energy efficiency and reduced maintenance, but at the cost of compromising the dignity and value associated with the design of a historic symbol of democratic government. Modern window technology can provide for energy improvements and high design quality that will reduce operational costs and recapture lost historic character.

Since 1903, our understanding of earthquake forces and building technology has identified improvements which reduce the degree of risk from occupying structures in locations of high seismic potential. This new knowledge has precipitated increased building standards and performance levels above earlier construction techniques. City Hall is a building that can benefit from this knowledge

Many original design features are still present on the interior of City Hall, but these have been obscured by efforts to accommodate the growth of city governmental responsibilities and to lower operation costs. These include installing modern (at the time) acoustical ceilings, introducing new lighting fixtures, carpeting over wooden floors, and constructing new service counters. Each individual effort was well intended, but collectively the effect has been to lessen the coherent quality of both a well-designed building and a highly structured government office. Well integrated improvements to the building's heating and cooling components, upgrading of electrical service, restoration of historic spaces , and rehabilitation of functional areas can achieve better function of City Hall and greater respect for the effort and services of the people who work there.

Appendices

Preliminary
Baker City City Hall
Paint Analysis

Introduction:

Definition and Purpose:

The preliminary paint analysis is a qualitative study of existing paint coatings from representative surfaces of the Baker City City Hall. The purpose is to seek initial understanding of the character and history of coatings used in the protection and decoration of finished surfaces. Prior to selection of definitive colors for rehabilitation, a quantitative study should be conducted to establish exact hue and tones.

Methodology:

Samples of extant coating were removed from the substrate using a small exacto knife. Sample substrate and location within the building were recorded. The samples were observed under both 10x and 30x magnification. The characteristics of the samples were recorded. After reviewing the samples and comparing observations, a second review of the samples was conducted to record the chronology of the layers.

Sampling Locations and Recorded Observations:

Exterior:

Sample No. 1:

Location:	Main Roof Field
Substrate:	Terneplate metal
1st Layer:	Dark Green
2nd Layer:	Light Green
3rd Layer:	Red
4th Layer:	Asphaltic emulsion
5th Layer:	Aluminium coating
6th Layer:	Tan

Sample No. 2:

Location: Parapet Cornice

Substrate: Galvanized metal
1st Layer: Red
2nd Layer: Grey with sand
3rd Layer: Dark Green
4th Layer: Red
5th Layer: Light Green
6th Layer: Brown

Sample No. 3:

Location: 2nd Floor Window Exterior

Substrate: Wood
1st Layer: Grey
2nd Layer: Dark Green
3rd Layer: Light Beige
4th Layer: Brown

Sample No. 4:

Location: Trim, 2nd Floor Balcony window

Substrate: Wood
1st Layer: Grey
2nd Layer: Dark Green
3rd Layer: Light beige
4th Layer: Light Green
5th Layer: Brown

Sample No. 5:

Location: Entry Door Trim

Substrate: Wood
1st Layer: Grey
2nd Layer: White
3rd Layer: Off-white
4th Layer: Tan

Sample No. 6:

Location:

North Wall, exterior entry
vestibule

Substrate: Plaster
1st Layer: Tan
2nd Layer: Off White
3rd Layer: Beige
4th Layer: Off White
5th Layer: Tan

Sample No. 7:

Location:

Exterior Balcony Wall, 2nd Floor

Substrate: Plaster
1st Layer: Beige
2nd Layer: Light Grey Green
3rd Layer: Brown

Sample No. 8:

Location:

2nd Floor Palladian Porch: west
side of pier under half column at
end of balustrade

Substrate: Galvanized Metal
1st Layer: Red
2nd Layer: Grey with sand
3rd Layer: Dark Green
4th Layer: Light Beige
5th Layer: Light Grey Green
6th Layer: Brown

Sample No. 9:

Location:

2nd Floor Palladian Porch:
column

Substrate: Galvanized Metal
1st Layer: Red
2nd Layer: Grey with sand
3rd Layer: White
4th Layer: Light Beige
5th Layer: Light Grey Green
6th Layer: Brown

Sample No. 10:

Location:

2nd Floor Palladian Porch:
Cornice above columns

Substrate:	Galvanized Metal
1st Layer:	Red
2nd Layer:	Grey-Brown with sand
3rd Layer:	Off White
4th Layer:	Dark Green
5th Layer:	Light Beige
6th Layer:	Grey Green
7th Layer:	Light Grey Green
8th Layer:	Red
9th Layer:	Brown

Interior

Sample No. 11:

Location:

Pilaster Base: south of
central stairs

Substrate:	Plaster
1st Layer:	Dark Brown
2nd Layer:	Salmon
3rd Layer:	Light Beige
4th Layer:	Light Beige
5th Layer:	Medium Beige

Sample No. 12:

Location:

Pilaster: south of
central stair

Substrate:	Plaster
1st Layer:	Salmon
2nd Layer:	Light Beige
3rd Layer:	Medium Beige

Sample No. 13:

Location:

Pilaster Base: north of
central stairs

Substrate:	Plaster
1st Layer:	Salmon
2nd Layer:	Medium Brown
3rd Layer:	Dark Brown
4th Layer:	White
5th Layer:	Dark Brown
6th Layer:	Light Green
7th Layer:	Salmon
8th Layer:	Off White
9th Layer:	Medium Beige

Sample No. 14:

Location:

Base of 1st Floor North Corridor

Substrate:	Plaster
1st Layer:	Dark Brown
2nd Layer:	Salmon
3rd Layer:	Light Beige
4th Layer:	Grey Green
5th Layer:	Reddish Brown
6th Layer:	White
7th Layer:	Beige

Sample No. 15:

Location:

Base of 1st Floor south Corridor

Substrate:	Plaster
1st Layer:	Reddish Brown
2nd Layer:	White
3rd Layer:	Dark Brown
4th Layer:	Grey Green
5th Layer:	White
6th Layer:	Light Beige

Comments:

Exterior: The roof was a green, along with windows. The metalwork of cornice and Palladian porch sand painted to match stone.

Interior Window Surfaces:

The interior of the windows were a dark stain on natural wood surface, similar in appearance to the existing newel posts of the central stairs.

Interior Corridor Walls:

The plaster of the interior corridor walls shows a water base salmon color paint.

Decorative Elements:

The plaster bases appear to have had a simulated dark wood stain finish. More samples are needed to verify the plaster columns and ceiling mouldings.

Preliminary
Systems Analysis
for
Baker City City Hall

This appendix includes preliminary determinations made by structural, mechanical, and electrical consultants for the City Hall of Baker City. These observations and their corresponding cost estimates are incorporated into the CSI Masterformat analysis which precedes the appendix.

PRELIMINARY
STRUCTURAL OBSERVATIONS
August 20, 1996

CITY HALL of BAKER CITY, OREGON



EXPIRES 12/31/96

ROGER W. McGARRIGLE, P.E.
CIVIL & STRUCTURAL ENGINEERING

SUMMARY .. The building construction reportedly began in 1903 and was completed in less than two years. The construction consists of brick masonry exterior walls faced with stone veneers, interior brick masonry and/or wood frame walls, and wood floors and roof framing. The clock and bell tower consists of a metal skin over wood framing, above the main roof's ridge, supported on brick masonry bearing walls. The west wall of the tower appears to be supported by framing members in the second floor ceiling.

A 1980 structural evaluation concluded that seismic strengthening and restoration of the masonry were important to prolong the building's useful life. Repointing of some of the masonry has occurred since that 1980 report. However, new cracks are present in some of the repointing and this indicates that the masonry veneer is not well attached and supported.

The building's main structural concerns continue to be the risk of at least partial collapse due to earthquake, and falling masonry veneer in the future as deterioration of veneer and attachments continues.

PURPOSE .. This report summarizes preliminary observations made in a brief walking tour of the building. These observations were made to provide the engineer with a general understanding of the building's configuration and structural condition. Information obtained in the preliminary observation of the building is used as a basis, along with earthquake engineering experience, to develop a plan for the structural upgrade of the building that is expected to extend its useful life to beyond the next century. As the structural plan is developed along with all of the non-structural issues, the general thrust of the structural plan can be expected to remain essentially unchanged. However, as the details of the existing structure and the intent of the City relative to renovating the building are determined, the extent of the structural plan may change.

P R E L I M I N A R Y
STRUCTURAL OBSERVATION
CITY HALL BAKER CITY
August 20, 1996

LIMITATIONS .. This preliminary structural observation is limited to the exposed and expected structural conditions of the building, and it does not include engineering calculations, building code reviews, or sampling or testing of any building components or systems. This report is based on a walking tour around and through portions of the building. No review was made of construction drawings or of plans for proposed improvements.

BACKGROUND .. The building construction reportedly began in 1903 and was completed in less than two years. The construction consists of brick masonry exterior walls faced with stone veneers, masonry and/or wood frame interior walls, and wood floors and roof framing. The clock and bell tower consists of a metal skin over wood framing, above the main roof's ridge, supported on brick masonry bearing walls. The west wall of the tower appears to be supported by framing members in the second floor ceiling.

A 1980 structural evaluation concluded that seismic strengthening and restoration of the masonry were important to prolong the building's useful life. Repointing of some of the masonry has occurred since that 1980 report. However, new cracks are present in some of the repointing and this indicates that the masonry veneer is not well attached and supported.

The earthquake hazard in eastern Oregon is presently considered to be relatively moderate (many locations are considered to be much less at risk, and other locations are considered to be at higher risk). However, Baker City is located approximately 200 miles west of the northwest's largest earthquake (Borah Peak in 1983) since Lewis and Clark' historic journey, and is located approximately 300 miles east of the great Cascadia Subduction Zone where the largest earthquakes this continent has known are believed to occur. And, recent (this century) earthquakes have occurred to the north as near as the Washington and Oregon border, to the west on the western side of the Cascades, and to the southwest in the Klamath Falls area.

Since earthquakes are the result of the excessive accumulation of strain energy that builds up in the earth's crust as the crustal plates move about on the earth's surface, and since this energy has not been released for a very long time in eastern Oregon, there is a strong reason to expect a significant earthquake in Baker City's future. When such an event might happen, is anyone's guess.

Based on the results of earthquakes in other locations, we have learned that buildings in a condition such as the City Hall are expected to be severely damaged or destroyed when a significant earthquake does occur, if their conditions are not improved. Where buildings are properly strengthened they have demonstrated reasonable performance with earthquake shaking.

COSTS .. Structural renovation costs are highly dependent on the need to remove and replace finishes. Where finishes are to be removed and replaced just to allow the structural work, the cost of replacing the finishes in a building such as the Baker City City Hall far exceeds the cost of the strengthening. We are not in a position to give an opinion on the cost of replacing finish materials and that cost is not included in the following, very preliminary, opinion of the construction cost to strengthen the building's earthquake resistance capacity.

The following cost figures may need to be modified significantly as the survey, materials testing, engineering, and architectural design process develops. The following cost figures are provided as an "educated guess" until the actual plans are developed.

1. Engineering survey: demo, testing, and "as constructed" plan	\$ 10,000
2. Engineering design:	\$ 25,000
3. Main roof: remove roofing, place plywood over existing sheathing.	\$ 20,000
4. Clock tower: plywood sheathing, wood to masonry connections, masonry reinforcing, and drag struts into main roof.	\$ 25,000
5. Second floor ceiling diaphragm:	\$ 20,000
6. Second floor diaphragm*:	\$ 30,000
7. First floor diaphragm*:	\$ 30,000
8. Masonry wall strengthening: remove interior finishes, repoint mortar, strengthen brick masonry walls, attach floors to walls.	\$200,000
9. Veneer attachment strengthening:	\$100,000
10. Northwest addition:	\$ 50,000
11. Contingency:	\$ 40,000
Structural total:	\$500,000

- end -

C:\WP60\REPORTS\9508BAKE.R01

Accipio Inc.

Consulting Engineers

August 28, 1996

Jeff Dubin
Hanson Dunahugh Nicholson AIA
215 Northwest Park Avenue
Portland, OR 97209

Project: City Hall Mechanical Report - Baker City, Oregon
Proj. #: 9605

Dear Jeff,

This report provides comments and recommendations regarding the plumbing and HVAC systems for the above project. Our recommendations and associated budget costs are based upon architectural drawings dated February 28, 1980, two mechanical drawings dated June 1989, video tape and site observation notes received from HDN Architects dated July 15, 1996, and a telephone conversation with Mr. Gary VanPatten, Baker City.

Engineering analysis has not been conducted, therefore, our findings and recommendations should be considered preliminary. Since the building is on the historical register, the mechanical systems should not deface the outside of the building. The mechanical components within the building should be installed to minimize alterations to the building as much as possible.

EXISTING MECHANICAL SYSTEMS

EXISTING PLUMBING: Most of the plumbing fixtures and piping are original, and the water heater is electric. The potable water piping is probably galvanized and corroded. Leaks, reduced water pressure and water quality may be an issue. Old galvanized piping that corrodes causes discolored (brown) water and small amounts of iron can break loose from inside the piping. The iron deposits can cause seals at the plumbing fixtures to prematurely fail. Rain drain piping located inside the building appears to be metal and uninsulated. When frigid water runs down inside the rain drain pipe, water may condense on the outside of the pipe. When this happens, damage to the building and furniture could occur.

EXISTING HVAC: The heating, ventilating and air conditioning (HVAC) system is a combination of steam heat and heat pump (split system) units. Not all of the spaces are cooled. The north and south ends of the first floor and the southwest corner of the second floor are cooled. The outdoor units are located just outside the boiler room on the west side of the building, and on the sloping portion of the roof. Steam is produced by two gas fired boilers (1989-1990 vintage) located in the southwest corner of the basement. Most of the steam piping is original, and is a one pipe system with some two pipe. Most of the steam radiators are thermostatically controlled at the unit. Ventilation is provided by double hung, operable windows. The system has no night set back and operates at the same temperature throughout the heating season. There have been many complaints surrounding the HVAC system where the occupants feel both cold and hot.

COMMENTS & RECOMMENDATIONS

PLUMBING: Plumbing fixtures and piping are old and should be replaced. If the main water line serving the building is over 25 years, suggest replacing it to the meter. All potable water piping material should be replaced with copper. Recommend sizing the piping system to accommodate flush valve type water closets at public rest rooms. Flush valve water closets have a quicker response time to flushing than flush tank type water closets. All interior rain drain piping should be insulated. Estimated plumbing costs are \$50,000.

HVAC: There are several types of HVAC systems that could work for this building, however, each has its limitations. The following is a brief discussion of three systems followed by our recommendation.

1) Gas Fired Furnaces With DX Cooling (split system) is probably the most economical first cost system, however it would require several units in order to zone the spaces properly. This would result in many outdoor units scattered around the perimeter of the building (aesthetically not pleasing). Generally, the maximum distance from the indoor unit to the outdoor unit is 50 feet, greater distances reduce cooling capacity. Each zone would probably serve more than one space, and those spaces without the thermostat control could be uncomfortable during certain times of the year. A separate outside air fan system would be located in the attic, taking air from the bell tower or rear dormer with louver and distributing it to the gas fired units. Gas piping would need to be piped to each unit. Also, gas vents would terminate through the roof from each unit. This system is not recommended. Note: An air to air heat pump system(s) is not recommended due to the cold weather conditions and snow fall.

2) Fan Coil Units with Chiller (four pipe system) will heat and cool with adequate control of each space or zone. This system will allow for heating and cooling spaces concurrently all year round. A chiller would be located on the west side of the building adjacent to the boiler room and a pump would be located in or near the boiler room to circulate chilled water to the fan coil units. A steam to water heat exchanger will be required as well as a pump to circulate hot water to the fan coil units. The existing boilers would be re-used. The fan coil units can be located on the floor in closet areas and in the attic with a ducted air distribution system, and/or console type units located below windows at the building perimeter.

Outside air (for ventilation) could be introduced to the fan coil units (not console type) from a fan located in the attic space. Outside air would be taken from the bell tower or rear dormer with louver and distributed to each unit. The outdoor air would be pre-heated. The ventilation system would operate only during building occupancy. If console units are used at the perimeter - operable windows (1/20 opening of floor area) would have to be used for the required ventilation. Wall louvers would deface the outside of the building and cannot be used.

Steam or hot water radiation units are recommended at the main entry to the building. This will help offset the large heat loss due to frequent opening and closing of the outside door.

Fan coil units with chiller will not impact the outside of the building except where the chiller is located. Ductwork would be minimal since the fan(s) are located in or near the space they will serve. This will be an expensive system, budget estimate of approximately \$16 to \$19 a square foot.

- I. This facility is being served overhead from the local Utility Company delta-connected pole mounted transformers. Documentation taken during the site review suggests the services to be 120/240 volt, single and three phase. Main distribution and metering equipment are located outdoors. The service was installed approximately two (2) years ago, and modifications will be necessary to serve additional loads.
 - A. Probable electrical service construction costs: \$10,000.00

 - II. Branch circuit wiring systems and receptacles are obsolete and should be replaced. An insufficient number of receptacles exists in several areas, and additional ones should be added. Circuits serving computer and other sensitive equipment should be served from isolated ground receptacles protected by transient voltage surge suppression equipment.
 - A. Probable electrical service construction costs: \$30,000.00

 - III. The telephone and computer network systems should be replaced with new outlets, raceway rough-in, and cables.
 - A. Probable electrical service construction costs: \$15,000.00

 - IV. The existing lighting system should be replaced. Interior and exterior fixture and lamp styles can be designed to enhance the historical characteristics and be more energy efficient.
 - A. Probable electrical service construction costs: \$65,000.00

 - V. A new fire alarm system should be installed to meet current code requirements. This system would include manual fire alarm stations, automatic detection devices, audible/visual annunciators, and other required equipment.
 - A. Probable electrical service construction costs: \$15,000.00

 - VI. A code approved emergency system to serve emergency lighting and exit fixtures does not exist. We recommend an emergency standby generator system with automatic transfer switch be installed to serve these and other City Hall essential loads.
 - A. Probable electrical service construction costs: \$20,000.00
- Total estimated budget for electrical construction: \$155,000.00

ARCHITECTURAL ASSESSMENT & HISTORY OF THE CITY HALL OF BAKER CITY

