CITY OF SHELBY

RAINBOW HOTEL PRELIMINARY ARCHITECTURAL REPORT AND BUSINESS PLAN

MAIN STREET - SHELBY, MONTANA
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INTRODUCTION

- This Preliminary Architectural Report was commissioned by the City of Shelby MT. The purpose is to study the feasibility of renovating The Rainbow Hotel building. The Rainbow Hotel is a landmark building located on an important corner on the Main Street of Shelby Montana.
- In general the existing building is in good condition, with good foundation and brick veneer. The interior wood framed floors and walls are in need of improvement, but can be retained. The existing building conditions are being studied for stability and adherence to the current structural code and historic requirements.
- There is a general need for building improvement and economic development in Shelby. There is also a need for newly remodeled business and residential spaces. A brewery and restaurant type business on the main floor with condo type residential and business spaces on the upper level fit well with the existing building and location.

Rainbow Hotel circa 1923

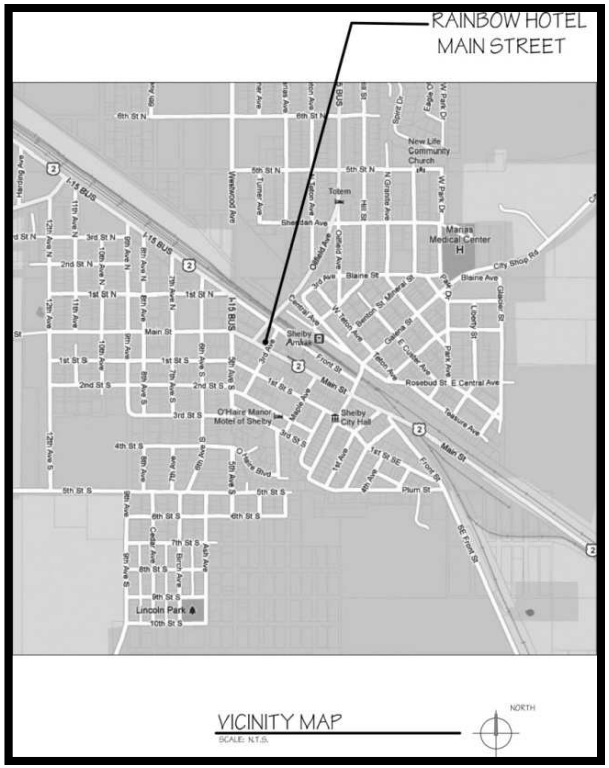
Rainbow Hotel 2011

BUILDING RENDERING

- PERSPECTIVE VIEW OF HISTORIC BUILDING WITH NEW SIDE ENTRYWAY

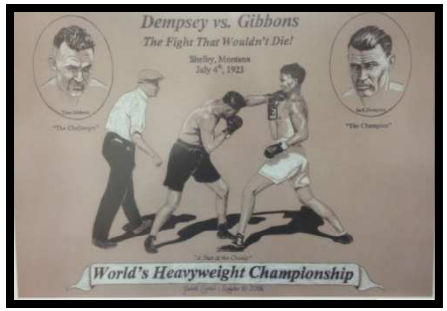
SHELBY AND VICINITY

- Shelby is the county seat of Toole County and 75 miles east of the Continental Divide and Glacier National Park. It lies approximately 35 miles south of the international boundary between Canada and the United States. The city lies on the trans-continental east-west main line of the Great Northern Santé Fe Railroad running between Minneapolis-St. Paul and Seattle. It is also located on the trans-continental east-west US Highway 2 “the highline” and north-south Interstate Highway 15. Interstate 15 is the main highway into Canada servicing the communities of Lethbridge and Calgary. The Port of Sweetgrass is the largest entry between Seattle and Minneapolis. The 24 hour port offers U.S. Customs brokerage service for clearance of commercial traffic entering and leaving the United States.
- Shelby was named in honor of Peter P. Shelby, the General Manager of the Montana Central Railway. In 1891 the Great Northern was making its way to Marias Pass and the builders dropped a boxcar from the train and called it a station. Shelby himself is believed to have said that Shelby would not amount to much. He was wrong: Shelby grew into a distribution and trade center for 50 miles in every direction.
- The area is serviced by Marias River Electrical Coop, Shelby Natural Gas Association, and Shelby City Water/Sewer. Shelby is the site of the Northern Express Transportation Authority, Amtrak passenger rail and Toole County Airport. The town is also home to Marias Medical Center, Marias Valley Golf Club, Shelby Civic Center and sports complex along with many outdoor activities.
- The 1920’s started an oil boom in the Shelby area. That industry and development continues. The recent Oil Boom, new wind-farms, and port transit hub have all helped Shelby become an economic center.
- Population in 2012: 3,376 (90% urban, 10% rural). Population change since 2000: +3.5% Estimated median household income in 2011: $43,014 Area Labor Force - 2,889 Employment Rate - 95.6%



RAINBOW HOTEL HISTORY

- In the fall of 1922 with a tremendous influx of oilfield workers and their families, the Shelby real estate market boomed. Thomas Costello, the town barber, had purchased two lots from Zimmerman and started construction of the Rainbow Hotel. The Architect on the Rainbow Hotel was E. H. Keane most notably known for the octagonal design of the fight arena built for Shelby's most famous event, the World Heavyweight Championship Fight of 1923 between Jack Dempsey and Tommy Gibbons. The hotel was built in a very short time period. A building permit was issued to Costello shortly after his purchase of the lots on October 26, 1922. City records indicate the building was complete on January 1, 1923 and a business license issued on May 28, 1923.



- The brick façade structure was originally constructed with two stories. The hotel boasted 30 individual rooms; some with baths and sinks; and common restrooms centrally located on each floor. Owners lived in the basement quarters tending to guests 24 hours a day. Local historians believe the third floor was added shortly after news spread of the impending Dempsey-Gibbons World Heavyweight Championship Fight taking place in Shelby on July 4, 1923. It was written the hotel was paid for before it even opened because beds were rented in the unfinished hotel for weary travelers who were flocking to Shelby during the oil boom.

- The Rainbow Hotel maintained a steady business providing lodging for travelers, railway employees, businessmen and visitors to Shelby. Several famous people enjoyed their stay at the Rainbow Hotel including Montana Senator and Statesman Mike Mansfield; Senator Burton K. Wheeler; fighter, Tommy Gibbons: Russian violinist, Rubinoff; the Gaelic Singers; and so many others. Original owners maintained the hotel until 1929 when the Rainbow was sold to Mrs. Elma Fike. The hotel was sold again in 1948 to Roland and Maurice Egan and James Kiesrowski. The Egan family managed the hotel until 1973 when it was sold to Dick and Mary Ann Potter. The Potters maintained the hotel until the early 1990's when the hotel was closed. The Rainbow has been abandoned since. Listed in Montana's Grandest Historic Hotels and Resorts of the Treasure State. Now owned by the City of Shelby, the Rainbow Hotel is now sits unused waiting to be resurrected.

DOWNTOWN REVITALIZATION

- Downtown revitalization of historic buildings are an important endeavor. It can often take more time and effort but the resulting renewed building embraces the past history and gives confidence to invest in the future. The public can enjoy the special warm and cozy environment that only historic buildings can provide. Investment by the city n the downtown core has a multiplying effect encouraging other building owners to make improvements and for new businesses to locate in the area. Rehabilitated buildings possess a new charm that will appeal to visitors and potential business tenants. The goal is to create a vibrant community and encourage economic growth in the downtown area.
- The Rainbow Hotel is a 3-story brick building located on the east side of Shelby Montana's Main Street. It is a landmark building with a colorful historic past. This large 13,000 SF building has the potential to be an anchor for main street and improve the downtown area.
- Due to its rich history and its prominent downtown location the Rainbow Hotel is a good choice for a remodel project. It is essential to the downtown revitalization of Shelby.
- The town of Shelby has a rich history of architecture. There are many 1-2 story brick face buildings and a many art-deco styled buildings. These buildings are hidden by newer facades, makeovers., and neglect Some recent remodeling projects have improved the look of main street.

POTENTIAL USES

- Future use for the Rainbow Hotel should be a combination of occupancies. The main level should be a public use and something that will generate more traffic and customers to the downtown Shelby area. Upper floors should fill a need related to the local economy.
- A brewery and restaurant located on the mail level would bring much needed traffic to this end of Main Street. Upscale dining restaurants are in short supply in Shelby and this casual type establishment should find a niche in town.
- Executive style "oil company" residential or business condo suites are in need and are not presently available. Providing updated small scale condo type units with current technology will correspond with Shelby's increasing development patterns. Small office suites in a professional building would be an effective use for those not needing storefront exposure. Not all businesses need a full-size rental building and these smaller businesses could benefit from being in a building with other like-mined businesses.
- Condominium style legal arrangement would allow for pride of ownership, less turn-over and a quicker return on investment. A 5-year rental agreement must be in place in order to be eligible for historic preservation tax credits.
- The additional purchase of the adjacent north building would allow for garage and storage space which is in very short supply in the downtown area. Personal secure heated garages would be in high demand. Part of this building could be used for the brewery portion of the project. This north building could easily be converted into this use.

WHAT HAS BEEN COMPLETED

- The city has received funding to remediate the historic Rainbow Hotel. This funding has allowed the city to address interior health issues. Cleanup and abatement of all interior finishes including mold, asbestos, and lead based paint has been completed.
- The city has received grant funding to complete this Preliminary Architectural Report and business plan for the historic Rainbow Hotel. This will include cost estimates, preliminary architectural drawings, structural analysis and a structure for investors for revitalization of the building.
- The city is currently working on grant applications for historic renovations, tax credits, and energy credits which could be applied to the project.
- A preliminary structural review has been completed by a qualified engineer. Now that the building is gutted and the interior finish items removed another structural review is being done along with this report.
- As built drawings have been completed showing the existing layout of the building.
- Preliminary discussions have taken place with the Historic Preservation Office to determine what changes would be allowedto meet those requirements.

HANDICAP ACCESS & CODES

- The existing building is not handicap accessible, but with modifications it can meet the ADA (Americans with Disabilities Act). The main floor public space will need a new ramped side entry access and handicap accessible toilet rooms with (2) water closets per gender.

- The upper levels are each greater than 3,000 SF office/dwelling units and are required to be accessible according to 1107. If all the units were residential the upper floors would not need to be accessible based on 1107.6. Private office/dwelling accessible toilet rooms are not required based based on 1109.2. Installation of an elevator is required based on 1107 if there are office units in the upper levels.
- Occupancy varies based on usage. The lower level restaurant would be A-2 occupancy and has 1,800 SF NET/OLF of 15 = 120 occupants The upper levels would be B or R-2 occupancy and 3,000 SF NET/100 OLF = 30 occupants per floor. Total building=approx 220.
- Due to occupancy loads and handicap requirements a new entry/exit area will need to be included. A east side entry porch with lobby, stair, elevator, and toilet rooms makes sense due to its central location and proximity to the parking area. This understated accessory entry is allowable under the historic preservation rules.

- 2 exits are required from the main level. According to UBC 1019.12 the upper levels B and R-2 occupancy will only require 1 exit as it is a historic building as the new use is similar to the old, and there is only (1) existing stair/exit. There may be additional code exceptions by using the Existing Building Code for Historic Buildings.
- Occupancy separation of (1) hour (@ layers of 5/8" gyp bd) is required above the main floor based on 508.3 if the whole building is sprinkled. (2) hours if not sprinkled.
- A fire suppression sprinkler system will be required for the first floor only based on 903 due to main level occupancy over 100. The upper levels do not require sprinklers, however it may be wise to sprinkle the entire building.

ENERGY EFFICIENCY/ UTILITIES

- The entire building would receive new wall and ceiling insulation. 2x6 interior frame walls with R-12 spray foam + R-11 fiberglass batt insulation for a total R-23 is recommended at exterior walls. R-12 spray foam + R-30 fiberglass batt insulation for a total R-42 is recommended at the roof.
- All new windows will need to be energy efficient with a minimum U value of .30. These replacement windows should be historic looking double hung and fixed units with true divided lites and meet historic preservation standards. In order to meet federal historic preservation rules all new windows must be detailed to match the existing windows and approved by the Historic Preservation Office.
- All light fixtures and appliances must meet the Energy Star requirements.
- Individual natural gas or electric heating systems would installed for each unit. This would provide heat and air conditioning with individual controls. Units would be located on the rooftop. All venting must also go through the roof, no sidewall vents allowed.
- The existing 1" diameter water line at mid 4th avenue needs to be abandoned. New connections should be made to the new 6" diameter fire flow water line at NE corner of property.

HISTORICAL PRESERVATION

- Federal Historic Tax Credits of 20% of the building rehabilitation cost are available through the Secretary of the Interior National Park Service . State Historic Tax Credits of 25% of the federal credit are also available. In order to obtain these credits an application must be made through the Montana Historical Preservation Office. The building can also be listed to the National Historic Register. Some eligible building items for the tax credit include: Walls, Partitions, Floors, Ceilings, Permanent coverings, such as paneling or tiles, Windows and doors, Components of central air conditioning or heating systems, Plumbing and plumbing fixtures, Electrical wiring and lighting fixtures, Chimneys, Stairs, Escalators, elevators, sprinkler systems, fire escapes, other components related to the operation or maintenance of the building
- According to discussions with Peter Brown of the Montana SHPO, the tax credit program requires applicants to maintain the character of a building by maintaining its character-defining features. The Rainbow Hotel, like all hotels of the time, was a finished building with a residential type use, new features must match that character. Existing main walls , corridors, windows and door openings must be retained. The existing fireplace must be retained. Exposed brick and wood framing members will not be approved. Features such as balconies and awnings that didn't exist historically on a building are not allowed. A covered awning or recessed vestibule at the front entry is not allowed. A new, accessible side entry would be allowable if it is understated, no larger than minimum requirements dictate, and it should have a flat roof. A new stair and elevator would be allowed. The basement area could also be re-purposed for any new function as it was an accessory space.
- The new use of a Microbrewery and restaurant is allowed, however any new dining and bar area must retain the existing corridors and cannot be an open area. Brewery activities located in the basement is in line with the Standards, however an open 2-story brewery area with glass would not be approved.
- Window replacement is possible with the proper documentation. Existing windows must be shown to have deteriorated and the new windows detailed to match the existing building. All new windows must be located in the existing openings and approved by the Historic Preservation office.
- Upper level privately owned Condos that are income producing do not work under this program. To obtain tax credits on the upper floors, units would have to be rental space for a period of five years from the date NPS certifies a project.
- Historic preservation is an important part of this project and all attempts should be made to save our cultural heritage. The goal of re-purposing this building into a functioning restaurant , brewery, and rental space must be combined with the federal historic requirements . The tax credit amount is significant and needs to be considered in order to achieve a feasible project.

EXISTING BUILDING

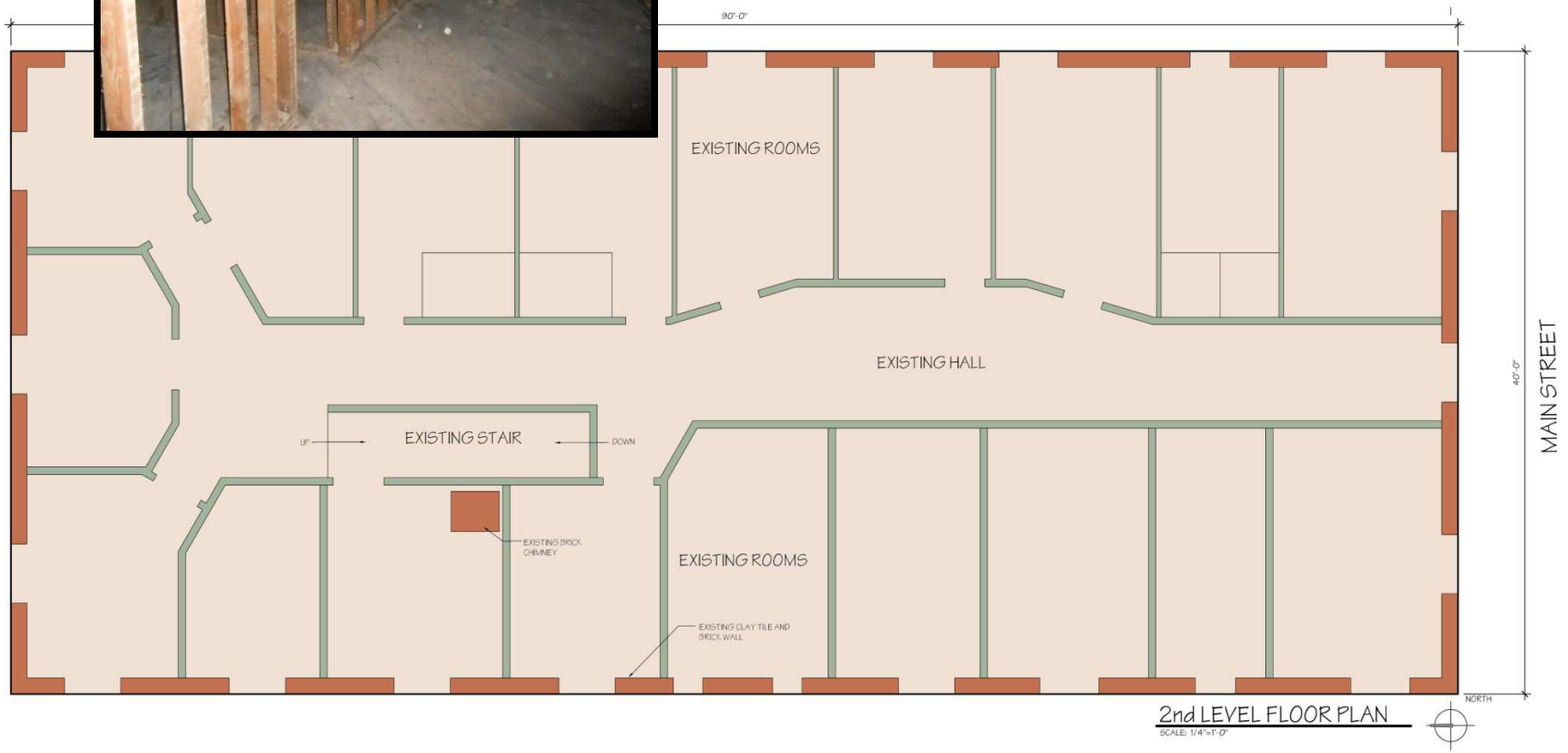
- The existing building is constructed of 8” clay tile with a 4’ brick veneer. Considering the buildings age the exterior is in good shape and is need of minor brick repair and cleaning.
- The interior of the building has been gutted and is in poor repair and needs a complete overhaul. All existing non-structural items have been cleared from the building during the remediation phase. All that remains is the wood frame wall, floor and roof structure. The structure is being analyzed , but can be retained with some structural upgrades. The basic structural layout and bearing walls must be retained to meet structural and historic preservation requirements
- The hotel property consists of 2 lots, with the building on the corner and parking on the internal west lot. This property is sufficient in size to handle the required parking spaces. See site plan. The property is not located in a flood plan and is basically flat. The property to the north would add needed garages, brewery facilities and overflow parking.
- This building is located in the central zoning district of Shelby. The new use meets the zoning regulations.
- The roof has had a temporary waterproofing repair to halt water damage. A complete new waterproof membrane roof will be needed.

EXISTING MAIN FLOOR PLAN

- RAINBOW HOTEL EXISTING MAIN FLOOR PLAN

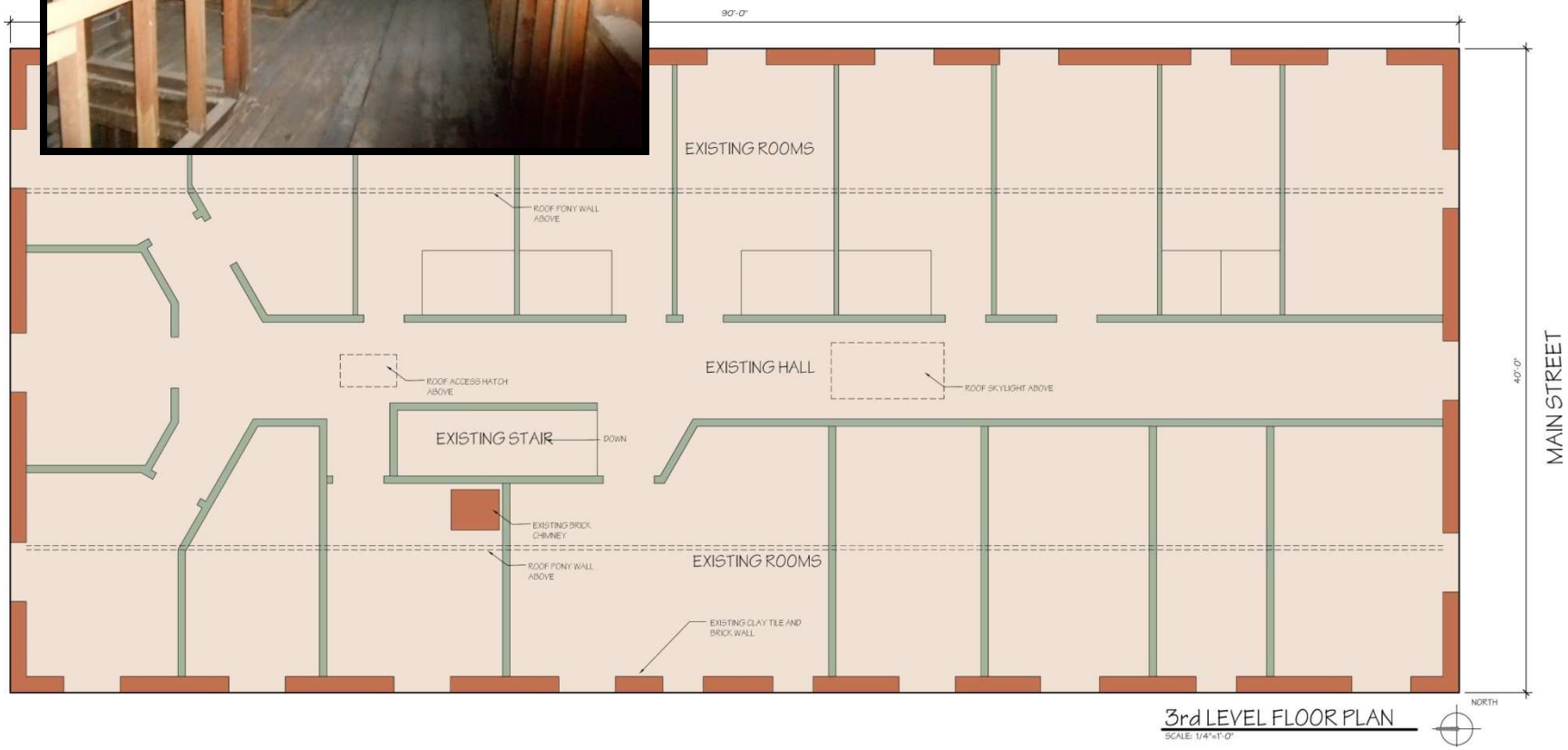
EXISTING SECOND FLOOR PLAN

- RAINBOW HOTEL EXISTING SECOND FLOOR PLAN



EXISTING THIRD FLOOR PLAN

- RAINBOW HOTEL EXISTING THIRD FLOOR PLAN



EXISTING BASEMENT PLAN

- RAINBOW HOTEL EXISTING BASEMENT FLOOR PLAN

EXISTING EAST ELEVATION

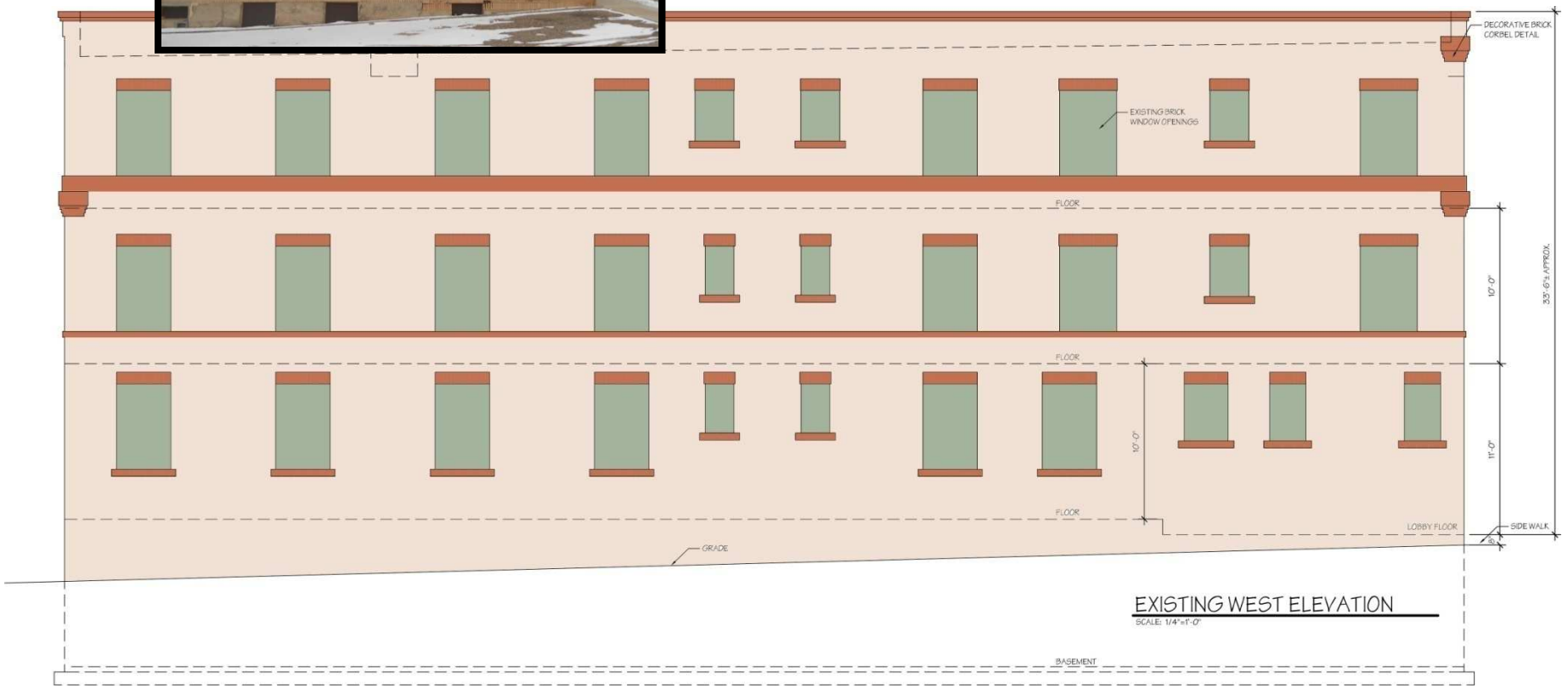
- RAINBOW HOTEL EXISTING EAST ELEVATION

EXISTING SOUTH ELEVATION

- RAINBOW HOTEL EXISTING SOUTH ELEVATION

EXISTING WEST ELEVATION

- RAINBOW HOTEL EXISTING WEST ELEVATION



STRUCTURAL ANALYSIS

- The existing clay tile and brick exterior structure is in good shape. It will be retained with minor repairs to the brick , foundation, and grout areas. Existing exterior window and door locations will remain.
- It is anticipated that the overall existing upper level interior wall and floor framing system swill remain in place. There will need to be some floor member replacement and new floor sheathing due to damage and age. However the basic floor structural system and bearing walls need to be retained for structural and historical preservation reasons. The upper floor above the main entry is in bad shape and will need to be replaced.
- The main level bearing walls and corridor also must be retained. The walls can be opened up with openings in the existing wall, but replacing the wall with posts and beams will not be allowed according the historic preservation requirements.
- The lower level basement interior footings and posts and beams need to be replaced due to water damage. The replacement will need to be a similar layout of posts and beams. A new concrete slab and minor foundation repair will also be required.
- The roof framing structure needs to be analyzed closer for water damage and repaired and new roofing material installed. However the basic structural layout and sloping roof to the north will be retained.
- Retaining the interior floor framing will help keep the lateral forces of the existing building in place and be less expensive to re-construct. Other options were looked at including removing and replacing the entire floor system with new wood systems as well as a new steel superstructure. However these were no other feasible options due to the increased code requirements, logistics, cost limitations, and historic preservation requirements.
- The basic structural code rule is that if 5% or less of the structure is changed then the building does not need to upgrade to the current code. The current code has much more strict lateral load requirements which would be costly and does not make economic sense. The building is located in a low earthquake zone, however the newer code would require a seismic retrofit with new beams at floor lines, lateral rods and plates for exterior bracing. In addition if federal historic preservation tax credits are being used all existing structural members remain intact.
- A new elevator and stair circulation will need to be added. This will require some modifications of the existing structure and is allowable by the historic preservation office.

STRUCTURAL INSPECTION-1

- ***INTRODUCTION***

  The City of Shelby has hired KLJ, along with Gibson Architecture, to prepare a Preliminary Architectural Report (PAR) as part of a business plan for the development of the Rainbow Hotel Building. The building is located on the corner of Main Street and 4th Avenue in downtown Shelby, Montana. As part of the PAR, an investigation was conducted to determine the current structural condition of the building. A structural walk-through inspection was performed at the above structure by Mary Stelling, P.E. of KLJ, on May 21, 2014. Mr. Brad Koon, KLJ Project Manager, and George Gibson, Architect, were present during parts of the inspection.

- ***SCOPE***

- The scope of this investigation is narrow, and pertains to structural aspects of the building only. No mechanical, electrical, or architectural aspects of the building were inspected or analyzed.

- ***OBSERVATION***

- The Rainbow Hotel Building was originally constructed as a two story building in about 1920. A third story was added to the structure in 1923. The three story building is constructed with wood framed floors, and full height clay brick exterior bearing walls (See Photo 1 and 2). The 1st floor is framed above a full basement. On the interior, full height wood stud bearing walls are located on each side of the main corridor down the center of the building. These walls are supported by beams and posts in the basement.

- At the time of inspection, environmental remediation had been done, and most interior finishes removed. The structural elements were open to view. The 1st and 2nd floor framing consists of diagonally sheathed 1x framing over 2x12 wood floor joists spaced at 16" o.c. The floor framing predominantly runs in the east-west direction and is supported on interior bearing walls (See Photo 3). At exterior walls most joists are "keyed in" to the clay tile wall while others appear to be supported on a wood ledge (See Photo 4). A small portion of framing spans in the north/south direction on the north end of the building.

- The 3rd floor framing was originally a roof, and the framing is slightly different than the 1st and 2nd floors. The "floor deck" planking of the third floor is placed perpendicular to the floor joists rather than diagonally. Ceiling joists consisting of 2x6 joists are spaced at 16" o.c. and are supported directly on the interior bearing walls and are embedded in the exterior clay tile wall. A 2x bearing plate runs perpendicular to and on top of the ceiling joists and supports 2x10 floor joists above also spaced at 16" o.c. (See Photos 5 and 6).

STRUCTURAL INSPECTION-2

- The framing of the current roof is not as conventional as the floor framing, and appears to have slope built into the system for drainage. There is an interstitial space between ceiling joists and the higher roof joists. The 2x10 ceiling joists at 16" o.c. run east-west between interior corridor bearing walls and are embedded in the exterior clay tile wall (See Photo 7 and 8). The 2x6 roof joists above are spaced at 24" o.c. and supported on rows of cripple walls that run north-south that are supported by the ceiling joists. The cripple walls are spaced at about 8 to 9 feet on center.
- The basement level exhibits the greatest amount of deterioration of the building. Two rows of 8x8 wood posts and 8x10 wood timber beams run north-south the length of the building, supporting the corridor bearing walls above (See Photo 9). The floor joists are supported by the beams on the interior, and are embedded in the exterior clay tile walls (See Photos 10 and 11). The joists, beams, and upper portions of the wood posts appear to be in good condition. However, the post bases and bottom portions of wood partition walls all have rot and/or are water damaged (See Photo 12).
- The soils in the basement were very moist with standing water near the east wall and in the southwest corner. Floor joists had been supported directly on the earth, and are rotted and decaying (See Photos 13 and 14).
- For the most part, the basement walls are in fairly good condition with minimal cracking observed. Some of the interior concrete wall surfaces show signs of deterioration, especially noticeable in the mid-section of the west wall (See Photos 15 and 16). The damage appears to be caused by water and/or the damp conditions of the basement.
- The exterior walls of the building are in good condition. The clay tiles observed from the interior were sound with little cracking observed (See Photos 17 and 18). The exterior brick is also in good condition (See Photo 19). There is some minor cracking near the corners, and some deterioration of mortar due to water in various locations, including the lower brick courses (See Photo 20).
- The site grading around the perimeter of the building does not provide for positive drainage away from the building on both the east and west walls (See Photos 21 and 22). The lack of positive drainage combined with the proximity of window openings to grade are a likely cause for water infiltration into the basement.
- ***DISCUSSION***
- The building appears to be in good shape overall. The limited amount of cracking in the exterior brick veneer indicates that the structure has experienced very little movement. Some minor cracking is to be expected for a 90 year old building.

STRUCTURAL INSPECTION-3

- Given the age of the structure, the floor framing appears to be in good condition with the exception of the localized water damaged area near the front (south) end of the building on the first and second floors. The wood joists are solid and are showing little sign of wear.
- Most of the roof framing is also in good condition with members appearing straight and solid. The interstitial space between ceiling and roof joists make it more difficult to observe closely the condition of the upper joists and deck. A closer examination will be required in the next phase of the project.
- The area requiring the most attention for long term use of the building is the basement. The soils in the basement were very moist with areas of standing water. The posts supporting the interior bearing lines have rotted at the base. The partition walls and floor joists also have significant rot and water damage.
- There are several likely culprits that contribute to the water in the basement. First is a leaking roof. The water damage at the roof level and to the floors near the south end could be due primarily to water infiltration at the roof level. There could also be leaking pipes or utilities, although services have been shut off. Ground water is also a possible water source in the basement. With a dirt floor, seasonal fluctuations in ground water levels could result in the moisture wicking up to the floor surface.
- Another likely cause of water in the basement is the combination of several at-grade basement window openings and the flat site drainage around the building. On the west wall, the gravel parking lot is flat, with a “swale” near the middle of the wall (See Photo 21). The interior surface of the concrete basement wall at this location shows obvious sign of water caused deterioration (See Photos 15 and 16).
- The east wall has similar conditions with poor site drainage and at-grade window access points. The sidewalk actually slopes toward the foundation (see Photo 22). The soil was also very wet near the east wall in the basement at the time of the inspection (See Photo 14). The basement moisture and rot of wood members will need to be alleviated for continued use of the building.
- A concern in the renovation of older buildings is the task of retrofitting lateral resisting systems to meet today’s building codes. Upgrades to resist wind loads are less commonly required than seismic upgrades. Shelby is in an area of low seismic activity, and the controlling lateral design forces are most likely due to wind. Per most building codes, seismic upgrades are not needed if the structure retains its use and is not affected by renovation.

STRUCTURAL INSPECTION-4

- The 2009 International Building Code (IBC) gives the following direction for the alteration of existing buildings:
  - ☐ All gravity-load elements where design gravity load is increased by more than 5% must be upgraded to current code.
  - ☐ The altered structure must meet wind/seismic provisions of the current code when:
    - o Design lateral loads increase;
    - o A structural irregularity results (such as opening up a section of floor);
    - o The "capacity of any existing lateral load-carrying structural element" is decreased.
- Lateral retrofits for a building of this type with hollow masonry tile shear/bearing walls would be extremely costly, unsightly, and the "fixes" may end up doing more harm to the brittle walls than good. If required, the options to upgrade could include the addition of reinforced masonry or concrete shear walls inside and adjacent to the exterior clay tile walls. Steel braced or moment frames could also be erected adjacent to the walls. Coring the center of the tile wall and adding grouted rebar, or shot-creting the wall over reinforcing, are also options to upgrade the building. The connection of the floor and roof diaphragms to the existing walls could be strengthened using steel angles fastened to the ends of the floor and roof joists and bolted through the tile and brick veneer with steel plates on the exterior wall. The preferred option, however, is to minimize changes to the structural system thereby avoiding the requirement of seismic retrofits altogether.
- While a cursory inspection of the structure indicated that the building is generally in good shape, a more thorough inspection should be done once preliminary remodel plans are known, with possible associated load changes. Individual structural members would need to be inspected for deterioration and analyzed to confirm load carrying capacity prior to final plans.
- ***CONCLUSION AND RECOMMENDATIONS***
- Although it puts constraints on options for the remodel of floor space, maintaining the existing structural systems is recommended to avoid the need to perform costly seismic retrofits. Keeping the load paths to the interior corridor walls and exterior clay tile bearing walls will also reduce cost and effort to chase new load paths requiring new beams, posts, and footings.
- One proposed preliminary plan was to remove a segment of floor for the installation and view of large tanks. Unfortunately, a building alteration of that magnitude is likely to trigger the requirements for extensive lateral retrofits. Smaller custom it openings may be an option.

STRUCTURAL INSPECTION-5

- Other recommendations include:
  - ☐ Eliminate excess moisture in the basement.
  - ☐ Correct site grading to provide positive drainage away from all foundation walls.
  - ☐ Seal at-grade window openings to prevent surface moisture infiltration.
  - ☐ All gravity-Install a concrete floor slab with an under slab drainage system to a sump pump.
  - ☐ Patch deteriorated concrete wall surfaces and seal any cracks.
  - ☐ Remove the bottoms of the timber posts to sound-dry material, and place on elevated concrete pedestals to prevent future decay from contact with moisture.
  - ☐ Remove all water damaged partition walls and floor joists.
  - ☐ The wood floor joists and bearing walls above are recommended to be left as close as possible to their current configuration.
  - ☐ Closer inspection of individual members should be done to determine the extent of repairs and strengthening required.
  - ☐ Patch, strengthen, or replace soft spots in the roof and floor decks.
  - ☐ Repair or replace clearly damaged framing members.
  - ☐ On the exterior of the building, minor rack repair and repointing of the mortar on certain areas of the brick veneer will need to be done.
  - ☐ Install a new roof to keep moisture out of the building
  - ☐ The recommended structural repairs, along with keeping remodel changes to the original structural system minor, should allow for a building that will perform well for many years to come.

Respectfully submitted,

KLJ Mary A. Stelling, PE Structural Engineer Project#: 4414003

STRUCTURAL INSPECTION-6

Photo 1: Exterior view of front (south and east) walls of the Rainbow Hotel.

Photo 3: Second floor joists supported on interior corridor bearing wall.

Photo 5: Third floor ceiling joists (below) supported on corridor bearing wall. The flat 2x member transfers load from the floor joists (above) to the ceiling joists.

Photo 2: North wall of Hotel Building.

Photo 4: Second floor joists supported at exterior clay tile wall.

Photo 6: Third floor ceiling and floor joists supported on exterior clay tile wall.

STRUCTURAL INSPECTION-7

Photo 7: Ceiling and roof joists at exterior wall.

Photo 9: Looking south down center corridor in basement. Rows of beams and columns on either side support interior bearing walls above.

Photo 11: First floor joists embedded in exterior clay tile walls supported on concrete basement walls.

Photo 8: 2x6 roof joists are supported by 2x cripple walls which are carried by 2x10 ceiling joists.

Photo 10: 2x12 floor joists supported on timber beams and columns in the basement. Floor elevation steps above.

Photo 12: Water damage and rot where columns and wood walls are in contact with dirt basement floor.

STRUCTURAL INSPECTION-8

Photo 13: Southwest corner of basement has standing water and rotted earth supported floor joists. A temporary support is at the right of the photo.

Photo 14: East wall of basement with wet soils and rotted floor joists.

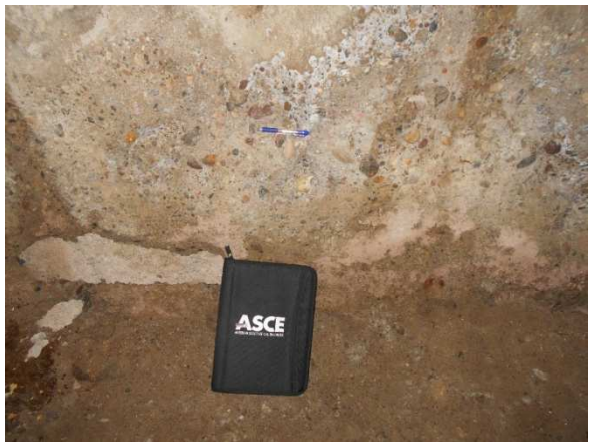


Photo 15: West wall of basement shows deterioration on the inside surface, but minimal cracking.

Photo 16: Looking south along deteriorated section of west basement wall.

Photo 17: Exterior clay tile wall with brick veneer.

Photo 18: Clay tile south wall, looking west at fire place.

STRUCTURAL INSPECTION-9

Photo 19: North and west walls. Brick veneer in good condition.

Photo 21: West wall. Note at-grade basement windows and flat site grading.

Photo 20: Some deterioration of bottom of south wall brick courses.

Photo 22: Sidewalk at east wall slopes toward the building.

NEW SITE PLAN

- Site plan showing existing hotel building , new west side entry porch and sidewalks.
- The adjacent north property and existing garage building would be converted into private garages for the condo units. Part of this north building would also be used for brewery facilities.
- New asphalt parking area with 39 parking spaces including 2 handicap spaces. This includes the front and back properties.
- Loading and delivery areas located at north side of hotel building.
- New signage at the north property for Hwy 2 and overpass exposure.
- Landscape areas around property as needed.

NEW MAIN FLOOR PLAN

- A restaurant and brewery on the main level is a good use of the existing space. The atmosphere created inside the historic brick building is ideally suited to this type of operation.
- The front entry would remain in its existing main street location. A foyer with restored existing fireplace would be a welcoming lounge with tables and couches. Openings could be created in the existing corridor allowing for restaurant seating on one side and bar seating on the other. A historic back bar would be along one wall.
- The rear part of the main level would be the kitchen area. This would have a cooler, cooking areas and storage. Direct access to the dining and bar area is important. There would also be a stair directly from the kitchen to the lower level brewery and accessory kitchen spaces.
- The brewery would be located in the basement area along with other kitchen storage, mechanical and support spaces. The actual brewery vats would be located in the adjacent north building. This building has a lower floor and allows for taller vats . A glass wall could also be installed in this building facing the hotel for visual interest.
- A new west side entry and covered porch would create another access from the parking area. A covered handicap ramp and exterior stair would be in this area as well. The adjacent interior stair and elevator is for secure access to the upper levels and would located in the existing stair location. The handicap accessible public toilet rooms would be near the entry and stair, each would require 2 toilets and 2 sinks per gender. Janitors closet and service sink are also required.
- Other requirements include covered rear loading and delivery area at the basement, mechanical chases and rooms, and storage areas.

- Historic brick fireplace and open dining area

ADDITIONAL BREWERY IMAGES

- Historic back bar at brewery area.

- Glass wall at adjacent north building with brewery vats.

- Existing corridor with new openings.

NEW UPPER FLOOR PLANS

- Privately owned condo units would be a good fit for the upper levels. This would allow each occupant to own their own space and foster pride in ownership. However in order to meet the historic preservation requirements these condo units must be rented for 5 years prior to turning into condo ownership.
- Each suite could be used for offices or residential, depending on demand. Every unit would have private baths, kitchenettes and closets.
- There could be 6 units per upper floor, for a total of 12 condos. Sizes would vary from 400 SF – 600 SF. Larger units could be created depending on rental demand and usage. The existing corridor would remain and connect the rooms to the central stairway and elevator.
- The lower west side entry and stairway would create easy access from the parking area. This stair and elevator would be secure with access limited to owners, guests, and tenants.
- Private heated garage and storage units would be available to condo owners/renters in the adjacent northern property. This existing north building could be easily converted to covered garage and/or storage units.

- New residential or office loft suites with historic double hung windows.

ADDITIONAL SUITES IMAGES

- Historic double hung windows

- Residential or Office Use

- Private Baths and Kitchenettes

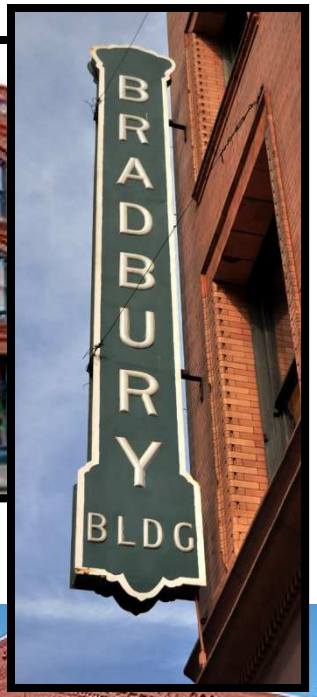
NEW EXTERIOR

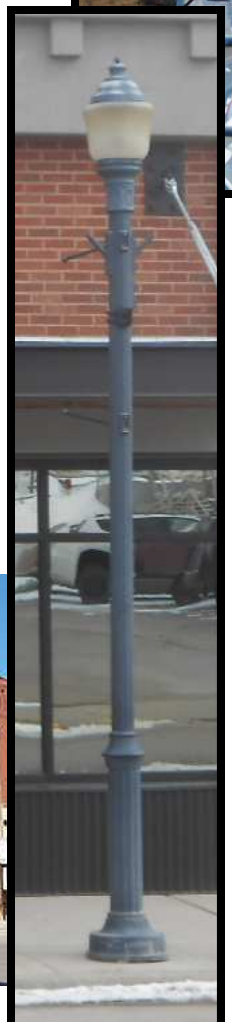
- The existing brick shell would remain. Repair of existing brick is required in some areas.
- New exterior historic wood double hung windows and doors would fit into the existing brick openings. These replacement units must match the existing units and be approved by the Historic Preservation Office.
- Retain as much of the existing historic look and feel of the building as possible.
- Interior to include structural upgrades as discussed.
- A new west covered side entry way with handicap ramp could have brick pillars and a flat roof. Installation of awnings, flags and signage is allowed only if there is historic precedence. New building lighting will be installed.
- An all-new roofing system is required. It is recommended to use EPDM membrane roofing with new flashing and caps.

- New brick pillar and flat roof side entry.

ADDITIONAL EXTERIOR IMAGES

- New historic lights and streetlights and signage.



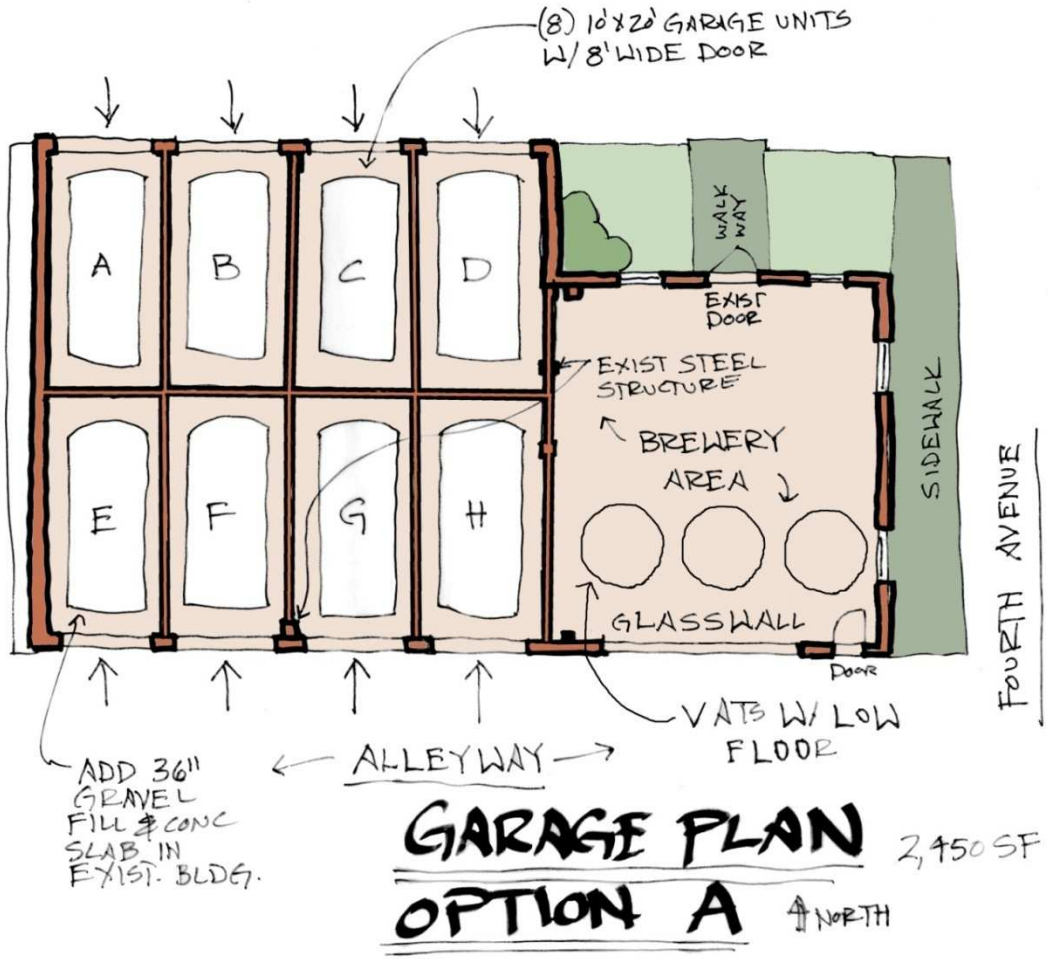


- Historic replacement wood double hung windows.

- Remodel existing brick exterior.

NORTH GARAGE BUILDING

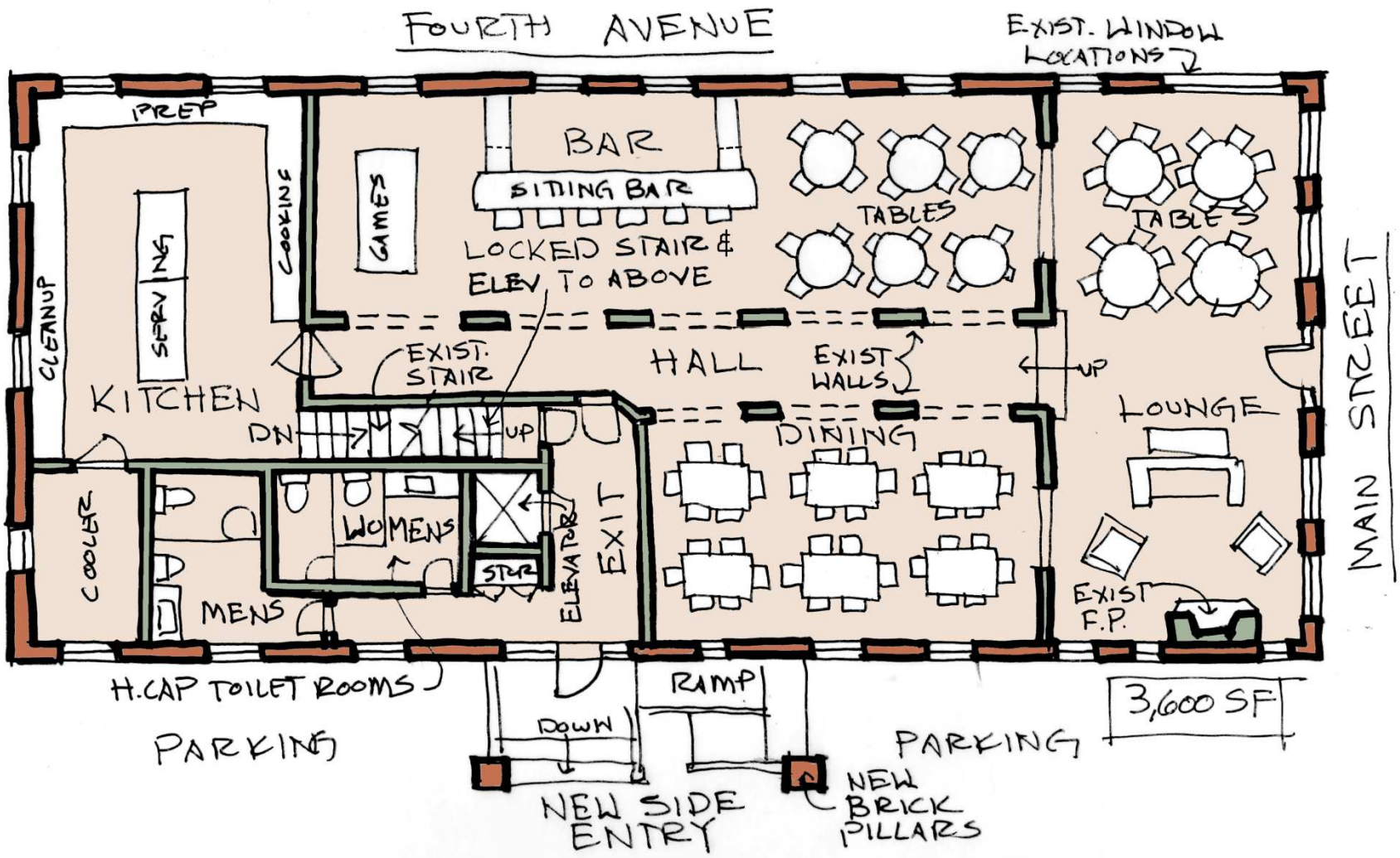
- The existing storage building north of the Rainbow Hotel building is concrete block and steel structure in good shape. It is a natural extension for this project. There is value in the existing building and it will provide much needed enclosed storage areas and overflow parking. There is potential for signage and good exposure to Hwy 2 and the overpass. In addition it would consolidate the property around the project and increase the overall value.
- (2) different layout options were provided for review and Option A is the preferred alternative
- Purchase of this property would allow for 8 individual garage units for condo owners and a Brewery granary and vat brewing area. It would also allow for 18 additional much needed parking spaces. The vats would be located on a lower slab allowing for taller vats and piping. A glass wall would visually connect the brewery to the hotel building
- It appears that the existing building has had flooding issues in the past. Mainly due the fact that there is no floor and the building is open to a 42" deep pit. 36" of gravel fill and a new concrete slab would need to be installed into the existing building. New overhead garage doors would need to be installed with new headers into the existing cmu and steel structure. Interior sheetrock, lighting and electrical would also need to be finished.



PREFERRED ALTERNATIVE

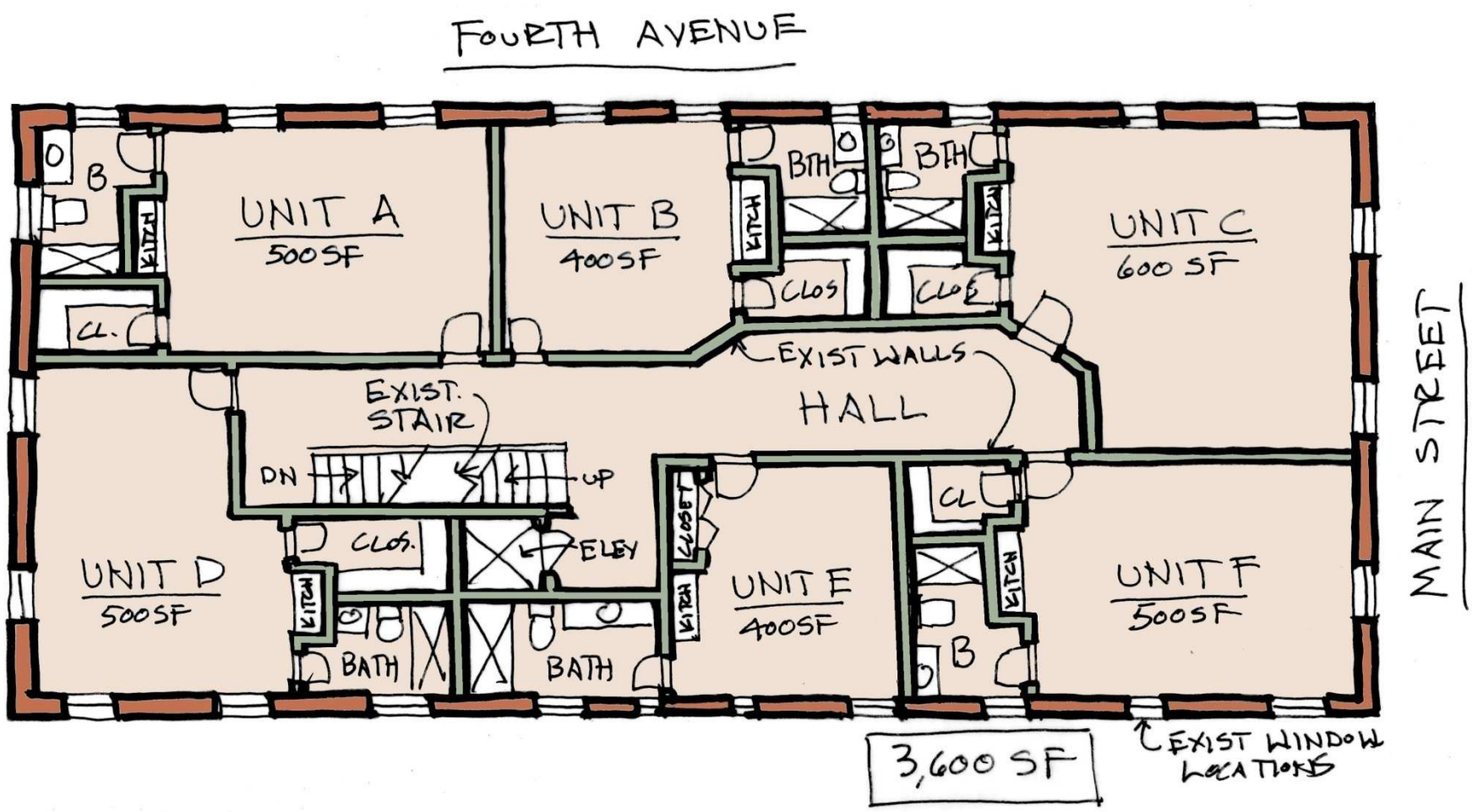
- (2) different layouts were considered for the Rainbow Hotel Remodel. Attributes of both designs were combined into a final design layout Option C, the preferred alternative. The main level retains the main entry on Main Street with a new handicap accessible entry on the west side with new stair and elevator. The new west entry would have brick columns and flat roof to match the existing building.
- The existing main level bearing walls and exterior window locations would remain. The main floor would house a restaurant, brewery, stair, elevator, and handicap accessible restrooms. There could be a kitchen in the back of the building with brewery and storage on the lower level. The north building would contain the brewing vats and storage. A main u-shaped bar with entry lounge area and restored brick fireplace would compliment the dining area.
- The (2) upper levels would be renovated into privately owned residential or office type condos with private bathrooms. The existing upper level bearing walls and exterior window locations would remain. The new stair and elevator would provide access to these levels. According to the code officials a second exit on the upper levels is not required based on the Existing Historic Building Code. The access stair and elevator would need to be secure and locked with access only by the upper level owners, guests ,and tenants.
- Some of the initial layout ideas were replaced with Option C due to historical preservation requirements. Open dining area, steel awnings, upper balconies, glass brewery wall, and exposed timbers and bricks, were ideas that did not meet the requirements. All the new renovations must align closely with the existing structural floor layout. All upper and main floor bearing walls and corridors need to remain. The lower basement structural posts and beams need to be replaced due to water damage.

NEW MAIN FLOOR OPTION C



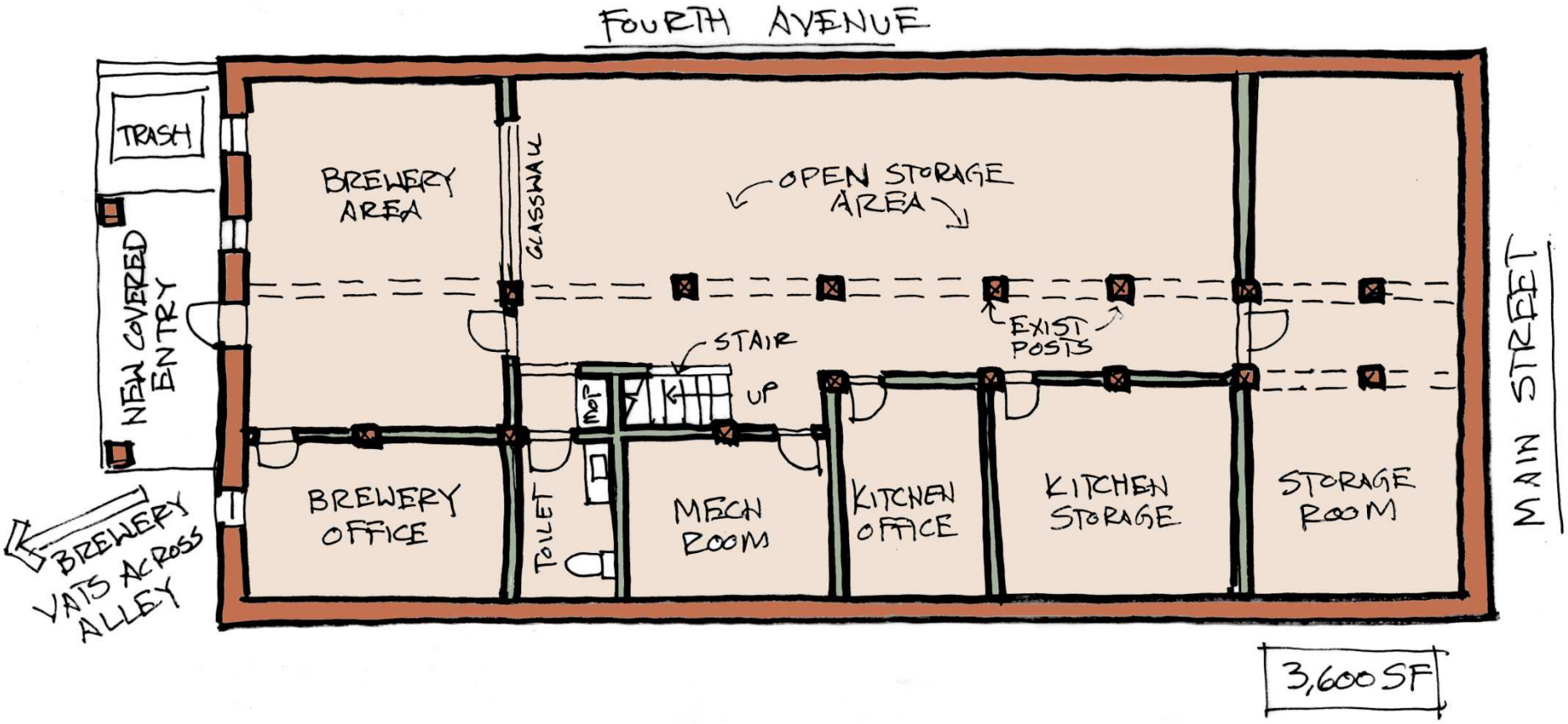
- NEW MAIN FLOOR PLAN LAYOUT-OPTION C

NEW SECOND/THIRD FLOOR PLAN OPTION C



- NEW SECOND/THIRD FLOOR PLAN LAYOUT-OPTION C

NEW BASEMENT FLOOR PLAN OPTION C



- NEW BASEMENT PLAN LAYOUT-OPTION C

SQUARE FOOTAGE & COST

- MAIN FLOOR RESTAURANT/BREWERY= 3,600 SQ FT
- SECOND FLOOR LIVING/OFFICE SUITES = 3,600 SQ FT
- THIRD FLOOR LIVING/OFFICE SUITES = 3,600 SQ FT
- BASEMENT STORAGE/BREWERY = 3,600 SQ FT
- **TOTAL BUILDING= 14,400 +/- SQ FT**
- **16 UPPER CONDO UNITS + MAIN FLOOR RESTAURANT/BREWERY**
- 3,600 MAIN SF X $125/SF = $450,000 includes interior finishes, heating, windows, doors, stair, elevator.
- 3,600 UPPER SF X $125/SF = $450,000 includes interior finishes, heating, windows, doors, stair, elevator.
- 3,600 UPPER SF X $125/SF = $450,000 includes interior finishes, heating, windows, doors, stair, elevator.
- 3,600 BASEMENT SF X $25/SF = $90,000 includes structural repairs and concrete slab.
- The square footage cost estimate includes all renovation work, structural repairs, concrete slab, masonry restoration, rough framing, interior finish trim, insulation, exterior windows and doors, interior doors and trim work, gypsum board, bathrooms, tile showers and floors, wood and carpet floors, elevator, fire sprinkler, mechanical , plumbing, and electrical systems, roofing membrane, new entryway, roof and ramp, overhead and profit, etc. DOES NOT INCLUDE ANY RESTAURANT OR BREWERY EQUIPMENT OR FURNISHINGS.
- NORTH BUILDING: $80,000 BUDGET New concrete slab and fill, (8) garage doors, modifications to existing structure. Remove Quonset, clean up site and pave parking area.
- PAVING: $45,000 New asphalt and gravel base 15,000 SF @ $3.00/SF
- LANDSCAPING: $10,000 BUDGET Bushes, trees, sod and irrigation.
- CONTINGENCY: $125,000 (10% of building subtotal)
- **TOTAL ESTIMATED CONSTRUCTION COST = $1,700,000**

THESE NUMBERS ARE PRELIMINARY AND FOR BUDGET PURPOSES ONLY –THEY ARE NOT A BID FOR CONSTRUCTION

SAMPLE ESTIMATED BUDGET

- The estimated building cost is$125/SF for the 10,800 sf upper 3 floors + $25/SF for the 3,600 sf basement area. This is based on analysis and comparison with a similar yet larger historic preservation project in Great Falls, MT. The comparison example building is 21,490 SF. The total Rainbow is 14,400 SF. A Sample estimated construction budget based on square footage cost is shown here with total cost per square foot.
- In addition, if the building qualifies and meets the requirements. The 20% Federal Historic Tax Credit and the 25% (of federal credit amount) State Historic Tax Credit would reduce the cost of this construction.

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ESTIMATED BUDGET BASED ON SIMILAR BUILDING SQUARE FOOTAGE COSTS

Description of Work	Cost Breakdown	Bldg SF	SF Cost
General Conditions	$ 88,776.00	10800	$ 8.22
Demolition	$ 54,756.00	10800	$ 5.07
Hazardous Materials Abatement has been completed	$ -	10800	
Structure Rehab	$ 141,264.00	10800	$ 13.08
Concrete and drainage	$ 16,200.00	10800	$ 1.50
Noise Abatement above restaurant	$ 11,880.00	10800	$ 1.10
Masonry Restoration	$ 21,600.00	10800	$ 2.00
Rough Framing	$ 54,756.00	10800	$ 5.07
Wood Trims / Wainscot	$ 42,120.00	10800	$ 3.90
Lobby Casework and Fireplace Allowance	$ 12,960.00	10800	$ 1.20
Insulation & Caulking	$ 35,856.00	10800	$ 3.32
Exterior Windows	$ 64,800.00	10800	$ 6.00
Interior Doors	$ 27,972.00	10800	$ 2.59
Exterior Doors	$ 27,000.00	10800	$ 2.50
Gypsum Board	$ 16,200.00	10800	$ 1.50
Gypsum Taping	$ 23,328.00	10800	$ 2.16
Ceramic Tile	$ 78,300.00	10800	$ 7.25
Shower Mud Pans	$ 9,936.00	10800	$ 0.92
Wood Flooring	$ 64,800.00	10800	$ 6.00
Sheet Vinyl	$ 21,600.00	10800	$ 2.00
Carpet	$ 17,388.00	10800	$ 1.61
Painting / Staining	$ 34,560.00	10800	$ 3.20
Div 10 Items	$ 15,876.00	10800	$ 1.47
Shower Curtains & Rods	$ 10,800.00	10800	$ 1.00
Shower Doors	$ 17,064.00	10800	$ 1.58
Shelving	$ 7,992.00	10800	$ 0.74
Elevator Pit	$ 6,696.00	10800	$ 0.62
Elevator	$ 69,552.00	10800	$ 6.44
Fire Sprinkler Systems	$ 54,540.00	10800	$ 5.05
Mechanical Systems	$ 70,200.00	10800	$ 6.50
Plumbing Systems	$ 70,200.00	10800	$ 6.50
Electrical Systems	$ 70,200.00	10800	$ 6.50
BUILDING SUBTOTAL	**$ 1,259,172.00**	-	-
Overhead & Profit @ 5.5%	$ 69,228.00	10800	$ 6.41
Bond, Insurance, Permits	$ 21,600.00	10800	$ 2.00
BUILDING TOTAL	**$ 1,350,000.00**	-	-
Cost per SF UPPER LEVELS (10,800 SF)			**$ 125.00**
3600 sf Basement Slab and supports	$ 90,000.00	3600	$ 25.00
North Building Remodeling	$ 80,000.00	2500	$ 32.00
Paving	$ 45,000.00	15000	$ 3.00
Landscaping	$ 10,000.00		
Contingency 10% of building subtotal	$ 125,000		
CONSTRUCTION TOTAL	**$ 1,700,000**		

FINANCIAL ANALYSIS

RAINBOW HOTEL RENOVATION
SHELBY, MT
BUDGET
10/31/2014

Development Cost		Amount		Notes
Real Estate				
- Existing Hotel	$	50,000		
- Adjacent Garage		80,000		
Design		170,000		(5)
Appraisal		10,000		
Insurance		20,000		
Accounting		0		
City		30,000		
Liquor License/Tavern Acquisition		250,000		(1)
Legal		60,000		
Real Estate Taxes		5,000		(2)
Finance		130,000		(6)
Leasing		5,000		
Lease-Up Carry/Incentives		40,000		
Project Management		80,000		
Contingency		120,000		
Subtotal			**$ 1,050,000**	
Construction Costs				
Hotel Remodel	$	1,350,000		(3)
Basement Repairs		90,000		
Environmental Remediation (Prior)		20,000		
Site Improvements		55,000		(4)
Garage Repairs		80,000		
Off Site Improvements		20,000		
Oil City Tavern Repairs		-		(7)
Contingency		125,000		
Subtotal			**$ 1,740,000**	
TOTAL			**$ 2,790,000**	

Notes:

1. Includes acquisitions of Oil City Tavern and apartments.

2. Oil City taxes during construction.

3. Gibson estimate; Excludes FF&E

4. Includes demolition.

5. Design Fees:

Building	$	90,000
Reimbursables		25,000
Construction Administration		25,000
Subtotal	$	140,000
Environmental	$	30,000
TOTAL		170,000

6. Title Insurance $ 10,000
   Closing/Legal 20,000
   Lender Fee (1.5% construction/permanent) 35,000
   Lender Inspections 15,000
   Interest ($2 Million, 5.5%, 8 months) 50,000
   TOTAL $ 130,000

7. Included in Oil City purchase price ($75,000).

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CONCLUSION

- After detailed review and analysis of the existing Rainbow Hotel building we feel that it is a good candidate for rehabilitation and re-purposing. The potential pluses to the community of Shelby are great. Increased dollars spent in the downtown, new facilities for the public and new opportunities for businesses to prosper.
- The investment in the Main Street corridor will have a ripple effect, encourage other remodeling projects and focus growth in the downtown core area.
- There are many challenges in creating a modern facility out of 90 year old building. The nature of remodeling requires additional effort and planning. The resulting project which saves a historic building should result in a sense of community pride. The city of Shelby will be a better place when this downtown project is completed.
- The location of this building on Main Street, the Dempsey/Gibbons fight history, the historic nature of the building, its structural integrity, and the need in the community for new restaurant and condo spaces makes this project a worthwhile investment.

- RESPECTFULLY SUBMITTED BY GEORGE GIBSON ARCHITECT, 11-0314

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