

Linda Lehman- Mayor
Stephanie Haug, CMC- City Clerk/Treasurer
Spink Engineering- City Engineer
Kerr Law Group-City Attorney



Lisa Stade-Councilwoman
Mary Lettau- Councilwoman
Vanessa Coates- Councilwoman
David Sandretto- Councilman
Jake Mokler- Councilman

**SPECIAL MEETING
WORKSHOP**

May 17, 2016

A G E N D A

**Benton City Community Center
6:00pm**

- A. CALL TO ORDER**
- B. ROLL CALL**
- C. PROJECTS**
 - a) City Hall Remodel
 - b) City Park Terracing
 - c) Other
- D. ADJOURNMENT**



CITY HALL FEASIBILITY STUDY

May 13, 2016

BY:



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City Hall Feasibility Study

I. General Discussion

In January, 2016, Mayor Lehman asked Spink Engineering to provide a Feasibility Study/Cost Estimate for upgrading the existing City Hall building. The study was to evaluate the following items:

- Adding more office spaces
- Addressing the water in basement on west end of building
- Creating a more inviting “lobby”
- Possibility of moving Council Chambers Downstairs

To help with cost estimates, Spink Engineering solicited from Berkey Structural Engineering, McCue and Associates (Architect), Booth Construction, Columbia Pumping & Construction, The Building Department and Labor & Industries. Below are brief discussions on existing conditions and input for the cost estimates.

II. Structural Evaluation

A. Report Findings

The beam supported by the column in the center of the existing Council Chambers (roof beam) cannot support the current design load. The design load is approximately 300% of what the current beam can support.

The beam supporting the floor of the existing Council Chambers cannot support the current design load. The design load is approximately 800% of what the current beam can support.

Design Loads consist of, but are not limited to:

- Dead load (weight of building)
- Roof wind load
- Roof snow load
- Occupancy live load

B. Construction Considerations

Roof Beam: the roof beam can be upgraded in place by adding to the beam in-place. After discussion with a contractor, the best end product would require the removal and replacement of the false ceiling. Otherwise, there would be broken tiles and bent frames. New tiles and frames in some areas of the ceiling would not match the existing ceiling.

Floor Beam: the floor beam currently has a clearance of 7'-6" from the floor to the bottom of the beam. This is the legal minimum height for an open space in

a building. The most practical option is to remove the existing beam and replace it with a metal beam. In order to have a Council Chambers without the column in the open space is to install two new columns at each end of the room. This will require constructing two new footings below the basement floor.



Figure 1: Record Storage Area with Beam

III. Upstairs/Street Level

The addition of more office space upstairs in this proposal will coincide with moving the Council Chambers downstairs. The renovation of the upstairs will require the removal of most carpeting and walls. McCue and Associates prepared a preliminary layout of the upstairs and downstairs with Council Chambers downstairs. The layouts are attached for reference.

The upper level layout provides a larger “service lobby,” a conference room, a mayor’s office, a breakroom with appliances and an ADA compliant bathroom.

Booth Construction visited the site, evaluated the existing structure and provided an estimated cost of \$52 per foot to construct new nine-foot walls. This cost includes framing, electrical wiring, network wiring, drywall, finishing and painting. In areas with nine-foot walls, false ceilings will be installed. The current HVAC system for the building is either undersized or past the design life and needs to be fully evaluated. A small wall unit air conditioner was purchased and installed for the southeast corner office which houses Code Enforcement and Parks personnel. The wall unit is no longer used due to problems with the electrical circuit.

New walls will require new electrical wiring. Labor and Industries indicated that if there were no major changes to the circuits, no new panels would be required. Based on the problem with the southeast corner office, \$20,000 has been added to the cost estimate to cover any cost with required upgrades and repairs. Also included are appliances for the break room, doors, two windows and a vaulted ceiling in the lobby.



Figure 2: At Council’s table looking toward audience. Ceiling beam and floor beam run left to right located above and below column in center of room.



Figure 3: At front desk/public reception area. Receptionist site behind counter on right. Counter space on right and left is used to assist residents & visitors.



Figure 4: Air Conditioner in current southeast corner office.



Figure 5: Outlet for Air Conditioner. Re-wiring work is anticipated.

IV. Downstairs/Alley Level

Currently, the basement is used as a storage area with separate single restrooms for men and women. The Benton County Sheriff previously used space for an office and storage. In 2009, mold remediation was completed in the City's record storage area and caulking was applied to the joint between the sidewalk and building front.

During the building walk-through earlier this year, mold was noticed on the south wall next to the stairway and open area in front of the bathrooms in the basement. Two firms were contacted. One firm said they were not available for approximately one week. All-Safe Abatement came out within a two-day's notice to perform the mold abatement. Water is leaking through the walls from the walkway between City Hall and the building to the south. The work for correcting this issue is included



Figure 6: Mold Abatement, February 2016

in the exterior work estimate.



Figure 7: Sheriff's Office

The old Sheriff's Office will need to undergo mold abatement to make this area usable. A cost estimate was received from All-Safe Abatement for this work. The cause of the mold is water leaking through the walls from the sidewalk above. The base of the block wall sits on top of the basement floor. The base blocks need to be drilled and pressure sealed along the west wall, stairs and open area in front of the bathrooms. Additional remediation of the leaks is discussed in Section V: Exterior Work. Additional items needed for the basement upgrade are a video system setup for recording Council meetings, a new platform and Council table, new lighting, and a new HVAC system.

V. Exterior Work

A. Leaking Areas

During the evaluation of City Hall, mold was discovered along the wall adjacent to the stairs to the basement and in front of the women's bathroom. At this discovery, it was recommended by the Benton-Franklin Health Department that the mold be removed as soon as possible. A quote was received from a company that could remove the mold within two days. Approval by the Mayor was received to move forward with the mold abatement and completed on February 24, 2016.



Figure 8: Northwest corner of City Hall

Another area where leaks have been a problem is along the west end of the building. This is due to the construction of the sidewalk up to the building front. The sidewalk was constructed up to and above the siding. At the northwest corner of City Hall, the sidewalk is actually sloped toward the building (picture to left). In 2009, the leaks were addressed with the low cost alternative of putting in a sealant/caulking at the face of the siding. This worked for several years, but was not considered a permanent fix.



Figure 9: Leaks on West Wall of Basement



Figure 10: Basement West Wall – Leak Stain

As shown in the pictures above, the caulking job has become ineffective due to weathering and “shrinking” over time. A seal of this type is not considered a permanent fix due to direct exposure to the weather.

A permanent fix would require the removal of the sidewalk between the building front and the street curb and gutter, from the north end of the building to the south end of the building. At a minimum, the siding will need to be removed one foot above the sidewalk. The replacement sidewalk should have a three to four inch curb placed against the building in a monolithic pour. New siding will include flashing that helps direct water over the “building curb” and onto the sidewalk, away from the building.

B. Building Front



Figure 11: Sidewalk and Building Joint

At left, the joint between the building and sidewalk is shown, looking north from the City Hall front door. The City Hall front wall joins the adjacent mini-mart (blue wall at top of picture). This location has a reverse slope back toward City Hall for approximately 10 feet. Moss is growing on top of the caulking installed in 2009. A permanent fix to the leaking would require the removal of the sidewalk between the building front and the street curb and gutter, from the north end of the building to the south end of the building.

At a minimum, the siding will need to be cut approximately one foot above the sidewalk to allow for the installation of a new sidewalk with a four-inch “curb” to be installed against the building. The sidewalk would be sloped away from the building toward the street and curb. New siding with

flashing would be installed from the cut line to just above the new four-inch curb. Flashing would be installed such that runoff water from the building front would be directed to the new curb and sidewalk, draining away from the building.

Figure 12 shows the siding on the front of City Hall. The upper section of the siding is warped and coming away from the wall. It was strongly recommended by the contractor reviewing the building, that the siding be replaced to help prevent damage to the interior structure of the wall fascia. A cost for this work is included in the cost estimate.



Figure 12: City Hall Front Wall Siding

C. Building Roof

A roofing contractor inspected the condition of the existing roof. There is an existing composite roof with a metal roof placed over it. The metal roof is missing the ridge cap that allows water to enter the “sub-roof” area. According to the contractor, the flashing around the HVAC units was installed incorrectly and may allow water to enter the “sub-roof” area. The contingency amount was increased from 10% to 25% in order to account for possible roof or truss damage encountered during construction.

VI. Other Considerations

If the Council Chambers is moved downstairs, there will need to be ADA parking on the lower level to allow for access to the new Council Chambers. The Building Department was consulted on the possibility of using the back parking lot for temporary ADA parking during the Council Meetings and revert back to employee parking during the day. The Building Department said the parking spaces would need to be established as ADA parking on a permanent basis. This would require employees to park on the street side of City Hall. At the current time there are three employees at City Hall who park in the back. They would be required to park on 9th Street and take up street parking for patrons of City Hall and downtown businesses.



Figure 13: Parking in back of City Hall

Additionally, there will be costs associated with operating City Hall during construction. The estimated time to complete the proposed upgrades is four to six months. There are two options to keeping City Hall open at that time. The first is to relocate City Hall to a temporary location for the entire time of construction. The other is to alternate using the upper and lower levels during construction. It is assumed City Council meetings will be held in the Community Center during the time of construction.

Long term storage of records will also need to be considered. Some of the records, such as plans, need to be held indefinitely, while other records have a specified retention time. With the reduction of storage space in City Hall, the retention of the records will need to be addressed. If an offsite location for record storage is chosen, there will be a cost associated with this option.

VII. Cost & Recommendations

The total estimated cost for the improvements is \$440,094.

This estimate is broken down in following attachment.

At a minimum, it is recommended that following items are done:

1.	Replacement of Roof & Floor Beams	\$37,230	(Line 9)
2.	Exterior Work	\$30,327	(Line 44+45+46x8.6%)
3.	Mold Abatement in Basement	\$ 8,129	(Line 29 x 8.6%)
4.	Subtotal	\$75,686	
5.	Engineering & Administration (20%)	\$15,137	
7.	Total Recommended Improvements	\$90,823	

(The recommendation for the replacement of the beams was expressed by the Structural Engineer, Architect and Spink Engineering.)

CITY HALL IMPROVEMENTS COST ESTIMATE

Below is the total estimated cost for the City Hall improvements/upgrades. The estimate is based on an evaluation by a structural engineer, architect, general contractor, flooring contractor and roofing contractor. The estimate is based on:

- 1 Beam Upgrades - Sheet 2
- 2 Interior Work - Sheet 3
- 3 Exterior Work - Sheet 4

The contingency cost was originally set at 10%. After discussing the condition of the roof with the roofing contractor, duct work with general contractor and considering the possibility of electrical wiring issues, the contingency was increased to 25%.

13 TOTAL BEAM WORK WITH NEW BASEMENT COLUMNS	50,331	Sheet 2
43 INTERIOR WORK	163,019	Sheet 3
50 EXTERIOR WORK	57,477	Sheet 4
45 CONTINGENCY (25% of Line 13 + Line 40 + Line 44)	67,707	
46 CONSTRUCTION TOTAL	338,534	
49 ARCHITECT/STRUCTURAL & ADMIN (30%)	101,560	
50 PROJECT TOTAL ESTIMATE	<u>\$ 440,094</u>	

Replace Beam in Roof & Floor

1 Structural Engineer Detailed Analysis of Existing Structure Design of Upgrades/Replacements Inspection		9,000
2 Spink Engineering Coordination		3,000
3 Demo and Replace False Ceiling	1,960 sf x \$2.60/sf	5,096
4 Add "Laminations" to Roof Beam		7,400
5 Steel Beam in Basement		10,800
6 Non-Tax Subtotal (1+2)		12,000
7 Taxable Subtotal (3+4+5)		23,296
8 Sales Tax - 8.6%		2,003
9 Total (6+7+8)		\$ 37,299

Reduce Number of Columns in Basement

10 New Footings and Columns - 2		12,000
11 Sales Tax - 8.6%		1,032
12 Subtotal (10+11)		13,032
13 Total (9+12)		\$ 50,331

INTERIOR WORK

Upstairs/Street Level

Item	Description	Quantity	Unit Cost	Amount	
14	Walls	9' Wall	139 LF	60 /LF	8,340
15	Doors	36": \$100 + paint & Install	10 EA	200 /EA	2,000
16	Windows		2 EA	1,000 /EA	2,000
17	Electrical		1 LS	20,000 /LS	20,000
18	Ceiling	Vaulted Lobby	276 SF	30 /SF	8,280
19		Tube Sky Light in Lobby	6 EA	1,500 /EA	9,000
20		False Ceiling	1,888 SF	2.60 /SF	4,909
21	Floors	Removal	1 SF	2,164 /LS	2,164
22		Entry & Lobby \$6/sf + \$2/sf inst.	552 SF	8 /SF	4,416
23		Carpet: \$1.50/sf + \$2/sf inst.	1,612 SF	3.50 /SF	5,642
24	HVAC	w/duct work	1 LS	18,000 /LS	18,000
25	Bathroom	ADA Compliant, Water & Drain	1 LS	12,000 /LS	12,000
26	Appliances	Hot Water Tank	1 EA	500 /EA	500
27		Refrigerator	1 EA	600 /EA	600
28		Range/Oven	1 EA	400 /EA	400
29	SUBTOTAL				98,251

Downstairs/Alley Level

Item	Description	Quantity	Unit Cost	Amount	
30	Mold Abatement	1 LS	7,485 /LS	7,485	
31	Wall Base Sealing	1 LS	4,000 /LS	4,000	
32	Wall Sealant	1 LS	2,500 /LS	2,500	
33	Floors	Removal	500 SF	1 /SF	500
34		Vinyl: \$2.5/sf + \$2/sf inst.	800 SF	4.50 /SF	3,600
35		Carpet: \$1.50/sf + \$2/sf inst	1,364 SF	3.50 /SF	4,774
36	Council Chambers	Platform and Table	1 LS	5,000 /LS	5,000
37	New Lighting		1 LS	3,000 /LS	3,000
38	Video Setup		3,000 LS	1 /LS	3,000
39	HVAC	w/duct work	1 LS	18,000 /LS	18,000
40	SUBTOTAL				51,859

41	TOTAL COST (28+39)	150,110
42	Sales Tax - 8.6%	12,909
43	INTERIOR TOTAL	163,019

Exterior Work						
Item	Description	Quantity		Unit Cost		Amount
44	Front Sidewalk Replacement	includes saw cutting, concrete removal and replacing sidewalk with 3" curb against City Hall Building	320	SF	20 /SF	6,400
45	Building Siding Replacement	Existing siding is deteriorated and needs replacement. Material cost est: 45 panels @105 ea = \$4,725. Installation = 2.5 x materials = ~\$11,800. Total = \$16,525	1	LS	16,525 /LS	16,525
46	Walkway on S. Side of Bldg		1	LS	5,000 /LS	5,000
47	Reroofing	remove old roof & install new roof	1	LS	25,000	25,000

48	TOTAL COST	52,925
49	Sales Tax - 8.6%	4,552
50	EXTERIOR TOAL	57,477



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March 2, 2016

City of Benton City
P.O. Box 70
708 9th Street
Benton City, WA 99320
Fax: 509-588-3323

RE: Inspection of Council Chambers, Benton City, WA

Dear City Council,

At the request of Alan Rainey of Spink Engineering, I have performed a limited structural inspection and analysis of the City Hall building at 708 9th Street, Benton City. Alan and I reviewed the layout of two floors, and opened up the ceiling to explore the construction methods and materials of the roof system. We also followed the transfer of forces through the first floor columns, into the floor beams and down through the basement columns.

The roof joists and floor joists seem to be at, or near, appropriate size for the local design loads. However, both the roof beams and the floor beams are grossly undersized. Estimated stress values of these beams under full design loads are in the vicinity of about 300% of allowable design values. The structure is most likely under deflective failure now. In the event that the roof system, the floor system, or a combination of roof and floor systems receive a full design load, the building would most likely have a catastrophic failure of some kind. Although the chances of the structure being fully loaded are slim, the nature of such a failure is life threatening. Action is required.

I believe that the appropriate corrective action need not be overly expensive. As I discussed with Mr. Rainey, new high strength timber may be successfully added to the existing roof beams to provide the strength required to resist full design loads. This retrofit would be relatively economical.

The floor beams are a bit more challenging. Given the low clearance in the basement, and assuming the City wishes to continue its use, there is no room to build-up the floor beams in the same manner as accommodated by the roof beams. My proposed fix, as I discussed with Mr. Rainey, is to replace the existing beams with stronger wood, such as a glulam beam (GLB), or laminated veneer lumber (LVL). Another viable option is to simply replace the wood beams with steel beams.

Job #15195

Another option would be to just add more columns and footings. Although this option is by far the most economical, the fastest, and by far the easiest solution, it would greatly limit the usable space in the basement. If the future use of the basement will be to store small items, the column idea would be practical. However, if you would like the space to be opened up more (for almost any other purpose), replacing the beams is the better answer.

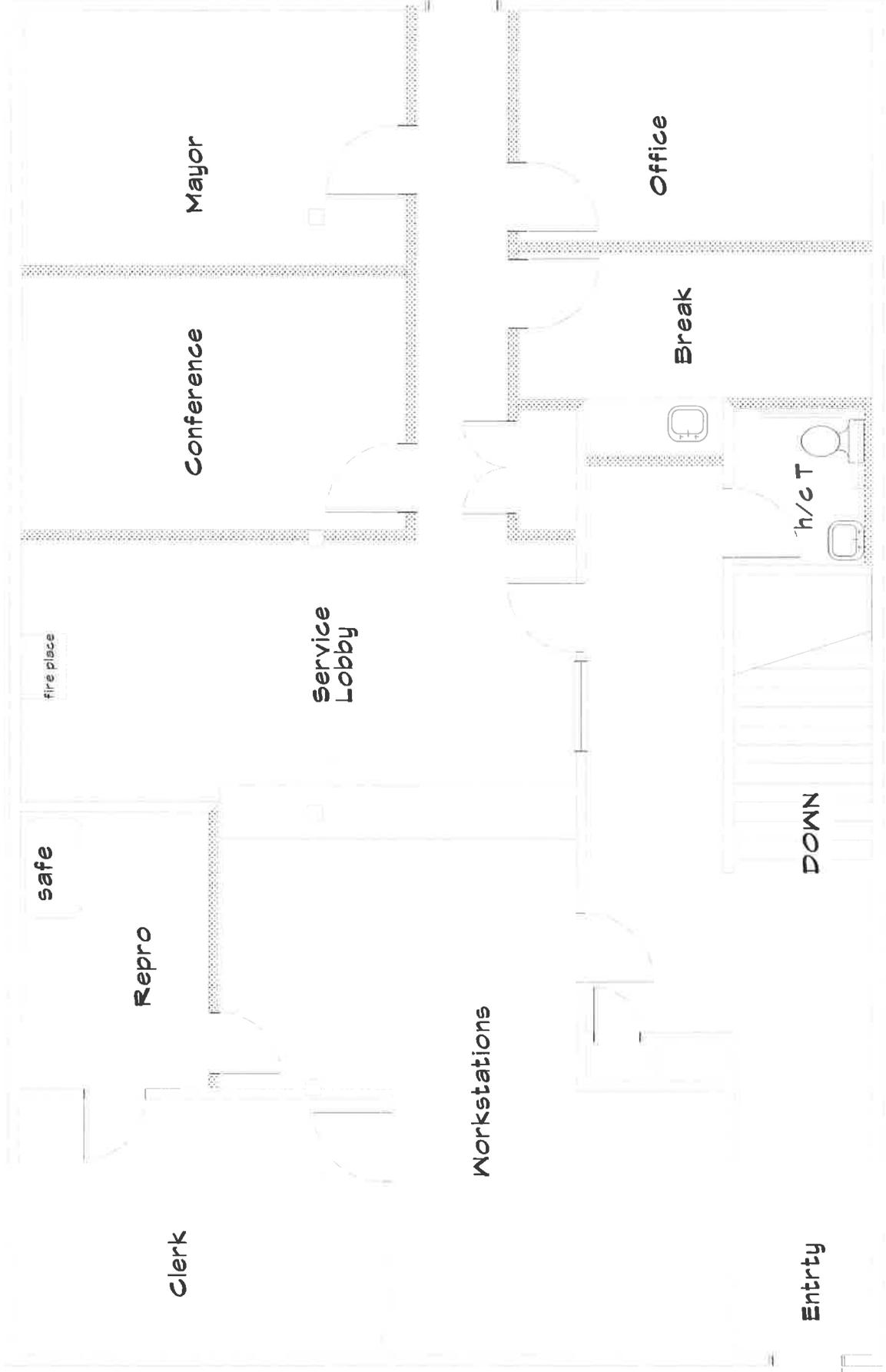
Lastly, this report should not be considered a complete structural survey by any means. It is recommended that further exploration is done as the City moves forward with renovation plans to reveal possible problems, and avoid future costs and delays.

At your request, I will try to make myself available to you, and/or your representative, for further discussion regarding this report (attend a City council perhaps). If you have any questions, please call.

Best regards,

Cliff Berkey, P.E.
Principal
Berkey Engineering





Street entry

existing stairs to parking

4/19/2016

UPPER LEVEL

LOWER LEVEL 4/19/2016

