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July 21, 2020

JD Boruff
Operations and Facilities Director
City of Bloomington Public Works
401 N Morton St.
Bloomington, Indiana 47404

Re: Facility Assessment-122 South Walnut St.

Dear JD:

I have attached our evaluation of 122 S Walnut Street. The evaluation was based on life safety, mechanical and structural surveys we performed through a walk through with a Structural Engineer and our MEP consultants, TEC. These reviews were to consider a 5-year immediate need survey and long-term issues if found for the existing facility; no destructive testing was performed. A few portions of the building were unavailable for us to review because of leases and Covid-19 shutdown.

Based on these reviews, it is our opinion that the existing building is in sound shape for the long term and only requires items mentioned in the report for the 5 year needs.

Please let me know if I can answer any other questions or review information in this evaluation that may not come across clearly, we have strived to simplify it in a manner that is best understood. We did not complete a “destructive” survey to look into walls and ceilings and only made observations where we could get easy access, sometimes items may be left unseen that could have an impact on our assumptions and materials and labor costs are becoming a moving target. This evaluation should act as a guide for you to look down the road for a more detailed scope of work and refined numbers if you decide on a future renovation.

Sincerely,

Howard Douglas Bruce
President-Architect
Tabor/Bruce Architecture & Design, Inc.

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INTRODUCTION

This study is to focus on a facility review for 122 South Walnut Street for the City of Bloomington. The focus is on Life Safety. plumbing, electrical, mechanical systems, and structural evaluation to an existing three story, 19,868 square foot structure.

Tabor/Bruce Architecture & Design has been commissioned to provide an evaluation of the structure, and produce a report to accomplish the following goals:

1. Review of existing HVAC and mechanical systems.
2. Review existing structural systems
3. Provide cost numbers for repairs if needed.

We consulted with both Jim Lewis of LJ Engineering, a structural engineering consultant, and The Engineering Collaborative to review the mechanical, electrical, plumbing systems. This evaluation occurred on July 17th, 2020.

INDIANA BUILDING CODES
The Structure falls under the jurisdiction of the current 2014 Indiana Building Code. This is a combination of the 2012 International Building Code adopted and modified with Indiana Amendments.

The three-story building is comprised of concrete masonry unit (CMU) bearing walls with a limestone stone veneer. The floor structure and roof structure are dimensional lumber. The original structure dates to the 1920's, with an addition in the 1980's. It is a historic structure with a rating of outstanding in the state sites and structures survey. The existing structure measures approximately 19,868 square feet.

RULES FOR EXISTING BUILDINGS
Existing buildings that were constructed in accordance with the rules of that time of existence are permitted to have their existence continued without having to be altered to comply with current rules. There are two exceptions to this:

1. The use of the building is changed which causes the building to be classified into a different occupancy group or a different division within the same occupancy group.
2. New work or alterations to the existing building must comply with the provisions of the current code. Portions of the structure not altered and not affected by the alternations are not required to comply with the code requirements for a new structure.

The Structure has been continuously occupied since its erection in the 1920's. Per code regulations only alterations must meet current code requirements.

OCCUPANCY and CONSTRUCTION TYPE
The Structure is currently classified as a Type M (Retail) and B (Business) and A (Assembly) occupancy uses. The theaters within the building are the A uses and at one time, were courtrooms, so the assembly use has been in use for the life of the building. The building is fully protected with a NFPA 13 type sprinkler system, which was not tested during this survey, but should be tested by a certified agency.

The building is a Type III-B Construction. This indicates that all exterior walls are created of a noncombustible material while interior building materials may be of combustible materials. The building may rise to four stories in height total, 55 feet maximum, (Actual building height is around 46 feet), and a maximum of 12,500 square feet per floor for an M use. 19,000 square feet per floor for the B use, and 8,500 square feet for the A-1 use. These numbers do not account for open space allowances, nor do they account for the automatic sprinkler increases, which allow 200% area increases and an additional story and 20 feet in height. The 'III-B' classification signifies that the building is a non-rated building with no required, rated fire protected structural members.

OCCUPANT LOAD
B, Business occupancy allows for a minimum floor area per occupant of 100 square feet. Total occupant loads are outside of this evaluation, however, the required number of exits and stairs for each floor were met for the current uses and required egress. M occupant loads are 60 gross square feet per occupant, and A occupancy loads are a 7 square feet per occupant for chairs that are not fixed.

DRINKING FOUNTAIN
Current building codes stipulates that there should be one drinking fountain for this use and one is provided.

MEANS OF EGRESS (Exiting from spaces)
One exit is required from individual rooms or spaces containing less than 50 persons in an Assembly Occupancy. For spaces over 50 persons (750 square feet), two exits are required.

EXIT TRAVEL DISTANCE
Exit access travel distance for business (A) or retail (M) occupancy allows a maximum of 250 linear feet from occupied space to the exterior in a building with a sprinkler system (1016.2). The (B) use allows up to 300 linear feet of travel distance. A minimum of two independent exits from occupied spaces to exterior are required in a building with occupancy under 500 persons (1015). Exiting seems to meet the code as the building is currently configured.

MAJOR ALTERATIONS or REMODELLING
The Indiana General Administrative Rules allows for the use of Chapter 3410 Code Review in an existing building to review if the building can be renovated and not need to meet all of the conditions for the current building codes. It is a scoring system that provides positive points for life safety items to exceed points deducted for deficiencies.

The potential exists that would allow the Chapter 3410 matrix on any renovations to the existing structure which may not require a major renovation to that portion to meet the new building codes.

ACCESSIBILITY

Chapter 11 of the Indiana Building Code prescribes standards and accommodations that must be followed to provide access to public and commercial buildings by disabled persons. These standards require that reasonable accommodations be made to allow a person to obtain access to the main level of a building. Any specific feature or experience within the building must be provided on that floor.

The basic premise of Chapter 11 requirements is to provide an accessible route to the building and to public use spaces within the building. The code is compatible with American's With Disabilities (ADA). Guidelines. In regard the Structure, it does fulfill most requirements for accessibility. The South entry of the building possess a walk that enters the first floor of the building at grade to an existing elevator for second and third floor level access. This permits acceptable clearances for a person in a wheelchair to access these spaces.

Restrooms in the building seem to meet ADA / Chapter 11 requirements. There is however, no signage indicating an accessible route. Minor issues involve the location of some flush handles in the ADA designated toilet stalls, and the grab bar locations, while meeting the older ADA codes, do not meet the newer, updated, ADA code locations. These do not need addressed unless an alteration is planned.

INTERIOR REVIEW

FIRST FLOOR
No immediate issues evident (WFHB space was not accessible)-all mechanical units reviewed. Rooms/corridor-No issues found-plumbing was in working order. No signs of visible water issues seen. Exterior doors all operated as expected. Wood windows were not needing replaced. HVAC/Electrical/Plumbing systems were reviewed and the mechanical rooms were inspected.

SECOND FLOOR
Some staining of ceiling tiles in South West office. Tiles are in the office and along an exterior wall and where the elevator tower is located.
A few wood windows along the south and east facades have rotted and need rebuilt. (Window replacement in an historic building at this level is discouraged).
Handrails on stairs are not on both sides of the stairs nor do they return to the wall as required by the building code and present a hazard. The exterior wooden exit stair has rusted fasteners as well as loose railings and should be replaced. It has weathered extensively. The door to the west lower roof has had some renovation work started but not completed and should be finished. It may have had water intrusion, so flashings and sealants nay be required before gypsum board is completed. It needs a new door threshold as well.

THIRD FLOOR
Windows in the Whikehart auditorium were covered and not accessible to inspect.
Flooring in the auditorium was covered, (very poorly), with underlayment to protect them but the underlayment is not fastened to the floor and bubbles up in numerous places. Handrails along stairs do not return to wall and could hook a carried item.
Skylight shows no sign of leaking. Toilet rooms were functioning and no ADA issues were evident except that the ADA toilet units have the flush handle located on the wrong side of the toilet.

ELEVATOR
A detailed inspection was not performed-the elevator seemed to be in operating order. The elevator equipment room, located across the hall, was warm as typically found in older elevator equipment rooms and did have a smell of hydraulic fluid, but no leaks were evident.

ROOF CONDITION
A roof inspection was not performed as that is being done under another contract, but the condition was observed. It is a Fully adhered roof-no evidence of issues present in flashings at parapets.
Some ponding of the roof membrane was visible at the location of roof equipment curbs, indicating low spots and lack of some water drainage. The roof drains on the main structure roof did need cleared and should be better maintained.

Lower roof-Fully adhered roof. No ponding was observed. Roof in this area drains to a gutter system.

BUILDING EXTERIOR

While the building has been well maintained, the building envelope requires maintenance. The work has begun in some areas along the South and East facades for tuckpointing masonry where damaged and missing. The exterior has numerous places where spalling of the limestone has occurred because of past cleaning, age, and salts from sidewalk and street treatments. See attached PDF sheets for repairs. Many areas have damaged stone from rusting of limestone anchoring systems and improper items drilled into the stone. Needed areas to be addressed are the North and west facades. A few areas have no grout within the limestone joints and need repaired to limit future damage and water intrusion. The steel exit stair from the third floor needs sanded-welds or bolted connections checked, and primed and painted. It shows signs of rust that should be striped before rust through conditions occur.

MECHANICAL/ELECTRICAL/PLUMBING SYSTEMS ANALYSIS

Physical Description

All systems have been visually reviewed in the field. In general, there are existing and functional electrical (power, lighting, and telephone) systems throughout the building, functional plumbing including domestic hot water, and functional heating and cooling throughout (with mechanical ventilation in some areas). There are active natural gas, domestic water, fire protection water, telephone, and power utility services,

Site Utilities

POWER

The building has an underground 1,200 amps at 120/208 v., 3 ph. power service, fed from a Duke Energy pad-mount transformer on the ground at the northeast corner of the building.

WATER

The is a meter pit near the southeast corner of the building; the piping enters underground but it is not visible. There is no visible Reduced Pressure Zone Backflow Preventer (RPZBP).

SANITARY SEWER

The sanitary sewer was not visible on site, but it is known to exit the building toward the south.

COMMUNICATIONS

There is a conventional telephone service.

NATURAL GAS

There are two (2) natural gas meters on the north side, toward the east end.

MECHANICAL – Heating, Ventilating, and Air-conditioning

There are seven (7) residential-style gas/electric split systems for heating and cooling. Two of the furnaces are located at the west end and their Air-Cooled Condensing Units (ACCU) for cooling appear to be on the roof of the adjacent building (at the northwest corner) and under the deck (at the northwest corner of the main body of the building); three (3) more are located in the lower level mechanical room with ACCU's on the ground along the north side, and the other two (2) are located in a closet in the kiln room on the second floor (near the southeast corner) and their ACCU's on the ground along the north side as well. There are two (2) gas/electric packaged rooftop units (RTU) on the high roof; the smaller unit appears to serve the west end of the third floor and the larger units serves the theater at the east end of the third floor. Several of the furnaces and ACCU's appear to date to the 1992 construction of the Arts Center. The RTU's appear to be newer and the larger one appears to be newer than the smaller one. There appears to be no mechanical ventilation in areas of the building served by the split systems but there is there outside air intake at both RTU's for mechanical ventilation of the third floor. Many of the spaces served by the split systems may qualify for natural ventilation via operable windows.

ELECTRICAL
The Duke Energy pad-mount transformer appears to serve only the 1,200 a. 120/208 v., 3 ph., 4 wire Main Distribution Panel in the lower level (east of the old mechanical room). This equipment serves several branch circuit panels scattered around the building, the theatrical dimming equipment on the third floor loft, and some of the HVAC equipment. This equipment is in good condition.

Interior wiring appears to be have completely updated in the 1992 renovation and it appears to be in good condition.

Lighting appears to date to the 1992 renovation so all of the fixtures, and lamps, are antiquated.

PLUMBING
Sanitary waste and vent and domestic water systems are present and the visible piping appears to be in good condition (dating to the 1992 renovation). All of the fixtures appear to date to the 1992 renovation and they appear to be in good condition. The water heater in the old mechanical room appears to be relatively new and it is in good condition.

FIRE PROTECTION
The building is fully sprinklered and there is an addressable fire alarm system.

CONDITION ASSESSMENT
Most of the furnaces and five (5) of the ACCU's are well past their expected useable lifetime and need to be replaced right away. Some of the ACCU's are literally falling apart and must be replaced right away. The RTU's appear to be in good condition and replacement could be several years into the future.

Power: the equipment appears to be in good condition and should be useable for a few more decades.

Lighting: the lighting is antiquated and should be replaced when funds allow. Energy rebates may be available to reduce the cost of this work.

Plumbing: the plumbing appears to be functional although replacement of the flush-tank water closets may be required sooner than later.

MECHANICAL EQUIPMENT CODE REVIEW
Even though all existing mechanical, electrical, and plumbing systems may have been in compliance with design and construction standards at the time of construction and newer work may have been in nominal compliance with Indiana Codes in the past, all new work undertaken in the facility in the future must be in full compliance with all current applicable rules, except the 2010 Indiana Energy Code. Due to its age, the building is entirely exempt from all requirements of the 2010 Indiana Energy Code.

One code issue that was observed is the lack of mechanical ventilation in most areas served by the split-systems. Even if natural ventilation is technically feasible (under the requirements in the Indiana Building Code governing opening sizes), it is still advisable to implement mechanical ventilation to assure that there is ventilation even when openings are closed. This is especially true in the current situation related to COVID19.

Another lesser code issue is that additional fire alarm visual notification devices will probably be need if areas are renovated because current rules require such devices in most spaces (anywhere there could be two or more occupants plus others).

Recommendations: Immediate, Mid-term, and Long-term

IMMEDIATE (as soon as feasible)

H1.1 Replace all failing (or failed) ACCU's.

H1.2 Replace all vintage 1992 furnaces.

H1.3 Add mechanical ventilation to all areas served by the split-systems. This can be in two (2) different ways:

- A. Add one or more Dedicated Outside Air Systems (DOAS), which are usually packaged gas/electric 100% outside RTU's that deliver air either directly to each space or to the return air ductwork at fan-driven systems. These systems can provide full dehumidification in conjunction with ventilation.
- B. Add one or more Energy Recovery Ventilators (ERV), which cannot provide full dehumidification and which require electric zone re-heat to prevent "cold blasts" if the furnaces aren't running.

H1.4 Add steam humidification throughout the facility to improve pathogen control. This can be done on a zone-by-zone basic with either units that disperse steam into supply air ducts or that disperse steam directly into spaces. This step could best be described as a COVID19 response as well.

E1.1 Replace luminaires with LED luminaires to reduce energy consumption and maintenance.

P1.1 Replace flush-tank water closets.

P1.2 Add a Reduced Pressure Zone Backflow Preventer (RPZBP) at the domestic water service.

MID-TERM (1-5 years)

P2.1 Replace the water heater.

E2.1 Replace the fire alarm system.

LONG-TERM (greater than 5 years)

H3.1 Replace the RTU's.

MECHANICAL SUMMARY

Over its lifetime, this building has been altered numerous times and various systems have been added. While the systems are all functional (with the possible exception of some of the ACCU's), significant work is needed over the Immediate and Mid-Term time periods to keep the building systems fully functional.

STRUCTURAL EVALUATION

DESCRIPTION OF SITE/EXISTING BUILDINGS:

The existing building is comprised of concrete masonry unit walls with a limestone veneer. The floor framing consists of wood joists. The roof system is a rubber type membrane over insulation on wood roof decking supported by wood joists. This type of construction appears to be consistent throughout all areas of the facility.

The exterior displayed no noticeable structural deficiencies. In order to maintain the exterior's integrity, some minor masonry tuck pointing, cleaning and joint sealant is recommended.

There were no identified deficiencies on the interior of the building that were noticed.
On the roof, there was some light ponding at some of the rooftop RTU units are located, possibly from condensation drains. Both roofs were intact and showed no visible issues.

The more recent elevator and ramp addition did not show any visible issues.

Finally, the structural condition of the building appears to be quite good with no noticeable structural issues. No visible settling or cracks were evident, and wall structures were in good condition.

FINAL STRUCTURAL COMMENTS:

Disclaimer: This assessment is based upon a visual site visit and a cursory review of a portion of the existing construction drawings. No structural analysis was completed and no confirmation of actual materials verses construction drawings was thoroughly completed. Therefore, all opinions are based upon years of experience and judgment as a structural engineer.

PROJECT COSTS

Cost estimates indicate actual numbers based on construction. However, the future and maintenance costs are subject to a certain degree of uncertainty. However, it is important that decision-makers have a good sense costs before commencing work. The following Opinion of Probable Cost was competed based on an inspection and evaluation of the building completed by Tabor/Bruce Architecture & Design, Inc. along with our consultants.

In providing an Opinion of Probable Cost, it is recognized that neither the Client nor the Consultants have control over the costs of labor, equipment, materials, or even the Contractor's methods of determining the process for bidding. This Opinion of Probable Cost is based on the Consultant's reasonable professional experience and judgment and does not constitute a warranty, expressed or implied that the Contractors' bids or negotiated price of the work will not vary from the Client's budget or from any opinion of probable cost. It is more cost effective to complete work in one continuous session rather than phasing work over long term. All costs will inflate if the proposed work is pushed off into the future.

The following items should be areas of concern for the immediate future for a five year plan.

Opinion of Probable Cost

Tuck pointing and masonry repairs to exterior facade (Depending on work already completed)	$75,0000.00
Interior water damage repair at second floor South West office	$8,000.00
Wood exit stair at north wall rebuilding	$30,000.00
Steel exit stair at north wall repairs/repainting	$6,000.00
West-second floor roof access door repair	$3,000.00
Wood window repairs for six window units (Roughly $8,000.00 each depending on removal of window)	$48,000.00

MECHANICAL Immediate issues

H1.1 ACCU's and H1.2 Furnaces:	$75,000.00
H1.3 ventilation:	$60,000.00
H1.4 humidification:	$100,000.00 to $150,000.00

E1.1 lights: this is hard to say, but at $2/sf for direct replacement. If the building is roughly 20,000 sf, that would be $40,000.00,

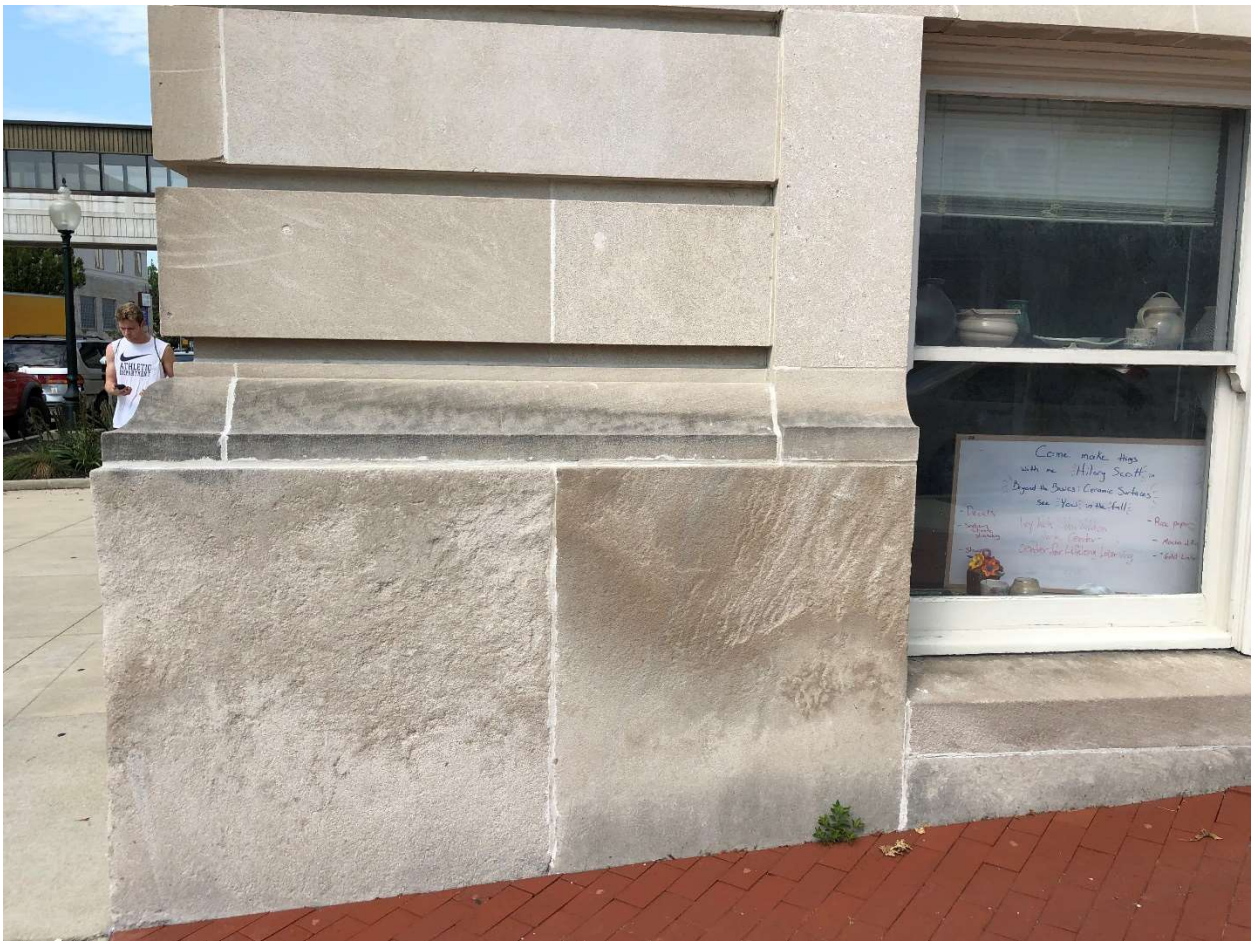
P1.1 water closets:	$1,000.00
P1.2 adding an RPZBP:	$15,000.00, if even feasible

MECHANICAL Mid-term issues (Beyond 5 years)

P2.1 water heater:	$5,000.00
E2.1 fire alarm:	$50,000.00, to $75,000.00

MECHANICAL Long-term Issues (Beyond 10 years)

H3.1 RTU's:	$50,000.00 to $75,000.00



Exterior Limestone spalling

West alley exterior with issues in spalling, cracking, and drains.

Upper west elevation at roof with masonry issues.

Typical stair railing-doesn’t return to wall and not on both sides of stair

Second floor East window deterioration

Second floor SW office window moisture issues

SW Office ceiling tile staining

Third floor office door to low west roof area access

North Exterior mechanical room air intake well

North exterior exit stair deterioration

North exterior wood exit stair

Main roof-roof drain debris

Skylight exterior framing

Main roof mechanical equipment condensation water ponding

Interior roof skylight

North wood exit stair rusted support fasteners

Two furnaces at first floor performance space

Mechanical room furnace

Mechanical room furnace

Furnace at first floor kiln room

ACCU unit possible serving WFHB

Old ACCU units at north exitway/alley enclosure

Failing ACCU in north alley/exit enclosure