CITY OF CHARLESTON
P.O. BOX 2749
CHARLESTON, WV 25330

October 31, 2024
Addendum #1

EOI- Municipal Auditorium Facade Assessment

This addendum is being issued to provide answers to the technical questions received.

1. Does the city have the original record drawings for the auditorium?
   A) Yes. Drawings are available and will be provided to the firm selected for this project.

2. Can you share with us the referenced original assessment report prepared by ZMM Architects and Engineers?
   A) Attached

3. Is there a lift on site that can be used for assessment?
   A) No. All equipment necessary for the assessment must be rented or provided by the firm chosen for this project and this cost can be incorporated and discussed at the time of contract negotiation with the successful firm.

4. Are there any local restrictions on flying drones (performed by FAA licensed operator)?
   A) There are no City of Charleston ordinances restricting drone use at the cite. However, there are state and federal rules and statutes that may apply. The firm chosen for this project will be responsible for compliance with any applicable regulations on drone usage.

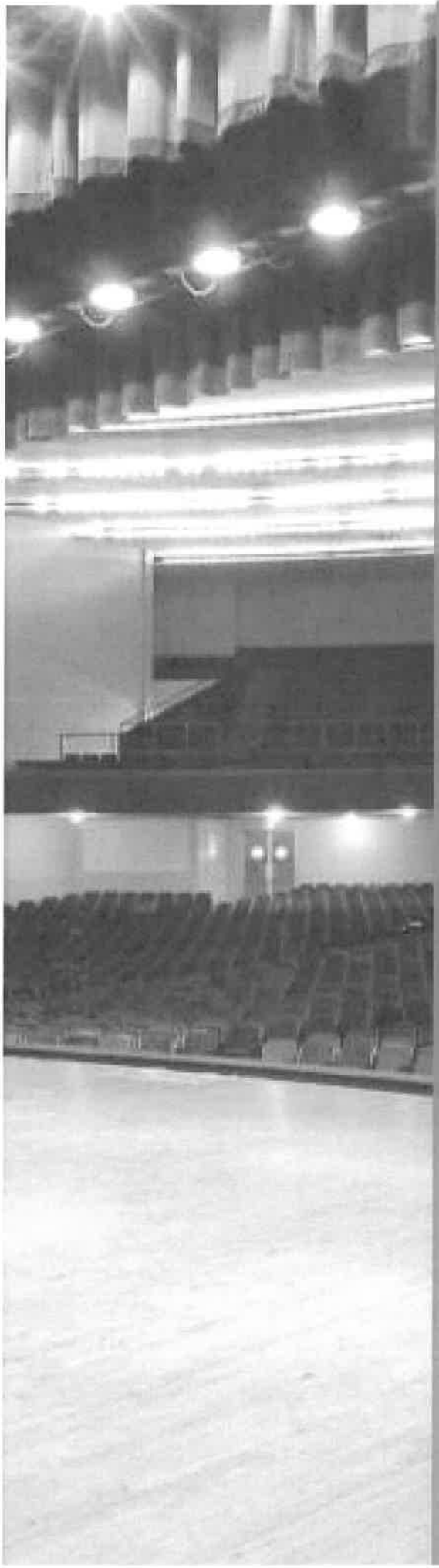
5. What does the City define as "environmental soundness"? Are teams expected to include an environmental subconsultant for HazMat services?
   A) The request to determine if the cast-in-place concrete front façade is "structurally and environmentally sound" is intended to have the firm selected for this project report on the structural soundness of the façade and whether there are any environmental risks or concerns with its potential preservation or removal, such as the presence of asbestos or other hazardous material.

6. Please clarify what is meant by "3 written client references." Does this refer to client contact information or are Proposers expected to include letters of recommendation in the proposal?
   A) **Vendors may provide at least three letters of recommendation or, in the alternative, contact information of at least three prior clients with a brief description of the work the vendor performed for the client.**

7. In "1.1 Purpose," the "cost associated with preserving the façade" is referenced. Does this imply that the team should include cost estimating services at this phase of the proposal process or is that scope anticipated to be addressed after the awarded firm is selected?
   A) **Cost estimate of preserving the façade is not expected or needed in a firm's expression of interest. Cost estimate for preserving the façade must be included in the final report prepared by the selected firm.**

8. In "1.1 Purpose," the proposal references the "cost-benefit analysis of the various options." Are these options pertaining strictly to the façade scope or options for the overall structure?
   A) **The architect and engineering services sought for this project are limited to assessing the condition of the cast-in-place concrete front façade. The purpose is to assess the condition of the front façade, determine whether it is feasible or not to preserve if the rest of the structure were demolished, and the estimated cost of preservation efforts for that portion of the building. The cost-benefit analysis should discuss various options for the façade, including (as examples only) demolition of the façade, preservation of the façade as part of a new build attached to the façade, preservation of the facade as a stand-alone or modified structure, or any other options that may be suggested or determined in the professional opinion of the selected firm.**

9. What are the available documents for review on this project as referenced in "2.1 Expectations," bullet point A?
   A) **The available documents include scans of original building drawings, recent productions of new drawings that were prepared as part of the overall building inspection, and the report prepared earlier this year summarizing the building's condition.**



MUNICIPAL AUDITORIUM ASSESSMENT

Prepared for:
The City of Charleston

Prepared by:
ZMM Architects and Engineers
Assistance from WDP Associates and CAS Structural Engineers

04-APRIL-2024

ZMM ARCHITECTS ENGINEERS

Table of Contents

Attachments:

1. As-Built Drawings Prepared by ZMM Architects and Engineers
2. Municipal Auditorium National Register of Historic Places Registration Form (47 Pages)
3. Municipal Auditorium Facility & Equipment Condition Assessment (Dated April 4, 2019 – 9 Pages)
4. Charleston Municipal Auditorium Forensics Report (Dated May 30, 2023 – 10 Pages)

Acknowledgements:

The report has been prepared by ZMM Architects and Engineers with support from Carol Stevens (CAS Structural Engineering, Inc.), Rex Cyphers and Jodi Knorowski (WDP Associates – Building Envelope Consultants), and Win Strock (Estimating). Patrick Leahy (OVG360), General Manager & Director of Programming at the Charleston Coliseum and Convention Center provided previous studies, insight into operational concerns, and building access. Chris Knox (City Engineer) provided access to existing drawings. Dr. Billy Joe Peyton, Chair of the Charleston Historic Landmarks Commission (HLC), provided access to Municipal Auditorium National register of Historic Places Registration Form. Wes and Anita Byrd provided the drone photography. Mark Nary from M&L Electric assisted with the additional electrical investigation and coordinated a temporary solution for replacing the electric service entrance with BBL Carlton.

Executive Summary

The Municipal Auditorium is an 85-year-old building that was constructed by the City of Charleston in conjunction with the Public Works Administration. Designed by architect Alphonso F. Wysong of Charleston (Alphonso F. Wysong worked in conjunction with consulting architects C. W. and George L. Rapp of Rapp and Rapp, Inc. of Chicago), the building has a prominent Art Deco façade, while most of the building is a more utilitarian or modern style. The main floor of the Municipal Auditorium originally held 2,411 people and the balcony accommodated 1,158 people bringing total seating capacity to 3,569. This number was reduced to approximately 3,450 due to the removal of seats for handicapped access at the rear of the main hall. It has been further reduced to accommodate a space for show production.

The building is currently in poor condition, is not accessible, and not designed to function in a manner that maximizes the visitor experience or revenue. In the current condition the building is not safe for continued occupancy. Significant improvements must be made to ensure continued operation of the Municipal Auditorium. The investments required to continue operating the auditorium will not improve the functional challenges created by the existing layout necessitating the comparison of the cost of improvements with the cost of a reconfigured or new theater.

ZMM Architects and Engineers completed the investigation of the Municipal Auditorium for the City of Charleston in January and February 2024. The Municipal Auditorium, located at 244 Virginia Street East in Charleston, "is a public auditorium in Charleston, West Virginia, as part of the Charleston Coliseum & Convention Center. It was constructed in 1939 and is a large monolithic concrete and steel structure, situated in the southwestern section of Charleston's central business district. It is an example of the Art Deco architectural style in a public building and was listed on the National Register of Historic Places in 1999."

The intent of this assessment is to identify the improvements, or proposed scope of work, required to rehabilitate the facility to an acceptable and modernized condition for continued use as a theater. The assessment also reviews the feasibility of targeted renovations, and a cost/benefit analysis for other options including complete renovation, or demolition and construction of a modern venue. Systems assessed include:

- Historic Characteristics and Features
- Site Conditions, Utilities
- Building Structure
- Life Safety and Egress (Building Circulation)
- Accessibility
- Building Envelope, Including a Roofing Analysis
- Interior Conditions and Finishes
- Plumbing Systems
- Electrical Service and Distribution, Emergency Power
- Lighting
- Mechanical Systems
- Data/IT Infrastructure
- Kitchen and Other Specialty Items
- Security Systems

Photo 1: Aerial View of Municipal Auditorium

Prior to commencing the assessment, ZMM worked to acquire existing documentation (plans and previous assessments). City Engineer Chris Knox provided access to a variety of plans for the building and building improvements. These plans were used to help produce the as-built drawings and model that are contained in this report. ZMM also received a copy of the National Register of Historic Places Registration Form from Dr. Billy Joe Peyton. That document provided a significant amount of information that has helped guide the assessment.

The on-site assessment effort commenced on January 24, 2024. This initial assessment included a review of the overall condition of the building, as well as a more detailed assessment of the building envelope. During this visit many deficiencies were observed. These included deficiencies with the operational layout of the building that were described by Mr. Patrick Leahy, General Manager & Director of Programming for the Charleston Coliseum and Convention Center (OVG360). The most glaring physical deficiency was the condition of the brick on the parking lot side of the building (northwest elevation). The bricks were significantly displaced and the panel between the windows appeared to be at risk of buckling and falling. The City was immediately made aware of the condition to ensure the safety of the public.

Following the initial walk-thru, follow-up visits were scheduled to gather additional information regarding various building systems and to take as-built measurements to assist with the documentation of the facility. Based upon our analysis and documentation, the building contains approximately 53,000 SF of space, as outlined below:

Basement Level (Under Stage)	7,943 SF
Main Level (Lobby, Performance Hall, Stage)	27,881 SF
Mezzanine Level	9,114 SF
Concession Level	4,673 SF
Dressing Room Suites (Multiple Levels)	3,376 SF
Total Area:	52,987 SF (Approximate)

On January 30, 2024, the initial electrical assessment was completed. During this assessment the main service switchgear (located in the basement) serving the entire auditorium building was observed to be in standing water. Water leaking out of the base of the gear and significant rust at the base of the gear was identified as an immediate concern that required correction if the building was to remain occupied. The observed condition could be deadly if there is an arc flash (explosion), in which case anyone near the service would be killed. Additionally, due to proximity it would likely immediately destroy the main fire alarm control panel. Power would be disabled to the building, and it could cause a fire.

Based upon the observed condition ZMM recommended that the building be closed until the gear is replaced or repaired and all components certified to comply with protection requirements by the manufacturer or third-party testing agency. AEP was contacted to disconnect the service, which permitted Mark Nary from M&L Electric to access the site and open the de-energized switchboard. M&L Electric observed that the water was likely entering around the conduits where they entered the building. The gear was observed to be extremely brittle in certain areas and rusted through in several spots. Oxidation was also observed on the lugs as well as the cables and bus. The main causes of arc flashes in industrial/commercial switchgear are the use of tools to energize switchgear, the deterioration of the insulation on phase bus bars, and loose connection that overheat. The actual flash is the light and heat from the explosion. A significant amount of corrosion was observed on the de-energized bus and

conductors. Over time the corrosion would deteriorate the connections, potentially resulting in an explosion.

AEP observed the condition and noted that they would be unable to restore power until the main service switchgear was replaced. Due to the location of the Municipal Auditorium in the flood plain, the new service would need to be moved from the basement and relocated approximately 4'-6" above the stage height. Based upon this and other significant life safety concerns the City of Charleston decided to close the facility pending the outcome of the assessment and repairs to the building.

In addition to the masonry damage and electrical service concerns, the following is a summary of major deficiencies that were observed during the assessment:

- There is no fire water service in the building. Where fire service is indicated (standpipes), it is connected to the domestic water service.
- The fire alarm is not capable of operating during a show and is turned off during performances, requiring use of a fire watch.
- We did not observe an automatic smoke detector shutdown of the mechanical air handling systems. If there is a fire, smoke could be spread throughout the building.
- There is inadequate roof drainage, and it appears scuppers were eliminated. This would allow water to build up on the roof creating an unintended load that could damage the roof structure over the audience. This could collapse the roof if there is a blockage of the drainage system.
- The fire curtain is failing. This system protects the audience if a fire occurs on the stage.
- There is no automatic fire suppression (sprinkler) system, which is unsafe for large assembly areas.
- Accessibility is inadequate and, in many cases, non-existent.
- There are numerous spaces where there is inadequate egress and egress lighting. The most dangerous area appears to be the stair towers leading to the dressing rooms, which only have one source of egress. These are further compromised because of wall penetrations in the stairwells.
- We did not observe any carbon monoxide detectors in the building. This is a concern since there is an assembly area immediately adjacent to the natural gas fired Columbus Air heating system.

Although many of these issues can be corrected, the result would be an auditorium that does not possess the modern amenities or layout to allow the operator to maximize the use of the facility.

As the assessment progressed, the team considered several options including renovation, reconfiguration, addition, and new construction. There are several standards that impact the level of renovation required. These include the State Building Code (2018 International Existing Building Code), the State Fire Code (NFPA 101 2021 edition), and the Americans with Disabilities Act (ADA). Each of these codes provides different standards for the level of renovation required, with exceptions for historic structures.

Although the final determination for the level of renovation will be determined by the Authority Having Jurisdiction (AHJ), ZMM anticipates that the scope of the improvements will require the highest level required by both the building and fire code. Specifically, NFPA 101 43.5.2 states that modifications of more than 50% of the area are to be considered a reconstruction. Reconstruction requires a complete renovation to meet code requirements for the existing building occupancy. Similarly, the 2018

International Existing Building Code would classify the Municipal Auditorium as Level 3 *alterations* (the most restrictive type) since the work area would exceed 50 percent of the aggregate area of the building.

For the ADA, "Application of the standards in an alteration is determined by the scope of work and whether it involves areas containing a primary function. Altered elements or spaces must comply with relevant provisions of the standards except where compliance is technically infeasible. Where compliance is technically infeasible, compliance is required to the maximum extent feasible. If alterations are made to an area containing a primary function (a major activity for which a facility is intended), an accessible path of travel from the area to site arrival points, as well as the restrooms, telephones, and drinking fountains serving the area, must be made accessible as part of the work to the extent it is not "disproportionate" (more than 20% of the total cost)." These requirements apply unless the modifications "would threaten or destroy the historic integrity or significance of a facility."

Completion of a significant renovation of the existing auditorium would update the facility but would not address the lack of adequate (or accessible) toilet facilities, concession areas, and dressing rooms. ZMM explored reconfiguring the auditorium to find space within the existing building to address the concession and toilet issues on the main level. This was determined to be not feasible as it reduced the available seating capacity beyond a level that would make the auditorium viable and destroyed the historic fabric of the existing facility.

Based upon our investigation and the information provided above, there are only two (2) feasible options – a full renovation with an addition or a new auditorium. Costs were developed for these options, which are presented below:

Option #1:	**Fully Renovate the Auditorium, Addition to Northwest Elevation**	**$25.4M**
Option #2:	**New Auditorium**	**$25.2M**

When complete, the renovated auditorium with the addition would still contain many of the functional and operational challenges identified above. It will also take significantly longer to plan for (and construct) the renovation/addition versus constructing a new facility.

The remainder of this assessment includes the detailed assessment of the site and building systems which served as the basis for the budgets identified above.

Historic Characteristics and Features

The Municipal Auditorium was placed on the National Register of Historic Places in 1999. The entire National Register of Historic Places Registration Form is included as an attachment to this assessment. The form notes that "The Municipal Auditorium is significant under Criteria A for its important contribution to entertainment/recreation and the performing arts in Charleston, West Virginia, and under Criteria C because of its architecture which is of the Art Deco building style. The period of significance has been determined to be 1939, which corresponds to its date of completion and opening as the city's premier playhouse." A large excerpt from the registration form is included, below:

"True to its characteristic Art Deco design, the Charleston Municipal Auditorium consists of modem steel joist construction and a steel frame resting on concrete piles. It is surrounded by a watertight subterranean retaining wall, concrete floors and roof, metal lath and plaster ceilings, concrete and cinder block brick-faced curtain walls, and a stylistic concrete facade. Project architect Alphonso F. Wysong of Charleston described the building style as "Conservative Modem," an appropriate term since its classical architectural elements are treated in a modern, shorthand manner that substitutes simple piers for elaborate columns and incorporates simple geometric shapes.

The curved facade is interrupted by three stair tower blocks. A center block dominates the front and incorporates the grand central stair. It rises to nearly the full height of the auditorium and is the building's most prominent physical feature. Two smaller blocks at the southeast and southwest corners are about half the height and bulk of the central unit, giving enhanced importance to the verticality of the main block and the symmetry of the whole. Representative architectural elements prominently displayed on the front facade include many classic angular and rounded geometric design elements of the Art Deco form. At ground level, the facade is pierced by six entrances--four on the front (south) elevation and one at each of the side (east and west) elevations, and two box offices with exterior ticket windows.

Enveloping the front and wrapping around the east and west sides, the molded concrete facade encompasses approximately one-third of the exterior space. In keeping with the building's symmetry and consonance, many of the exterior elements echo the verticality of its Art Deco design. These include a series of eight (four on each side of the center tower) vertical, angular buttressed steel members covered in concrete and extending from ground level to just below the cornice line. They replace columns found in more classic designs and tie into concrete piles to provide structural stability for the massive face wall."

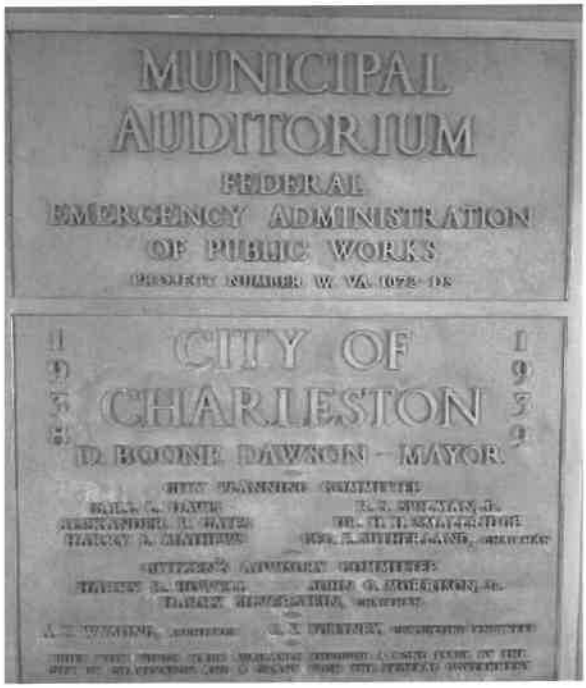


Photo 2: Building Dedication Plaque

Although the distinctive color of the building is one of the most notable features, it is not original to the construction of the building, as "Originally, the distinctive molded concrete facade was a monochromatic gray that lacked any contrasting color except for the letters spelling out the building's

name, but in recent years the main surface has been painted a light cream shade with some of the geometric elements highlighted in red. Aside from this bolder paint scheme that accentuates the most prominent architectural features, the most noticeable alteration to the facade since 1939 has been the replacement of the original entrance doors."

Photo 3: Original Color of Municipal Auditorium (Source Unknown)

Photo 4: Distinctive Art Deco Facade

A description of the auditorium space is provided, below:

"The main floor of the Municipal Auditorium originally held 2,411 persons and the balcony accommodated 1,158, bringing total seating capacity to 3,569 (this number has been reduced to 3,450 due to the removal of seats for handicapped access at the rear of the main hall). In the rare occasions where additional seating is required, 1,500 more temporary seats can be placed on the stage and still leave room for speakers to appear. Manufactured by the American Seating Company, the permanently-installed metal folding seats feature decorative end details and cushions and backs upholstered in red cloth. All permanent seats received an overhaul during the major renovations undertaken in the mid- 1960s.

Seating on the main floor is divided into seven sections separated by eight aisles running the length of the floor from the entrance doors at the rear to the base of the stage at the front of the hall. Located directly below the front of the stage and footlights is a shallow (approximately 2' deep) orchestra pit which remains concealed under a hard cover that supports foot traffic when not in use. Access to the orchestra pit is obtained through a door in the basement located directly beneath the stage area.

The auditorium ceiling employs the familiar semicircular configuration that is a prominent detail throughout the building. It contains a succession of seven cantilevered sections which are lit from the recesses between each section. This type of recessed lighting casts a low reflective luminescence on the auditorium and bathes the space in a soft, warm glow. Also on the ceiling are seven large disk-shaped air intakes, while mounted in the main floor beneath one seat per row in each aisle from the balcony to the fourth row are 10" mushroom ventilators that exhaust into concrete ducts beneath the floor to circulate air throughout the hall.

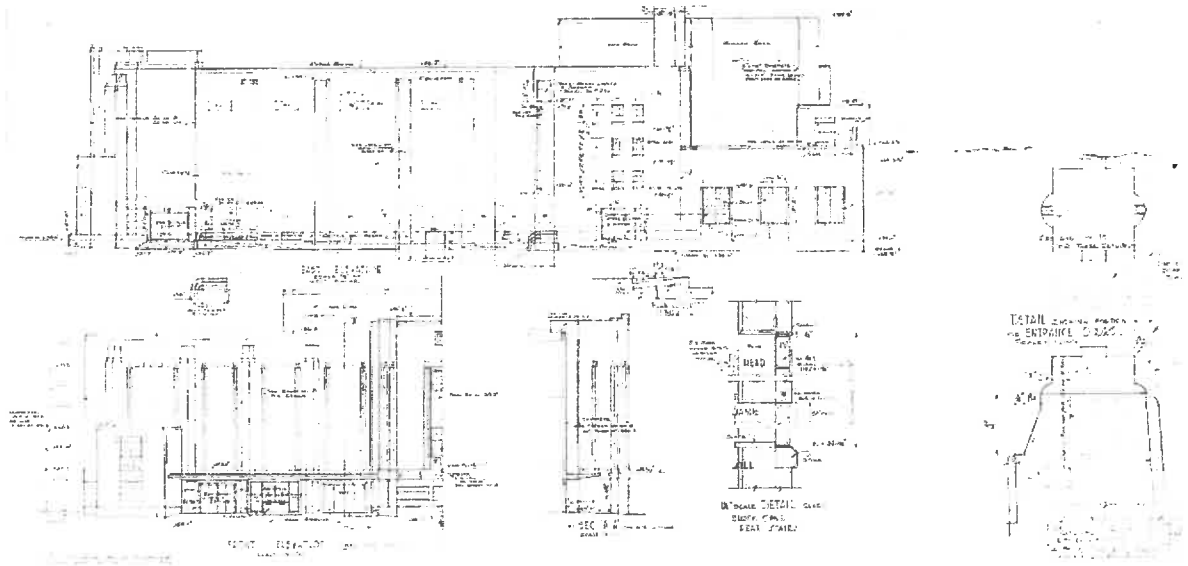
From the second-floor mezzanine, the balcony is reached by passing under four open stadium-style concrete portals. Arching in a semicircular pattern around the main hall, the balcony extends the entire width of the auditorium. It features a curving concrete balustrade with the familiar square-in-square geometric motif cast in its front border. The balustrade is covered with acoustical spray and painted a deep red to match other interior features. Two levels of upholstered balcony seats are identical to those on the main floor. A walkway separates the two balcony seating levels, with decorative copper handrails adorning the upper seating area and plain steel rails along the lower seating area. The back wall of the balcony is lined with acoustical tiles installed in the 1960s or later.

An expansive basement with unadorned concrete and block walls is located beneath the stage and backstage areas. It is reached by descending one of two sets of metal stairs located on either side of the main stage. This space is not open to the public but is used primarily as a staging and preparation area by performers, stagehands, and technical crews who work on the various events held in the auditorium. Directly beneath the stage in the basement is a large central room with steel I-beam column supports, concrete block walls, and open ribbed concrete ceiling. Immediately adjacent to the west are toilet facilities for men and women. Other basement spaces include the furnace room housing six vertical tube heaters, gas burners, and main breaker, the boiler room containing the main 6' floor-mounted blower fan, and the fire control room that houses a modern alarm system. Nearby is the recently installed sump pump apparatus that pumps raw sewage from the auditorium up to the level of city sewer lines."

Upon the completion the Municipal Auditorium "garnered effusive praise and was reputed to be one of the largest performing halls of its type in the eastern United States." Over the years several issues were identified that limited the effectiveness of the venue. Initially the facility did not have air conditioning,

which limited its use during the summer. Additionally, acoustical concerns with the space have persisted since its completion, "One charge leveled against it relates to the acoustics, which patrons lamented as being inferior from the start." Deferred maintenance issues started to develop with a few decades of opening, "Following a decade of heavy use, the city in 1950 conducted an inspection of the auditorium. Officials pronounced the building basically sound but in need of maintenance. However, no funds were made available for repairs at the time. By 1957 the "big, old dusty auditorium" (as one touring Broadway actress called it) required substantial renovations and repairs. Initial estimates valued the necessary work at $85,000, but that figure was reduced to $74,352 and then scaled back further to $52,445. Despite the effort to set aside dollars for upgrading Charleston's largest dedicated concert hall, the city undertook no work on it and detractors increasingly commented on the deplorable condition of Charleston's tarnished crown jewel. On March 2, 1959, City Councilman Simon Bailey termed the playhouse a big pile of mottled, discolored concrete."

Following the completion of the Civic Center the future of the building was again publicly debated, "Then, Mayor John A. Shanklin on February 1, 1960 appointed a citizen's committee to study and make recommendations on its future status. Its members included well-known citizens Lyell Clay, Henry Elden, V. B. Harris, John T. Morgan, and Edwin W. Tabor, and it seemed that each one had a differing opinion on what to do with the facility. Architect Henry Elden led the advocates who favored selling the building, which he and others termed an "ugly duckling" and "white elephant" while arguing that it was still unpaid for and costing the city $1 5,000 a year. After considerable deliberations, the citizen's committee issued a comprehensive report on the state of the auditorium on April 21, 1960. They reiterated the obvious fact that the facility was neglected and run down but noted that it was worthy of being repaired and operated as an asset to the city." Interestingly, "Despite the city's plan to commit a substantial amount of funds for the long-awaited program of repairs, local officials still discussed selling the building to the Beni Kedem Shrine for use as a mosque." Ultimately, improvements were made in 1967 and the HVAC system was updated in the 1980s. Since that time few significant investments have been made in the Municipal Auditorium. The lack of regular maintenance has led to the current critical condition of the facility, which is documented throughout this report.



Original Elevations from 1937-38

Site Conditions, Utilities

The Municipal Auditorium is located on a "2.04 acre lot situated about two blocks west of there and bordered by Virginia and Truslow Streets on the south and east, respectively. Disparagingly referred to as "the hole in the ground" because it lay in a swale several feet below street level, the local press dubbed the low-lying tract a "debris-littered, weed-clogged catch basin for stagnant rainwater" which city officials considered a public eyesore. Starting in 1874, the Kanawha Woolen Mills Company had a factory on the site which engaged in the manufacture of yarns, flannels, jeans, and blankets. However, the plant disappeared long before plans materialized for the auditorium. According to Sanborn Map and Publishing Company insurance maps and local newspaper reports, in the mid-1930s the block of Virginia Street between Truslow and Clendenin Streets contained an auto sales and service center dating from 1924, a used car lot, cinder block office building, and cinder block service station. To make room for the auditorium, workers demolished a frame garage and service station and relocated another frame structure elsewhere."

The site for the Municipal Auditorium sits with the 100-year flood plain. The only portion of the building not located in the flood plain is the main entrance on Virginia Street. The base floor elevation is 594', and the elevation at the entry is approximately 596'. The stage elevation is 4.5' lower than the entrance, meaning that it is 2.5' below the 100-year flood plain. If there is a substantial renovation the entire building will need to be flood proofed to 596' (100-year flood plain plus 2'). This will require significant analysis and expense. A map indicating this area is provided, below:

Figure 1: Image from West Virginia Flood Tool

The conditions of the paving and sidewalks around the Municipal Auditorium are poor and require improvement. There are many hazards, deteriorated surfaces, and damaged handrails. Additional site constraints included extremely limited parking, lack of adequate space at the entrance of the auditorium for the public prior to events, and inadequate access to the stage for loading and deliveries. There is limited distance from the dock to the sidewalk/street to accommodate the truck size utilized by national touring shows. In 2021 a ceiling mounted lift was added to improve loading and unloading.

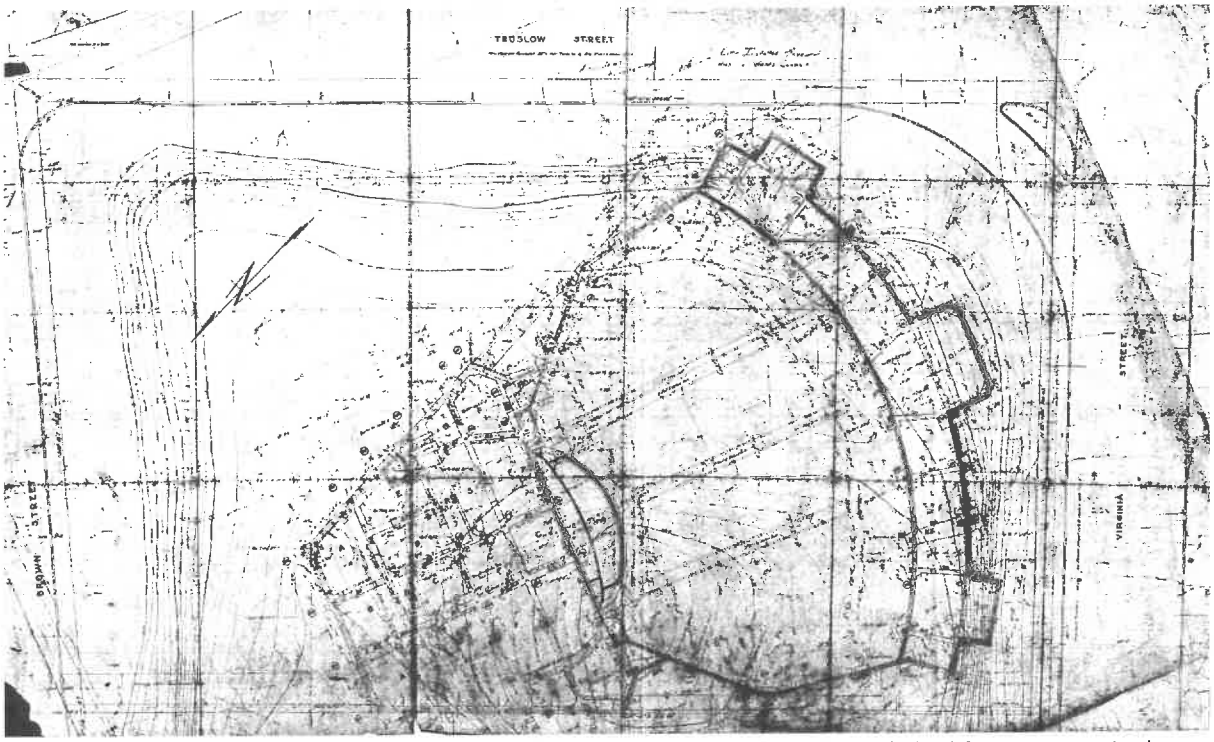


Figure 2: Site Plan from Original Construction Shows Previous Grading of Site (Filled for Construction)

Building Structure

The structure consists of both reinforced concrete and structural steel framing. At the time of this site visit, the auditorium had been closed and the power turned off. Photos taken during the site visit are limited due to the lack of power in the building and are included with this report.

The exterior of the building is exhibiting several issues related to moisture infiltration. From open joints at the coping, to brick mortar joints that appear to be cracked, the worst condition at the exterior is at the west parking lot side of the building. It appears that the lintels over prior window openings have failed, and the brick is rotating out, away from the backup clay tile substrate. This area has been fenced off to keep vehicles and pedestrians away from this side of the building. There are other areas where there is also evidence of brick movement at the exterior, mainly at the upper roof to lower roof wall at the rear. No original drawings of the structure have been found to determine the exact structural framing of the building.

Photo 5: Evidence of Water Infiltration

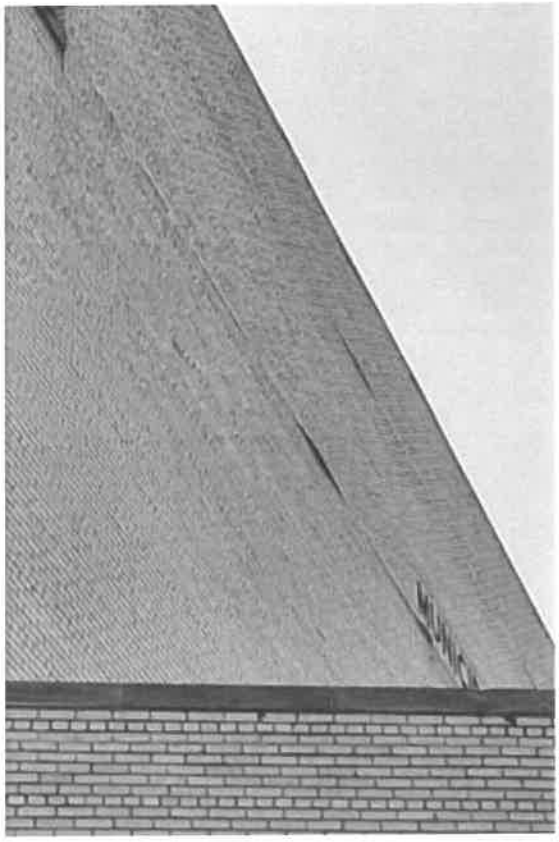


Photo 6: Dislocated Brick

In the basement, there is water ponding on the floor in places since the power has been shut off and the sump pumps cannot run. The structure of the main floor level appears to be a one-way concrete joist floor system. There are steel columns exposed in several locations. Whether the beams are steel encased on concrete or concrete beams is not known currently. The structure that could be viewed at this level appears to be functioning as intended with no major structural issues being identified. The dressing rooms and toilet rooms appear to be supported by structural concrete floor slabs and either steel beams encased in concrete or concrete beams.

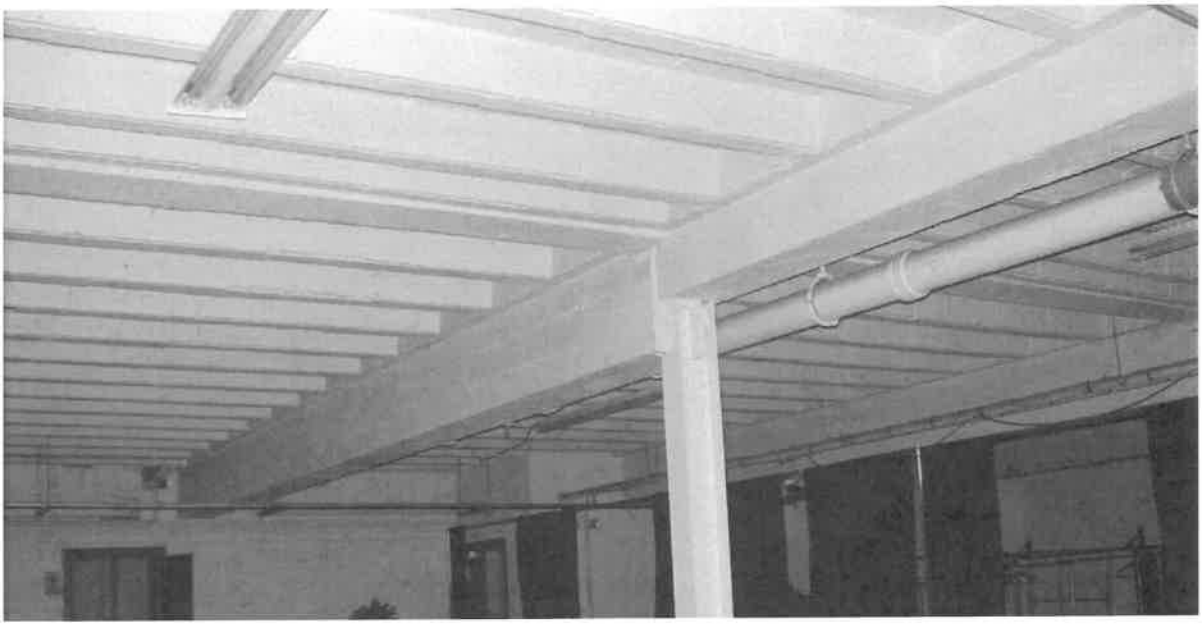


Photo 7: Floor Framing is One-Way Concrete Joist and Beam System

Photo 8: Interior Evidence of Moisture Infiltration

Photo 9: Steel Framing Supporting Ductwork

The upper floor and balcony structure could not be seen at this time; therefore, the framing system in these areas is unknown. Except for moisture infiltration through walls, these areas all also appear to be functioning as intended with no major structural issues found. The roof framing consists of structural steel beams and columns and expanded metal roof joists. The expanded metal joists are typical of the

construction of the time. The plaster ceiling and ductwork and other utilities are suspended from the roof framing. Without actual measurements of the steel beam and steel joists, the capacity of the roof framing cannot be determined. Again, no major structural issues were found in the limited areas that could be viewed.

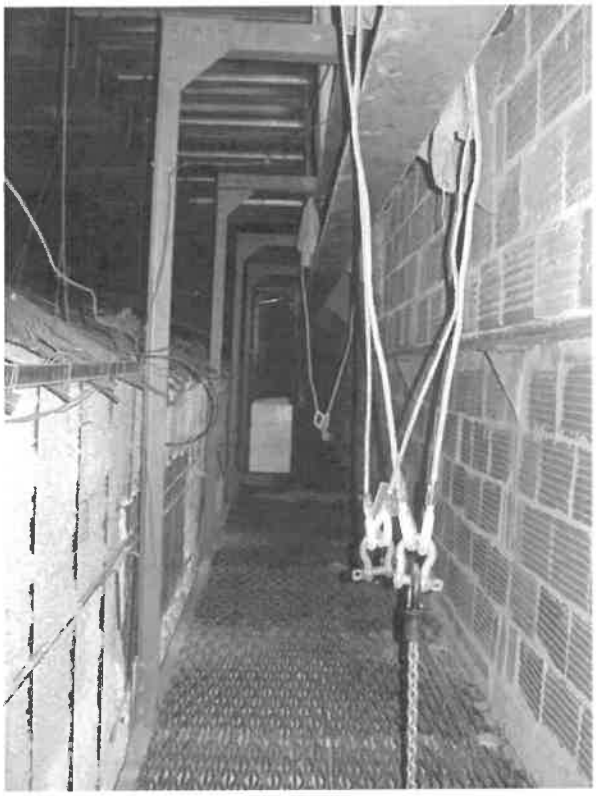


Photo 10: Catwalk Supported by Steel Structure and Clay Tile

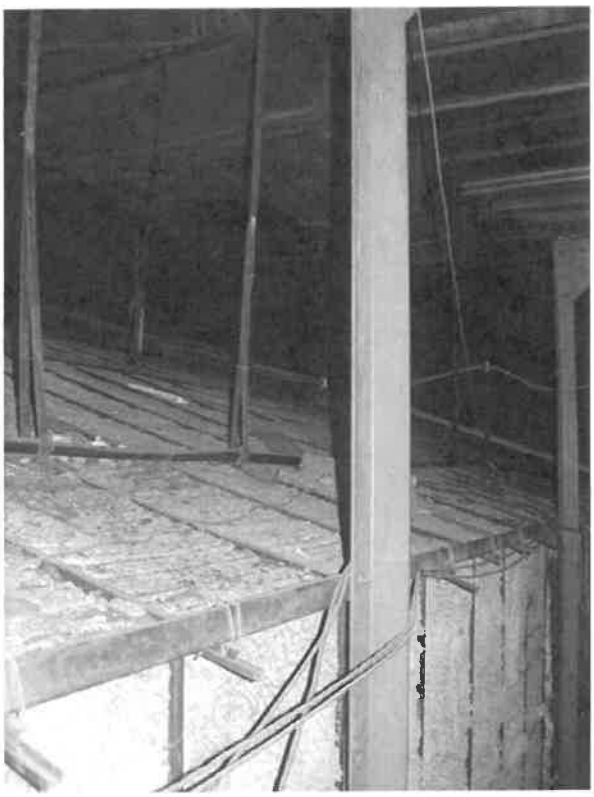


Photo 11: Plaster Auditorium Ceiling Supported by Steel Structure

It appears that the main issues with the building structure are related to moisture infiltration. The structure, in the areas that could be observed, seems to be structurally sound and able to support the loads for its intended use. Issues related to moisture infiltration should be corrected to mitigate additional damage. Integrating ADA access into the structure would be challenging and multiple elevators would most likely be required.

Life Safety and Egress (Building Circulation)

Fire Protection:

The facility has fire service racks located on the stage, in all stair towers, and in the front lobby area. Each fire service rack is fed from the domestic water system. This system was installed in 1938. The domestic water system cannot be used to feed hose rack cabinets without a backflow preventer. Per the 2018 International Plumbing Code (IPC), 608.1, a potable water supply system shall be designed, installed, and maintained in such a manner to prevent contamination from non-potable liquids, solids or gases being introduced into the potable water supply through cross connections or any other piping connections to the system.

Since substantial improvements are going to be made to the structure, a new automatic fire suppression (sprinkler) system should be installed to serve the entire facility. To simply reopen the Municipal Auditorium, at minimum, install a backflow preventer on the domestic water lines feeding the fire hose racks installed throughout the building.

Fire Alarm:

The Municipal Auditorium's fire alarm system requires immediate replacement. Existing system has minor coverage, non-ADA pull stations, inadequate marking and connectivity, does not provide voice notification as required per assembly spaces of this size, and is obsolete and faulting during stage production effects leading to a building fire watch. Smoke detectors are an issue in show production as they are not zoned, so productions that utilize hazers (fog) as an effect requires the disabling of the fire system during performances. Staff indicated that a portion of the system is offline and requires a component necessary to repair the system, but the part is unable to be sourced due to age and manufacturer. Although some of the design issues are grandfathered in, system replacement should be a priority and replaced as soon as possible due to the other potential life safety issues arising from a building of this age and the necessary renovations.

Egress:

There appears to be adequate egress from the auditorium for 3,500 people. Egress from the stage also appears adequate; however, egress at the front of the stage occurs through the stairs leading to the dressing rooms. Although intended to be egress stairs, they appear to be communicating stairs that connect the dressing rooms (and the gathering space below the stage) to the stage (due to multiple penetrations of the stairwell). Egress from the dressing rooms is inadequate and unsafe. The dressing rooms should not be utilized until improvements to the building are completed.

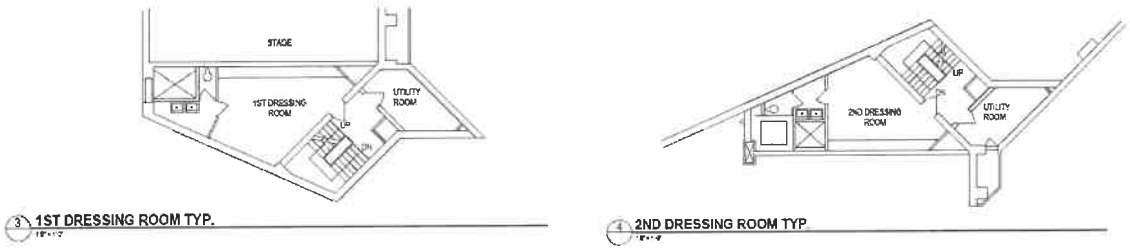


Figure 3: Inadequate Egress from Dressing Rooms

Accessibility

The building does not meet current accessibility guidelines. Current inaccessible areas include concessions, the mezzanine, the main toilet facilities, dressing rooms, and the gathering space provided below the stage. Multiple elevators would be required to provide access to the entire structure.

The lobby is accessible, but currently wheelchairs can only be accommodated in the rear of the auditorium (in Section 5). Access to these areas is difficult as the aisle slope begins immediately upon crossing the threshold into the auditorium. The cross scope that leads to the "accessible" area is difficult and unsafe to navigate. The aisles are too steeply raked to allow un-assisted wheelchair access to the front. In the absence of a facility renovation, the width of the front cross aisle would allow seats to be removed for wheelchair placement, with staff assistance becoming an operational consideration without an accessible route.

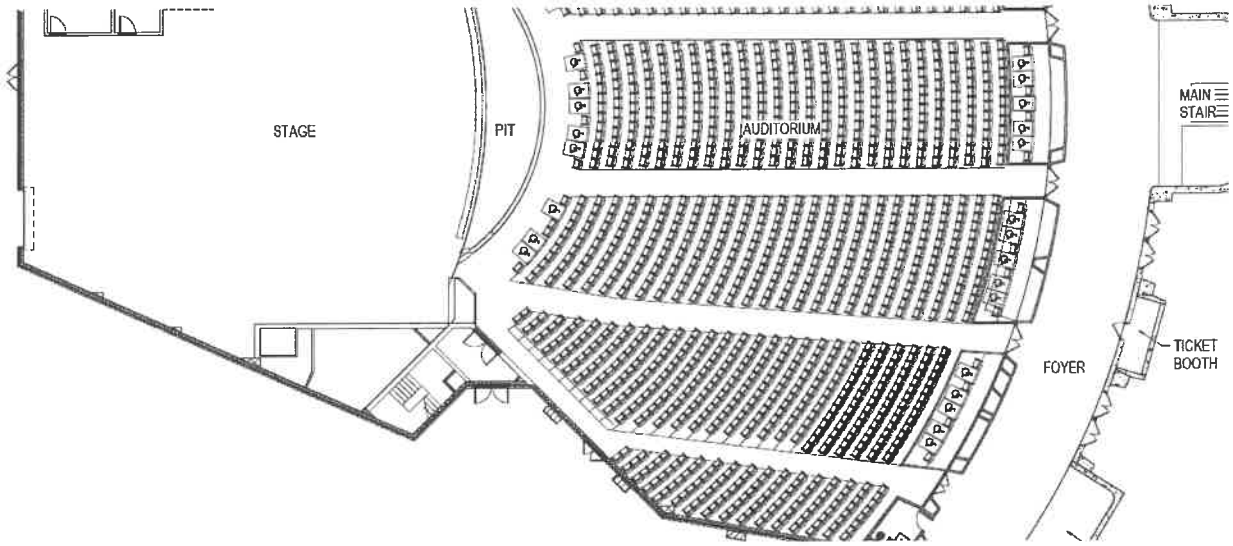


Figure 4: "Accessible" Seating in rear of Auditorium

The main lobby provides access to restrooms located on the lower level (basement) via steps. Two (2) single use accessible restrooms are located on either end of the main lobby level. The amount of accessible toilet facilities is inadequate for a venue of this size.

Facility renovation will require horizontal and vertical distribution of wheelchairs and ADA designated aisle seats, with the number dictated by the final seat count and number of rows, respectively. Utilizing the historic structure exemption may be possible, but significant modifications will be required to improve accessibility throughout the Municipal Auditorium.

Photo 12: Stair Access Only to Concessions and Balcony

Building Envelope and Roofing Analysis

The Municipal Auditorium is a steel-framed building with a street facing cast concrete façade and mass masonry walls on the other three sides of the building. The roof assembly generally consists of a built-up roofing system with gravel, with the center of the main roof featuring a metal roof with a liquid coating. There have been ongoing water infiltration issues through the building envelope causing damage to interior finishes as well as general deterioration to building envelope components. ZMM Architects and Engineers retained WDP to perform a general assessment of the building envelope. WDP was on-site on January 24, 2024, to review the interior and exterior of the building, and reviewed original construction drawings dated December 6, 1937, and June 8, 1938. This report presents observations from this site visit and cursory review of the original drawings. A more comprehensive field evaluation would be necessary to understand the root cause of the failures that were observed and to develop repair details based on the existing conditions.

Exterior Walls:

WDP observed the condition of the exterior walls through visual observations made from the ground level and from the upper roof level. The north, east, and west elevations of the building feature brick masonry walls with concrete masonry units (CMU) backup. The brick masonry appears to be locked into the CMU with headers in a common bond pattern to form a mass masonry wall structure. The south elevation of the building features cast concrete walls with a painted finish.

Masonry Walls:

- Displacement of brick: In several places, the brick was observed to be displaced and buckling away from the building:
  - Faux Windows: At the west elevation of the building, significant displacement of the brick was observed between the faux window panels (Photograph 13 and Photograph 14). Per the original drawings, these were steel windows that have since been replaced with a brick infill. Between the top and middle rows of windows, the brick panel was severely buckled, and the brick was protruding from the face of the wall. There is a significant risk for this brick panel to fall based on the observed displacement. Corrosion was also observed at the steel lintels above each faux window (Photograph 15).
  - South Elevation: At the south elevation of the building, significant displacement of the brick was observed above the lower roof. The most significant displacement appears to align with the location of a steel beam within the wall (Photograph 16). This could indicate corrosion of the beam is occurring and expansion of the steel as a result of corrosion is forcing the brick outward.
  - Parapets: Displacement of brick was also observed near some of the parapets (Photograph 17). Similar to the displacement observed at the south elevation, this could be a result of corrosion of steel elements within the wall.
- Cracking of Brick:
  - Walls: Step cracking in the brick masonry was observed throughout the building. Key locations of cracking were observed near the parapet (Photograph 18), near outside corners (Photograph 19), and at the upper penthouse (Photograph 20).
  - Integration with Concrete Walls: Cracking in the brick masonry was observed at the integration between the brick masonry and the cast concrete walls (Photograph 21). Provisions for expansion

were not included between these two wall types, so it is likely that this cracking is from stress induced from the expansion of the brick masonry against the concrete wall.

- Deterioration of stone elements: Stone elements are integrated into the brick walls at the chimneys and at the top of pier caps at the exterior walls. The parapets are also capped with stone. The stone units were observed to be deteriorated and spalled in many locations (Photograph 22).

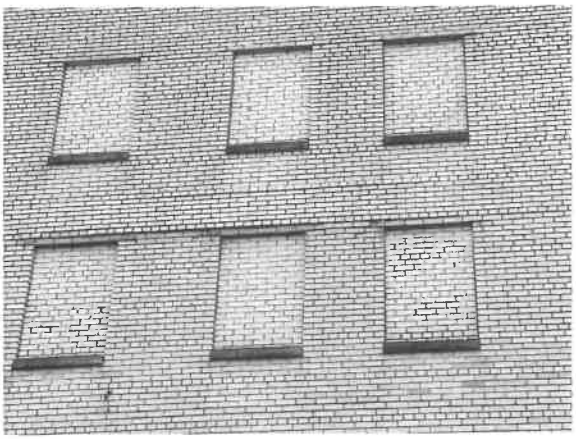


Photo 13: Displaced Brick at Faux Windows

Photo 14: Displaced Brick at Faux Windows

Photo 15: Displacement of Brick Masonry and Corrosion of Steel Lintels

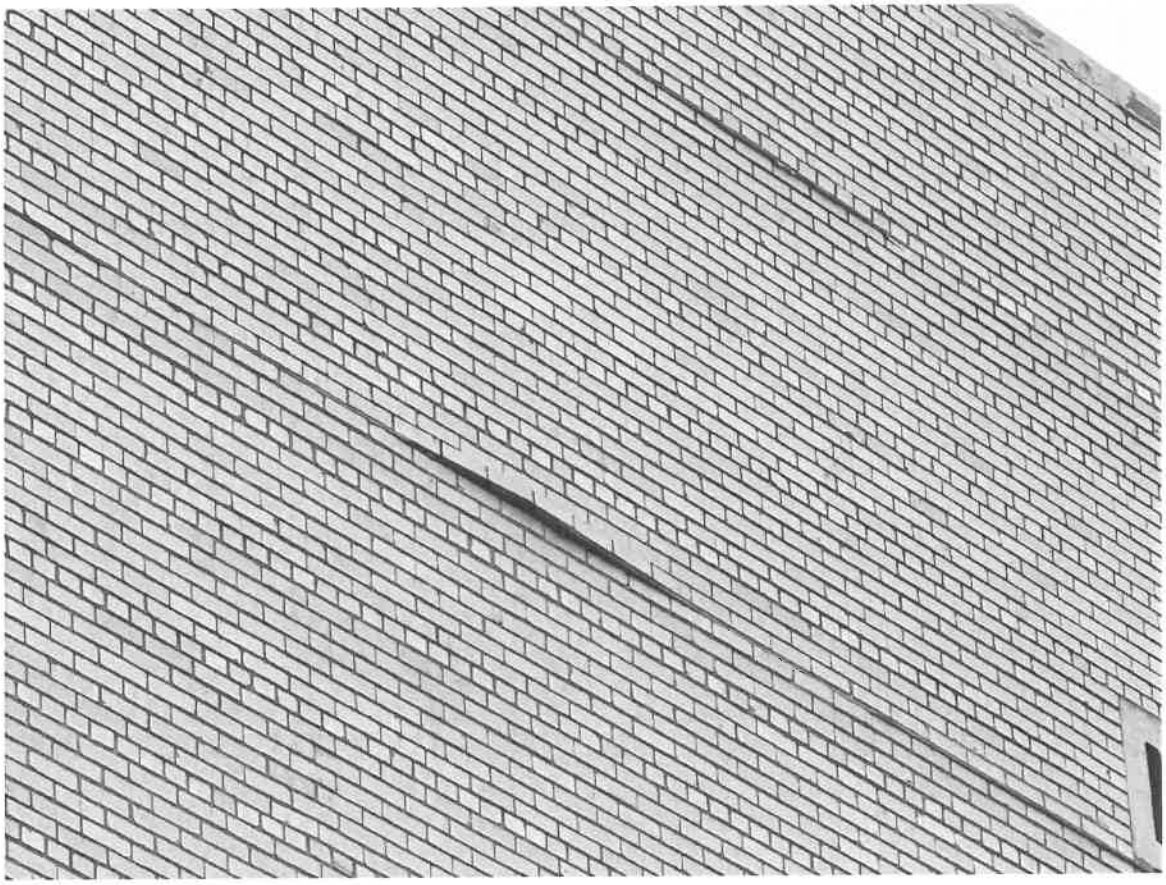


Photo 16: Displaced Brick at South Elevation

Photo 17: Displaced Brick at Parapets

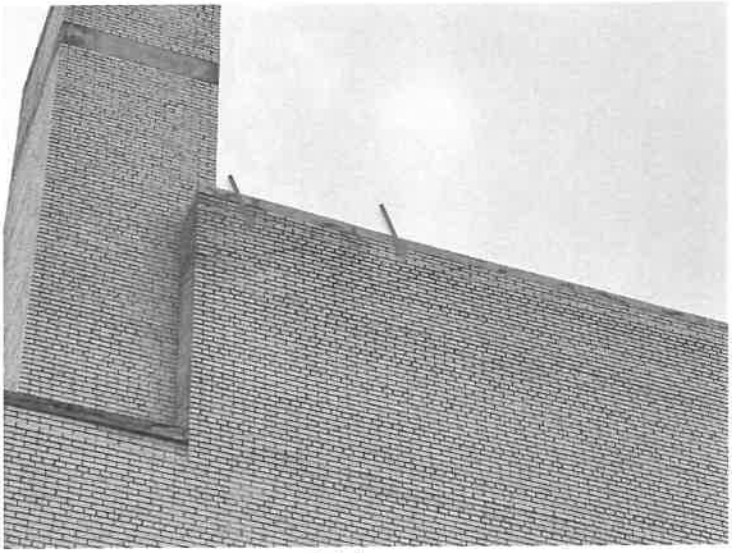


Photo 18: Step Cracking in Brick Masonry at Parapets

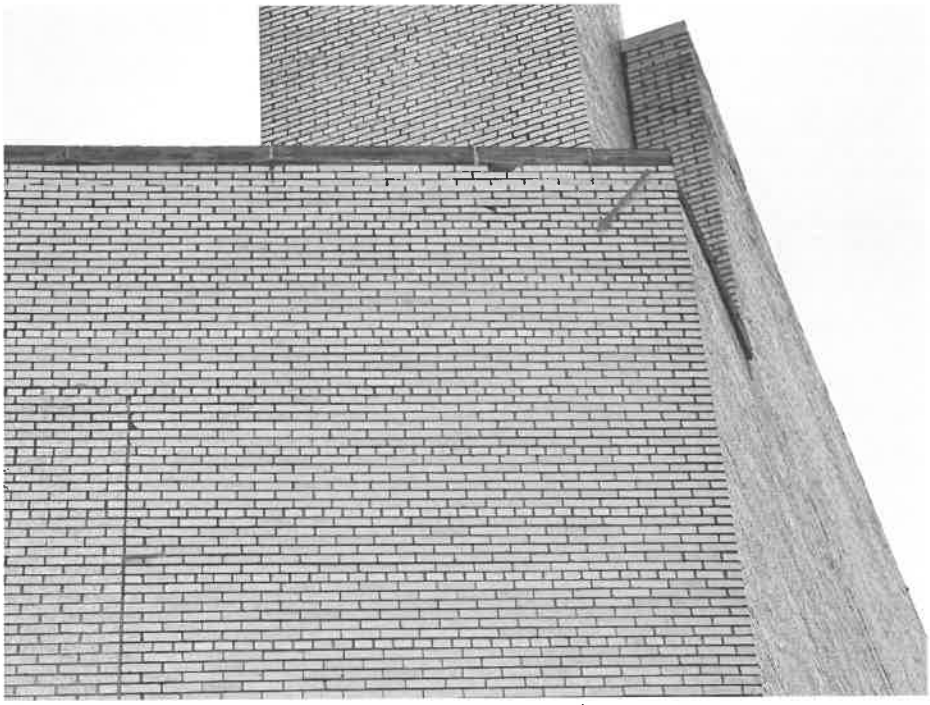


Photo 19: Step Cracking in Brick Masonry at Outside Corners

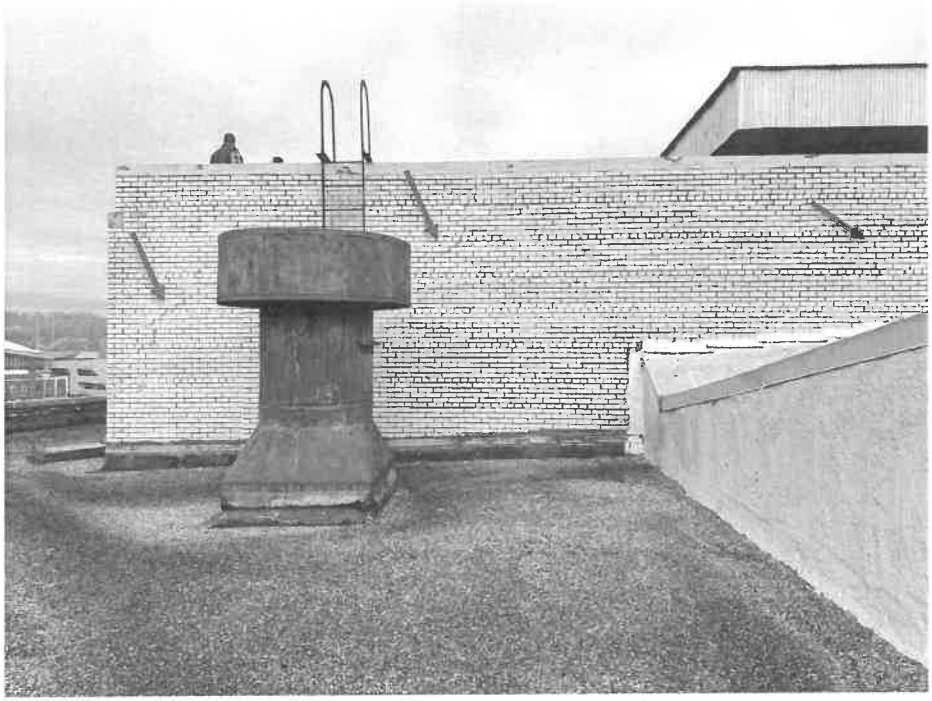


Photo 20: Step Cracking in Brick Masonry at Upper Penthouse

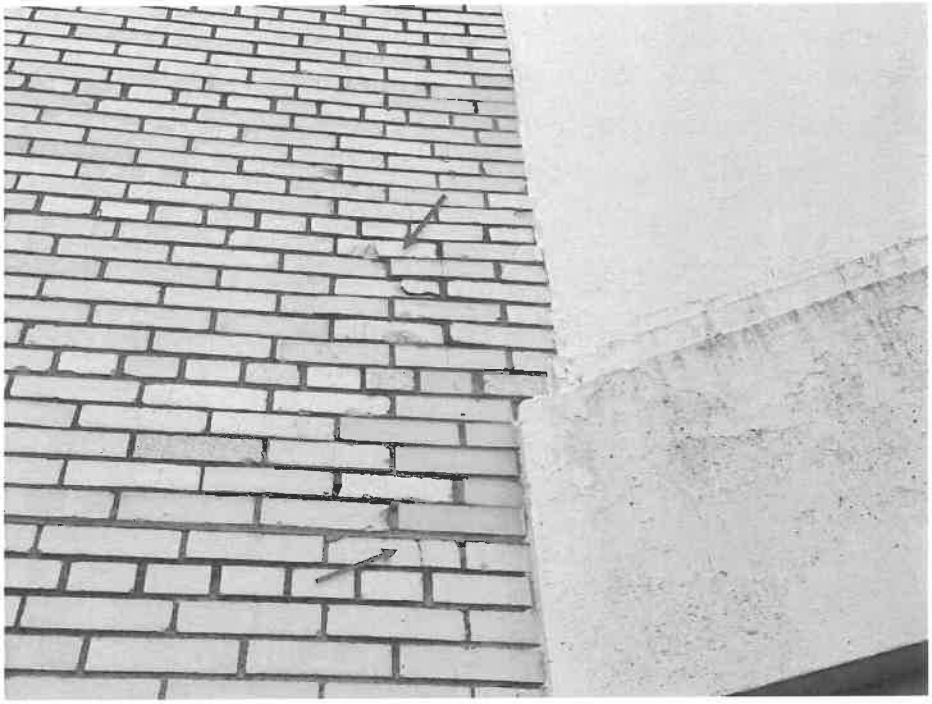


Photo 21: Cracking of Brick Masonry at Concrete Wall

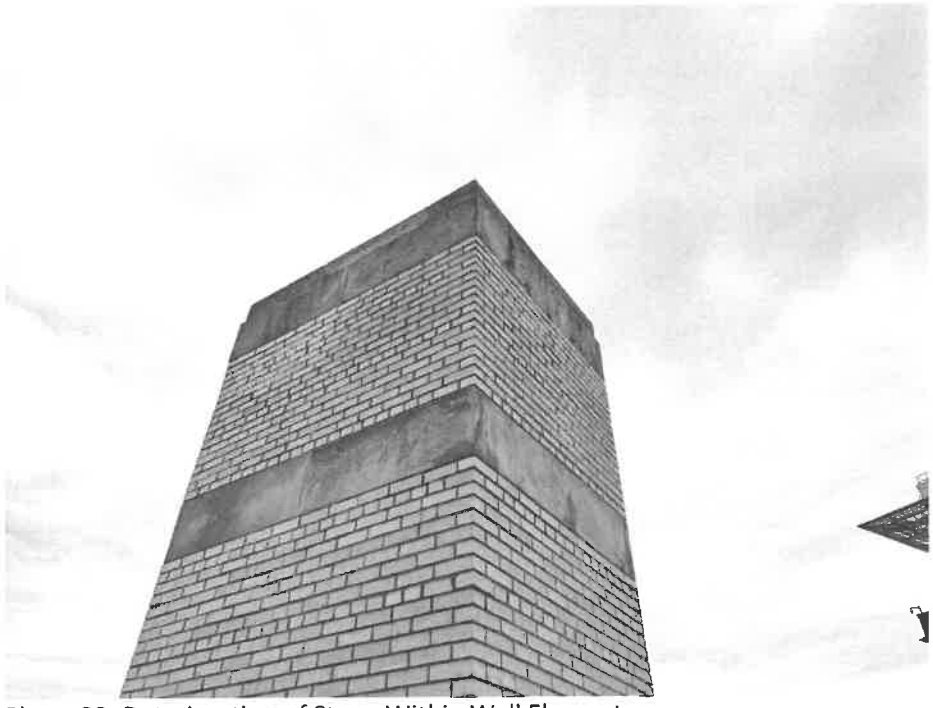


Photo 22: Deterioration of Stone Within Wall Elements

Concrete Walls:

- Vertical cracking: A vertical crack was observed in the façade of the cast concrete wall (Photograph 23 through Photograph 25). This crack appeared to propagate through the entire height of the wall. Further evaluation would be required to determine the cause of this cracking.
- Paint failures: The painted surface of the concrete façade was observed to have failures in some locations (Photograph 26). It appears that water has penetrated behind the painted finish and caused it to fail.

Photo 23: Vertical Cracking in Cast Concrete Façade

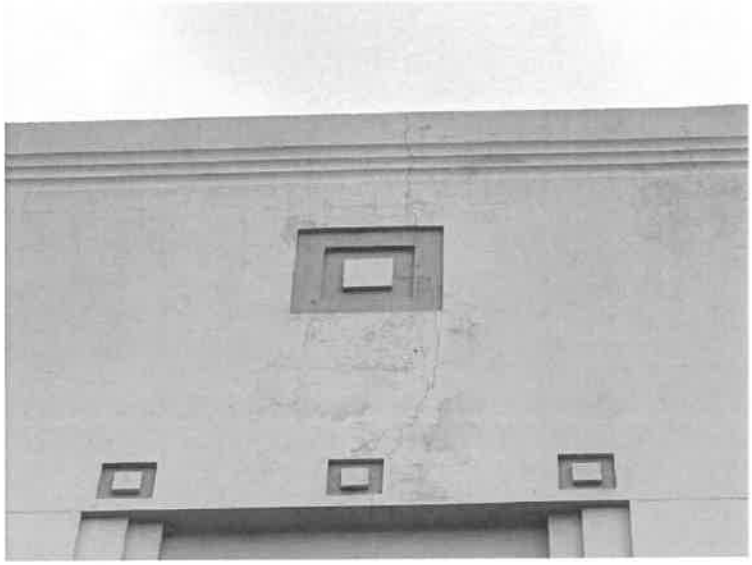


Photo 24: Vertical Cracking at Top of Wall

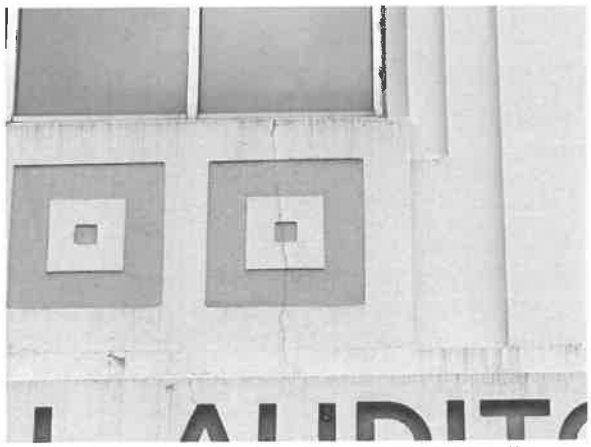


Photo 25: Vertical Cracking at Bottom of Wall


Photo 26: Paint Failures at Cast Concrete Façade

Roof Assemblies:
WDP observed the condition of the roof assembly through visual observations made from the roof level. The main roof is a flat roof which consists of a built-up roofing system and gravel layer over top. The center of the main roof features a metal roof with a liquid coating. There is also a roof awning with a similar built-up roofing system that covers the ticket booth at the south elevation, which was observed from the ground level.

Flat Roof Assemblies:

- Drainage provisions: With the size of the flat roof assembly, there were limited drainage provisions for the roof. Roof drains were only observed in a few locations, and the staining patterns and biological growth (Photograph 27) throughout the roof indicate that the roof is not draining sufficiently.
- Termination: Where the roof terminates against adjacent brick masonry and parapets, potential paths for water to penetrate behind the roof membrane were observed (Photograph 28 and Photograph 29).

Photo 27: Typical Staining and Biological Growth at Roof Assembly

Photo 28: Pocket in Roof Termination

Photo 29: Roof Termination Between Brick Masonry Wall and Concrete Façade

Parapets:

- Displaced stone units: One of the stone units at the parapet was observed to be displaced onto the roof (Photograph 30). It is unclear how this stone became displaced; it appears to have been knocked loose by force, rather than through natural weather events.
- Coating failures: The coping stones at the parapet had been coated during a previous restoration project. This coating was observed to be failing in several locations (Photograph 31).
- Failures in sealant joints: Sealant joints installed between coping stones were observed to be deteriorated (Photograph 32). Flashing below the parapet coping stones was not observed; therefore, failures in the sealant joints could allow water to penetrate into the wall assembly below.
- Flashing integrations at chimney: Sheet metal flashing was observed at the base of the chimney that turned out and over the parapet. The extents of the flashing were not terminated or sealed, creating a direct path for water to penetrate under the flashing (Photograph 33).

Photo 30: Displaced Coping Stone Unit

Photo 31: Typical Coating Failure at Parapet Coping Stone

Photo 32: Sealant Joint Failures

Photo 33: Flashing at Chimney Integration

Sheet Metal Roof Assemblies:

- Integration with masonry wall: The sheet metal roofing assembly at the center of the main roof was integrated with the face of the brick masonry wall (Photograph 34). Without a drainage plane in the masonry wall to integrate with, there is the potential for water to penetrate behind this roof termination.
- Coating failures: A coating had been installed over the metal roof assembly. There were locations where the coating was observed to be failing (Photograph 35).

Photo 34: Sheet Metal Integration with Masonry Masonry Wall

Photo: 35 Coating Failures at Sheet Metal Roof

Awnings:

- Water infiltration at ticket office: Significant plaster damage was observed over the ticket office at the south elevation of the building from apparent water infiltration (Photograph 36). It is likely that the source of water infiltration is at the integration of the awning and the concrete wall (Photograph 37). Further evaluation would be required to determine the source of water infiltration.

Photo 36: Interior Plaster Damage at Ticket Office

Photo 37: View Looking Down at Top of Entrance Awning

Building Interior Conditions:
WDP performed a walk-through of the interior of the building to gain a general understanding of interior conditions and damage locations. Many of the interior finishes were observed to be painted plaster. WDP was able to observe the main theater level and the basement and walk up one of the staircases to access the roof. WDP did not access the catwalk above the main theater during our site visit.

Plaster Ceiling in Theater:
The plaster ceiling within the theater is suspended from above. There is a significant amount of moisture-related damage observed in the plaster ceiling, either from bulk water infiltration or moisture-related issues from the mechanical system (Photograph 38). The original drawings indicate it is installed over metal lath and anchored to channels that are secured to steel framing above with hangers. Due to the amount of water infiltration that has occurred through the roof, a visual inspection of this plaster should be performed from above to verify whether corrosion is present and if the structural integrity of the plaster ceiling has been compromised.

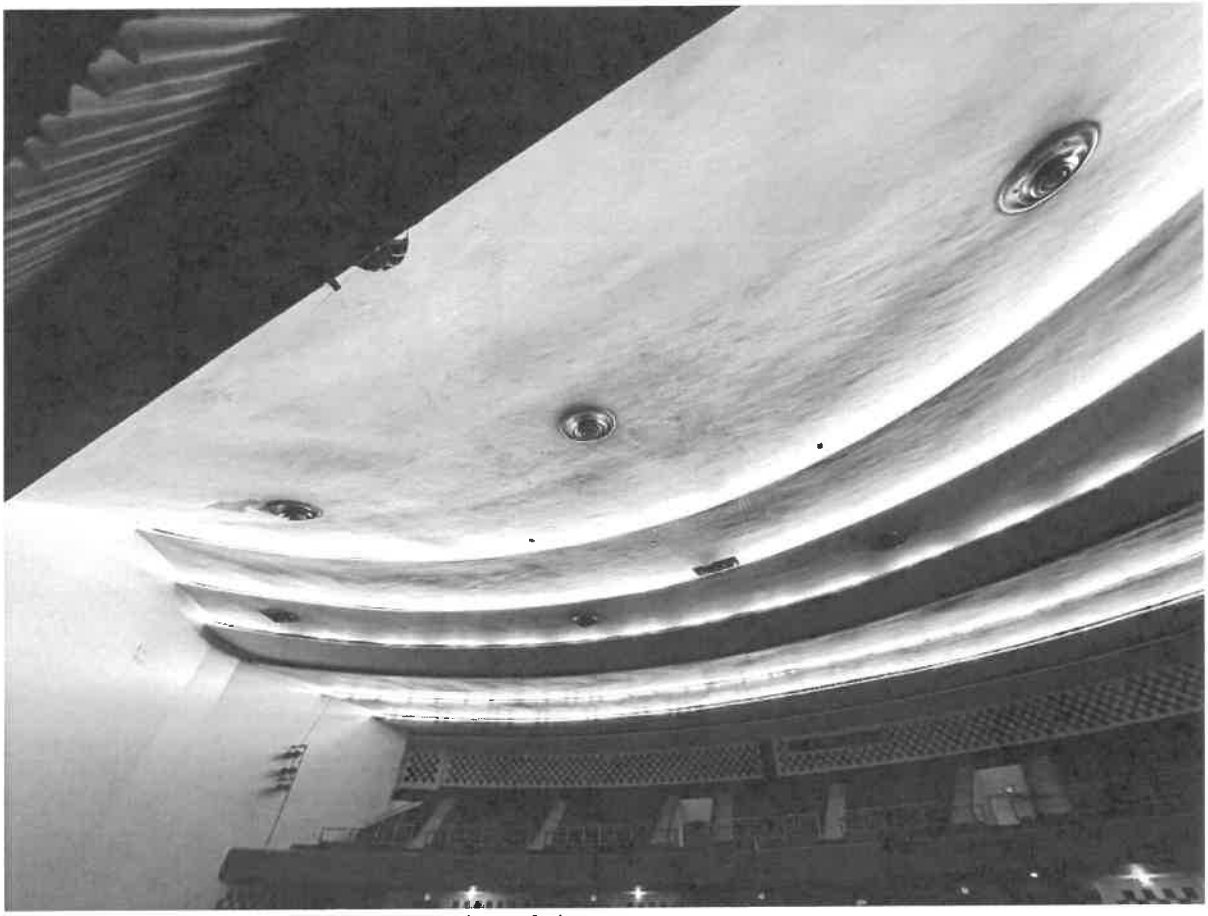


Photo 38: Plaster Damage at Interior Ceiling of Theater

Basement Water Infiltration:
Water infiltration was noted in the basement during the interior tour, although it was not actively leaking at the time of the WDP site visit. Where significant water infiltration is known to occur, a series of trenches have been cut within the concrete floor (Photograph 39) to drain water to a pit where a sump pump is used to manage the water (Photograph 40). The source of the water infiltration is unknown, and it was noted to occur at interior walls. Further evaluation would be required to determine if the water infiltration is a result of the elevation of the water table, below-grade water infiltration at the perimeter that is making its way to interior portions of the building, or another source.

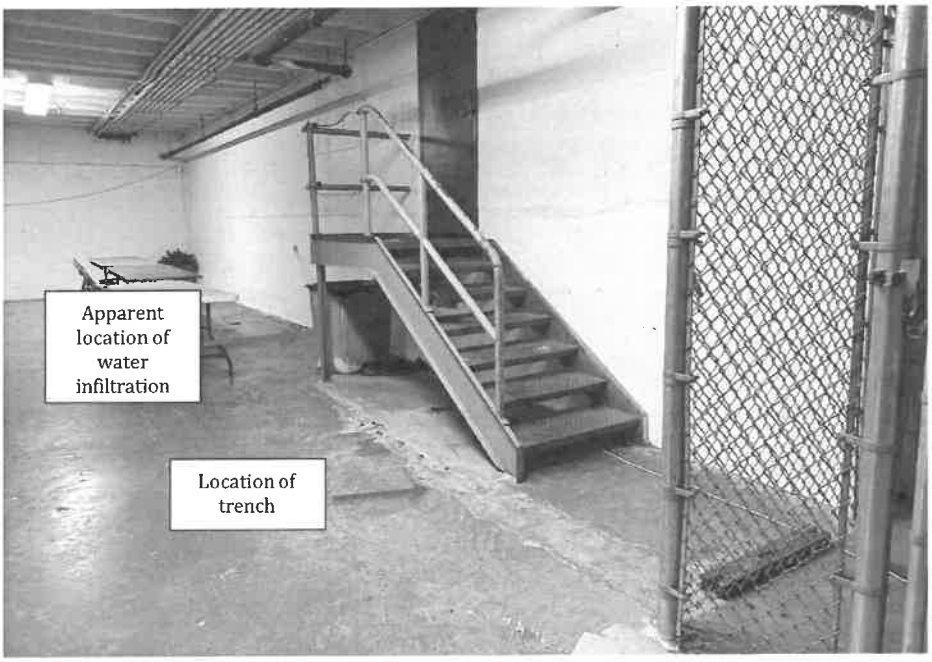


Photo 39: Water Infiltration at Basement Level


Photo 40: Trench Leading to Sump Pump

Interior Plaster Restoration:
Throughout the theater space, plaster damage was observed as a result of either water infiltration or interior moisture-related issues (Photograph 41). As part of a restoration effort, repairs would be required to restore the interior plaster.

Photo 41: Typical Interior Plaster Damage in Auditorium

Interior Masonry Walls:
At the interior demising CMU walls adjacent to the stage, cracking was observed (Photograph 42). Further evaluation of these walls and the need for reinforcement or anchorage would be required.

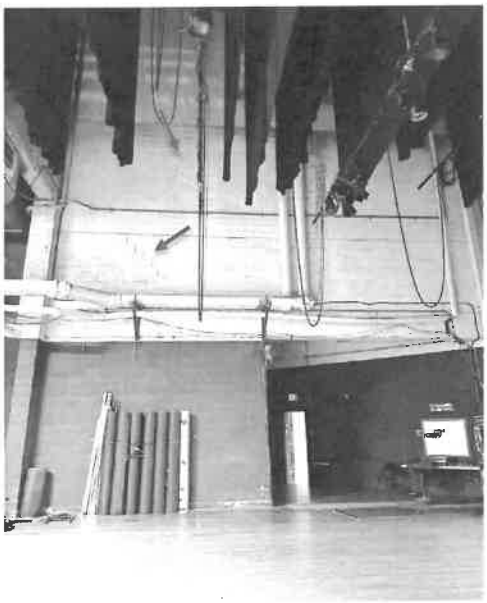


Photo 42: Cracking in CMU at Interior Wall

Site:
While evaluating the exterior of the building, evidence of settlement within the building site was observed. This would require further geotechnical evaluation to determine the condition of the existing soils and remedial repairs.

- Ticket office settlement: At the ticket office, evidence of settlement was apparent in the separation of the granite panels, as well as around the storefront windows (Photograph 43). Beyond this being a structural concern, this also provides paths for air and water infiltration into the building.
- Sidewalks: Settlement has occurred at the sidewalks around the entrances (Photograph 44). Where differential movement occurred between sections of the sidewalk creating a hazard, the concrete has been cut to provide a smooth transition between sections.
- Cracking of steps: Cracks were observed in the concrete steps adjacent to the building (Photograph 45). This appears to be a result of settlement under the steps causing differential movement and separation between portions of the stairs.

Photo 43: Separation in Joint in Granite Panels and Around Storefront Window

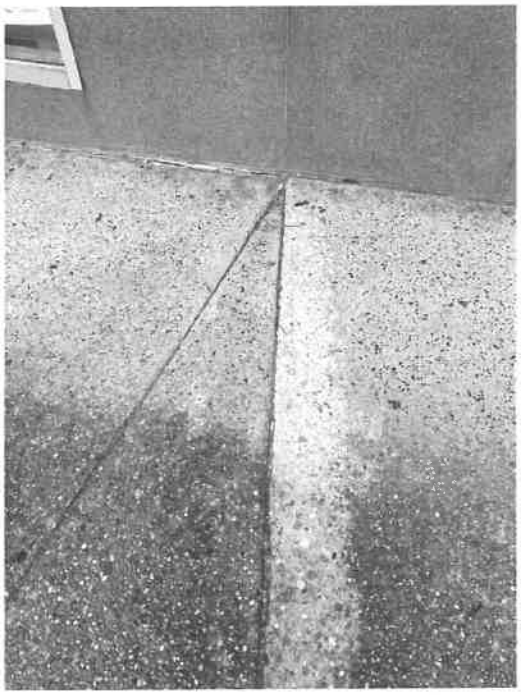


Photo 44: Concrete Cut Back to Limit Trip Hazard Due to Settlement

Photo 45: Cracking in Concrete Stairs

Recommendations:
Significant improvements to the exterior building envelope are required. The improvements will include a full roof replacement, repair of the damaged parapet, significant brick replacement, and repointing/ resealing of the entire structure. If the building is renovated, a significant amount of additional investigation and evaluation will be required to ensure that the improvements resolve the multitude of issues that have been identified. The list of additional investigation and proposed improvements include:

- After an initial walk through, WDP the following are general recommendations for repairs to the building. A thorough follow-up investigation will be required for the development of a comprehensive repair approach.
- Structural evaluation, bracing and repair of the exterior masonry walls.
- Arrestment of any corrosion to the masonry façade elements. Repair and/or replacement of the masonry and support elements.
- Structural evaluation of the exterior concrete walls to determine the cause of cracking. Engineered design to fix structural deficiencies, repair of concrete cracks, and recoating of the exterior walls.
- Replace the existing flat roof with an EPDM or PVC roofing assembly. New roof to have additional drainage provisions as well as new terminations with the adjoining masonry walls and parapets. New flashing integrations at the brick chimney.
- Replace and reset damaged parapet coping stones. Provide new parapet coping flashing, and new sealant at joints in the parapet coping.
- Replace metal roof and provide new water-tight integrations at the masonry wall.
- Water infiltration testing and evaluation at the ticket office awning.
- Water infiltration testing to identify source of water in the theater. Repairs to mitigate water infiltration would need to be undertaken prior to any repairs to the interior plaster in the theater. In addition, a structural evaluation to identify any corrosion of the metal lath supporting the plaster ceiling should be performed.
- Further investigation of the water infiltration into the basement to identify the source. The results of the investigation would determine what dehumidification, dewatering, or other repairs would be required.
- Further evaluation of the interior CMU demising walls adjacent to the stage. Anchorage or reinforcement would likely be required to support and address cracking of the walls.
- Geotechnical evaluation of the existing soils to investigate possible settlement issues and make recommendations for remedial repairs.

Interior Conditions and Finishes

The interior conditions of the facility are worn, dated, and in poor condition. Although the "monolithic building has undergone relatively few alterations" it has also suffered due to lack of upkeep and maintenance. The most significant changes were the modifications to the concession areas in the 1990's and potentially the removal of glass block in the main lobby, as described below:

"According to auditorium maintenance staff, the original partition wall separating the foyer and main hall reputedly incorporated rows of inlaid glass blocks for nearly its entire length. No physical investigations have been undertaken to verify this assertion or determine if any glass blocks remain in place behind the acoustical tile which was installed later."

Water intrusion from the roof and through the exterior walls has resulted in areas with damaged plaster and damaged ceiling tiles. The flooring in the Municipal Auditorium is a combination of carpet, exposed concrete, wood, tile, and terrazzo. The carpet is worn and dated. Even routine cleaning does not return the carpet to an acceptable level. Ongoing maintenance efforts have addressed painting of exposed concrete flooring. The need for maintenance of the terrazzo and wood stage is becoming more apparent. The finishes in the concession and toilet area are dated and in desperate need of replacement.

The location and condition of the artist dressing rooms (and support areas) are unsafe and do not satisfy the expectations of national touring artists. Although the paint and furniture has been updated in some spaces, the rooms are small, accessible only via communicating stairways on each side of the stage area. The rooms are dated compared to venues attracting similar artists. Additionally, there is no accessible access to these spaces as there is no elevator providing access to the dressing rooms that are located on floors 2, 3, and 4.

The main house (auditorium) seating area has a large amount of peeling and plaster damage due to moisture from water intrusion and the humidity caused by the lack of adequate HVAC controls. Repairs to the plaster in the auditorium would be significant, requiring special scaffolding or lifts to access all the damaged areas. In addition to the plaster damage, the acoustic wall panels are torn, dirty, and are detaching from the walls in several places. The panels cannot be cleaned without causing more damage to the acoustical properties. Previous assessments have noted that, "In 2021 additional foam acoustical panels were placed in several sections of the interior house section to improve the degrading acoustical system in place. The room was designed for nonamplified sound. Acoustically acceptable for unamplified speak as the curvature of the wall design allows for the human, unamplified voice to travel in around the walls, providing for excellent audibility of the non-amplified voice. Unfortunately, since the introduction of powered speakers and electronic instruments, the house is an acoustical challenge for nearly every show production that utilizes the venue. It is expected that some show types will see the artist refusing to perform in the venue because of this significant challenge."

Any renovation or rehabilitation of the Municipal Auditorium should include the replacement of nearly all interior finishes. Historically significant elements such as the terrazzo, railings, and seats may be maintained, but will require significant rehabilitation. The plaster ceiling in the main performance hall will likely require complete replacement due to water damage, as well as the need to install an automatic fire suppression system and improved rigging and sound amplification systems.

Plumbing Systems

Domestic Water Service:

The facility is served by a galvanized 4" domestic water line that enters the corner of a utility closet in the basement. The potable water has a Watts model 957 backflow preventer installed on the main line in the utility closet. The backflow preventer was last tested in 2019 according to the inspection tag. The domestic service directly downstream of the backflow preventer is a copper line, but throughout the facility, the water piping material is a mixture of copper and galvanized. All galvanized domestic water should be replaced with Type L copper throughout the facility.

Photo 46: Main Water Service and Backflow Preventer

Photo 47:Copper and Galavnized Piping

Gas Service:

The existing gas meter is located along an outside wall and is routed to the basement to serve the Columbus air system. The main gas line that is exposed at the gas meter is painted 4" black steel.

Domestic Hot Water Systems:

Each gang toilet located in the basement, along with both concession areas are each served by a 6-gallon electric tank type water heater with a 1,500-watt non-simultaneous element. There are no thermostatic mixing valves installed on these systems for anti-scald protection. There are no expansion tanks installed to serve the water heaters. The systems do not have hot water recirculation. Most of the domestic hot water piping is not insulated.

There are 4 stair towers in the facility. Each stair tower has dressing rooms on each floor. Each tower is served by a small electric tank type water heater with an electric non-simultaneous element. There are no thermostatic mixing valves installed on these systems for anti-scald protection. There are no expansion tanks installed to serve the water heaters. The systems do not have hot water recirculation on them. Most of the domestic hot water piping is not insulated. Based upon our observation of the systems, please note:

- There are no thermostatic mixing valves installed on the domestic hot water systems to prevent scalding. Per the 2018 International Plumbing Code (IPC), 607.1.1 Temperature limiting means, a thermostat for a water heater shall not serve as a temperature limiting means.
- It takes on average 60-90 seconds to get warm water from the lavatory faucets. The domestic hot water piping is not insulated throughout the facility. This will allow for very high heat loss in the system distribution piping, resulting in much lower-than-normal hot water temperatures.
- There are no expansion tanks installed on the domestic hot water tanks throughout the facility. The expansion tank's purpose is to absorb excess pressure built up from the water heater, so the domestic water system and equipment does not get damaged.
- The domestic hot water piping throughout the facility consists of piping runs more than 50 feet in length with no hot water recirculation to maintain consistent water temperatures. Per the 2018 IPC, 607.2 The developed length of hot or tempered water piping, from the source of hot water to the fixtures that require hot or tempered water shall not exceed 50 ft in length.

Photo 48: Electric Hot Water Tank

Photo 49: Electric Hot Water Tank

Recommendations for the domestic hot water systems include:

- Install an ASSE 1017 on each domestic hot water system to temper the water leaving the water heaters to 120 degrees Fahrenheit or install an ASSE 1070 thermostatic mixing valve at each plumbing fixture that requires hot water.
- Install ASSE 1016 thermostatic valve to serve each shower throughout the facility.
- Insulate the domestic hot water piping throughout the facility.
- Install domestic hot water recirculation piping and associated recirculation pumps for each domestic hot water system.
- Replace all existing domestic electric water heaters with new equipment. An analysis of each system would have to be completed to ensure the equipment is sized properly. Install expansion tanks for each new water heater.

Plumbing Fixtures:
The existing restrooms are dated and not sized to adequately accommodate the venue's capacity. During recital events, maintenance staff are required to handle numerous calls per event to address issues resulting from overuse and backup of the system. According to the International Plumbing Code 2018, Chapter 4, Section 403 under the classification of an Assembly Hall for performing arts:

The minimum number of water closets is 1 per 125 for males, 1 per 65 for females.
The minimum number of lavatories is 1 per 200 people.
The minimum number of drinking fountains is 1 per 500 people.

Based upon an occupancy of 3,500 people (assuming 1,750 male and 1,750 female):

Minimum number of water closets (toilets and urinals) for males:
1750/125 = 14 (Current Deficit: 0)

Minimum number of water closets (toilets) for females:
1750/65 = 27 (Current Deficit: 16)

Minimum number of lavatories (sinks):
3500/200 = 18 (Current Deficit: 6)

Minimum number of drinking fountains:
3500/500 = 7 (Current Deficit: 5)

Total number of water closets required: 41 (Current Deficit: 16)

Total number of lavatories required: 18 (Current Deficit:6)

Total number of drinking fountains: 7 (Current Deficit: 5)

The private toilet located on the first floor of the lobby area has a sensor operated faucet and manual flush tank toilet that are in good condition. The toilets serving the facility are a mixture of flush tank and flush valve type toilets. Most of the lavatories are vitreous china with manual faucets. The private toilets in the first-floor lobby area have Terreon lavatories with sensor operated faucets, soap dispensers and hand dryers. The private showers have manual controls with ball type shower heads.

There are no thermostatic mixing valves installed for scald protection on any plumbing fixture requiring hot water. Per the 2018 International Plumbing Code (IPC), 607.1 thru 607.1.2, In nonresidential occupancies, hot or tempered water shall be supplied for bathing and washing purposes. Tempered water shall be supplied through a water temperature limiting device that conforms to ASSE 1070 and shall limit the tempered water to not greater than 110°F. This provision shall not supersede the requirement for protective shower valves in accordance with Section 412.3, which states individual shower and tub shower combination valves shall be balanced-pressure, thermostatic or combination that conforms to the requirements of ASSE 1016 and shall be installed at the point of use which will limit the maximum setting of the valve to 120°F.

Sump Pumps and Ejectors:
There is a ½ hp sump pump located in the basement that helps control ground water that enters the basement. Additionally, all sanitary sewer piping serving plumbing fixtures in the basement is routed to a duplex sewage ejector. Both the sump pump and the ejector have reached the end of their useable life and require immediate replacement. The new pumps should be connected to the building automation system (BAS) to monitor status.


Photo 50: Sump Pump

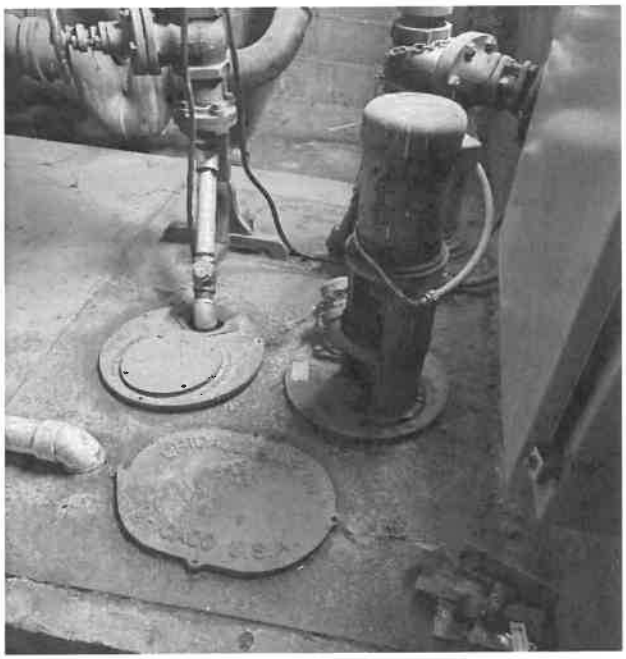


Photo 51: Duplex Sewage Ejector

Roof Drains:
The are 2 roof drains serving each roof of the facility. The roof drains appear to be the original drains installed in 1938. Currently there are no emergency overflow roof drains or scuppers installed. The existing parapet wall around the roof perimeter is approximately 2'-0".

The existing roof drains are original to the facility and in need of replacement. Currently there are no emergency overflow roof drains or scuppers installed. The existing parapet wall around the roof perimeter is approximately 2'-0" high. Per the 2018 International Plumbing Code (IPC), 1108.2, Where roof drains are required, secondary (emergency overflow) roof drains or scuppers shall be provided where the roof

perimeter construction extends above the roof in such a manner that water will be entrapped if the primary drains allow buildup for any reason.

All the existing roof drains should be removed and replaced. Emergency overflow roof drains or scuppers should be installed. If overflow roof drains are utilized install associated piping and terminate with wall mounted downspout nozzle. Roof drain bodies and associated piping should be insulated.

Electrical Service and Distribution, Emergency Power

Service Entrance:

The existing building service is powered primarily through an Eaton Cutler Hammer 2000-amp, 208Y/120-volt, 3-phase, 4-wire, service entrance switchboard which was installed approximately with the 1983 renovation or earlier. Labeling is minimal or not provided on some items and so a complete system riser hierarchy could not be determined at the time of the inspection. However, it appears that the service has been tapped in excess of the six service disconnect limit per the National Electric Code (NEC) – approximately 7-9 service shutoffs are being utilized.

Service comes underground from a pad mount utility transformer located adjacent to the building. The issue will be further explained in the following Switchboard sub-section: ground water is leaking into the main service switchboard near the service entrance conduit penetrations at the basement wall. Water within the conduits would indicate a crack or rupture in the conduit. Initial inspection by Mark Nary of M&L Electric indicated that the water is likely entering around the perimeter of the below grade conduits penetrations through the wall and is not coming through the conduits themselves. Regardless, any rework of the existing service necessary for the mandatory life-safety replacement of the service switchboard would also require full removal and replacement of the service feeder.

Maximum peak demand seen on the service over the last couple years has been approximately 600-amps as received from AEP; however, staff indicated that event productions have been tripping branch breakers. Since the main service is 2000-amps, it is likely only an issue in branch sizing for temporary stage production connection points or possibly older breakers reaching the peak of their age and having false trips. In the event of a renovation, the facility user needs would be evaluated to determine adequate service size for current and future demand loads and downstream branch circuits would be properly sized for stage connections.

Switchboards:

The existing building contains two primary distribution switchboards: a 208-volt, 2000-amp main gear installed in the basement as the service entrance to the building and a 208-volt, 1600-amp downstream distribution switchboard installed on the opposite end of the basement.

1600A downstream switchboard: The existing switchboard is Eaton Cutler Hammer and was installed approximately with the 1983 renovation or earlier. Although it has no visible signs of concern outside of usual wear, it has reached / exceeded the expected lifespan and any modifications to the gear will be harder and more costly to find replacement parts and breakers. In the event of a substantial renovation, the gear would be removed along with most of the electrical system to prepare for a new installation throughout the complex. The entirety of the basement is below the 100-year flood zone per FEMA and any new switchgear would need to be installed on the first floor or above.

2000A service entrance switchboard: The existing switchboard is Eaton Cutler Hammer and was installed approximately with the 1983 renovation or earlier. At time of inspection, the switchboard had a continuous stream of water flowing out from beneath / inside of the unit. The water appears to have been coming through for an extended period as the entire bottom of the switchboard has rusted significantly. The rust has an outward direction indicating the water coming from within or under and not simply around the gear. Although there were multiple unknowns, this was an immediate concern as the outer barrier of the gear was now compromised and that the interior of unit had some capacity of water passing through it. Without knowing the interior condition, the primary concern was that at any moment the internal bussing

could arc to the wet components and cause the building to lose all power while potentially electrifying the water on the floor or cause an arc explosion. The room housing the gear does not meet current egress clearance requirements and the fire alarm control panel serving the building was on the opposite wall – adding to the risk factor that that potentially the fire alarm operation could be destroyed while the building would lose power.

The building was closed immediately, however through consultation with M&L Electric, a replacement switchboard was sourced, the only drawback being that it would cut the service entrance size to 1600-amps. Though because the entirety of the basement is below the 100-year flood zone and the existing electric room did not meet code clearances, the new service entrance would have to be moved to the first floor. This would require removal and rework of the service entrance all the way back to the utility transformer, a new electrical room being built at the back of the stage, and all the branch circuits in the basement being extended to the new switchboard location.

There is also a mix of disconnected and abandoned equipment throughout the building, primarily around the stage and in the penthouse electrical room. It appears that the majority of the equipment has been disconnected, however there are 'newer' (80s or earlier) disconnect switches potentially tapping the lines and conduits still connected to the equipment. One older model disconnect switch has text written on it indicating that the wires within are still hot and to not turn on the switch. In the event of any renovation, all abandoned equipment throughout the building should be entirely disconnected, removed, and all feeders capped off in a safe manner or pulled back to their source.

Photo 52: Water Seeping Out from Switchboard

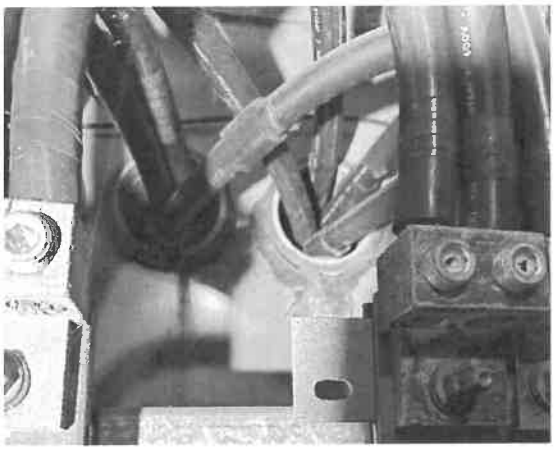


Photo 53: Interior of Switchboard - Rust Around Conduits Service Indicating Likely Point of Water Infiltration

Photo 54: Interior of Switchboard - Rust Around Base of the Gear

Photo 55: Exterior of Switchboard - Rust Around Base of The Gear

Photo 56: Dilapidated (Abandoned?) Gear in Penthouse

Photo 57: Abandoned Stage Dimmer - Retrofitted With Panelboard Compartment

Photo 58: Abandoned, Unlocked with Exposed Wiring*

*Although power to box was not verified, existing disconnect and cabling should be removed entirely to ensure wiring does not inadvertently become hot – leading to fire or public life safety concern.

Panelboards:
Panelboards throughout the facility are a collective mix added or replaced over time with renovations, including SquareD, Eaton Cutler Hammer, and GE. Although compatible replacement breakers are easier to obtain for current manufacturers than in switchboards, most of the panels have exceeded their expected lifespan and are due for replacement. It is also likely that branch circuiting and system layout from the main switchboards is not adequate based on owner complaint of tripping breakers. If renovations occur, it is recommended that the panels be removed along with all feeder and branch wiring to prepare for an entirely new electrical system throughout the building.

Transformers:
The existing facility does not contain any significantly sized transformers larger than control voltage as the building operates on a 208Y/120-volt service.

In the event of complete renovation, a new 480Y/277-volt service could be considered for the building and then stepped down with general distribution transformers throughout. 480-volt allows all service components to be smaller in physical size and amperage rating, lowering the quantity and cost of service gear, wiring, and conduit as well as allowing greater flexibility in a new design of the electrical system across a building of this size.

Cabling / Conduit:
As standard with a building of this age that has been through multiple renovations, circuiting throughout the existing building is completed through a mix of EMT conduit, MC cabling, RMC, and minor PVC that has been added over time. Existing cabling and conduit appear to be in satisfactory condition with no

visible areas of immediate concern outside of overall age. Over time insulation deteriorates and terminations loosen, leading to a greater risk of faults across the system. In the event of substantial renovation, it would be recommended that all feeder and branch wiring and conduit be removed entirely and replaced with a new installation.

Emergency Power:
There is no emergency power provided at the Municipal Auditorium. At a minimum all life safety systems, including emergency egress lighting and elevators, should be on emergency power. A natural gas generator should be provided.

Lighting

Light Fixtures:

The lighting fixtures consist of a mix of fluorescent, incandescent, metal halide HID (high-intensity-discharge), and minor LED replacement primarily on the exterior. Emergency battery packs and battery exit signs are arranged throughout the facility for emergency egress lighting operation. In the event of renovation, it is recommended that all lighting be replaced with current technology LED to conserve energy, save on maintenance costs, and meet energy code. Emergency operation could not be verified at the time of walkthrough, but for a facility of this size it is estimated that the current layout does not meet code required minimums in coverage and output.

Lighting Controls:

Lighting controls throughout the complex consist of manual toggle switches controlling fixtures within an area. In the event of renovation, provide all new automatic lighting controls throughout the facility to comply with building energy codes. Theatrical lighting controls should be replaced along with theatrical lighting such that newer emergency override controls and zoning technology can be integrated into LED lighting system.

Mechanical Systems

There are several places within the National Register of Historic Places Registration Form that mention the longstanding challenges and deficiencies of the mechanical (HVAC) systems at the Municipal Auditorium. Some of the comments include:

"Inadequate heating in the building was also problematic, despite the original installation of seven gas furnaces capable of each furnishing one million B.T.U. of heat, a massive six-foot blower fan, and several auxiliary fans to circulate the warm air. As reported in the Charleston Daily Mail, during a 1940 performance the ushers wore overcoats and "patrons shivered in the building at Golden Boy production, but basement furnace ate up $52 in gas." Building managers acknowledged the heating problem early on, but it still persisted for years. As late as November 1975, "an absence of heat in the auditorium forced many orchestra members to perform wearing overcoats." Warm weather offered little respite from the climatic inadequacies because the auditorium had no air conditioning. Consequently, the windowless concrete building turned into an oven during the hottest summer months, which effectively limited its availability to nine months of the year. In the 1980s the city hired Silling & Associates to design and install a new central heating, ventilation, and air conditioning plan for the building."

"After nearly a decade of planning, the much-needed repair program finally got underway in 1966. When work concluded in 1967 the city had spent over $100,000 on renovations, beginning with a general clean-up that yielded eight truckloads of accumulated dirt and debris from the air ducts."

"The lack of air conditioning originally precluded use of the Municipal Auditorium for several months each year, but the hall now operates a full schedule of year-round activities."

Background:

As noted above, when the facility was constructed in the late 1930s a Columbus Air Systems mechanical system provided heating and ventilation. This system consisted of a large central gas-fired heating furnace with a single large blower fan. Heating and ventilation are provided to the spaces by ductwork with ceiling supply and underground return air tunnels with floor and wall return openings. The facility was not originally provided with cooling.

In 1983 the facility was renovated and provided with cooling. The heating system renovations included the installation of six 800 MBH (80% efficient) gas-fired power flame burners, combustion air, which connected into the existing furnace systems. The supply fan motor was replaced with a new motor and Variable Frequency Drive (VFD). The supply ductwork to the concession area was capped, and new heat pump systems and ductwork were installed to serve this area. Two new supply fan systems were installed. One to serve the stage area and one to serve the auditorium area. These fan systems tap off the existing furnace supply ductwork to serve their respective HVAC zones. Each fan system was provided with new chilled-water cooling coils. Two constant-volume chilled water pumps in a duty stand-by configuration provide chilled water to the coils. Cooling water was supplied by one or two 100-ton air-cooled chillers. Individual P-TAC units with DX cooling and electric heating have been provided to serve some of the dressing rooms. The facility control systems were upgraded at this time. The Columbus Air Systems mechanical system provides ventilation via outdoor air (OA) louvers located above the chillers.

Photo 59: P-TAC Unit

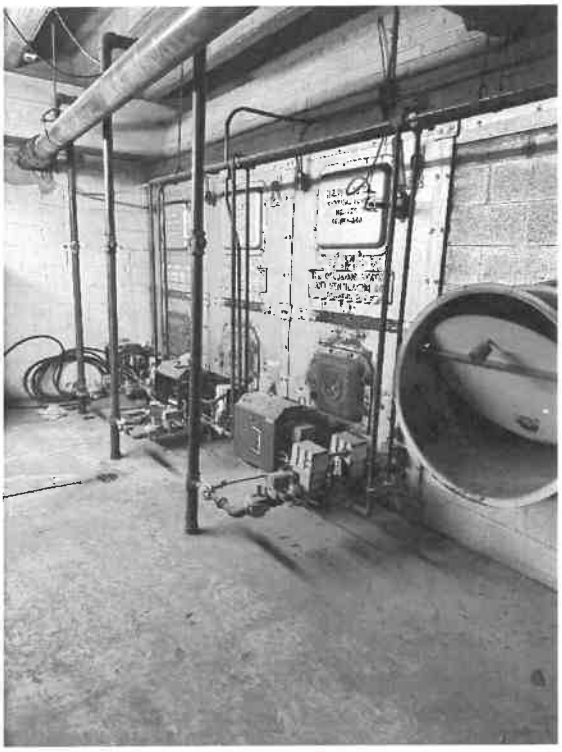


Photo 60: Existing Columbus Air Systems Unit

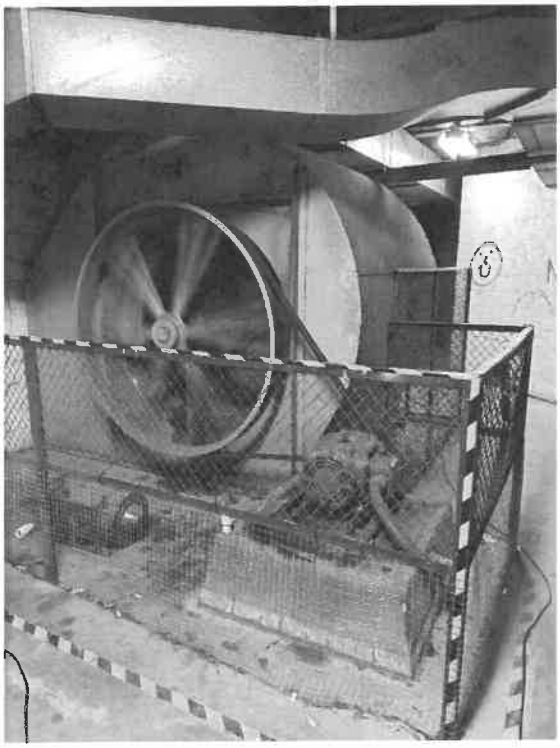


Photo 61: Large Blower Fan

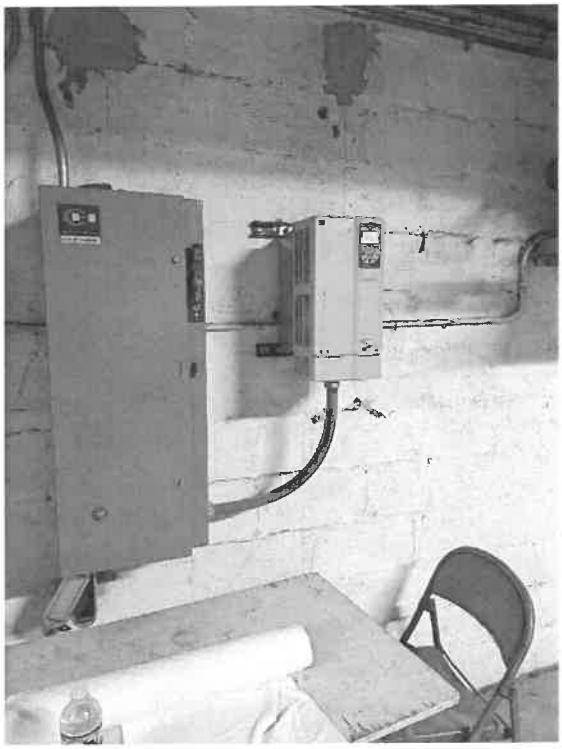


Photo 62: Equipment Disconnect

Photo 63: Stage Fan System

Photo 64: Auditorium Fan System

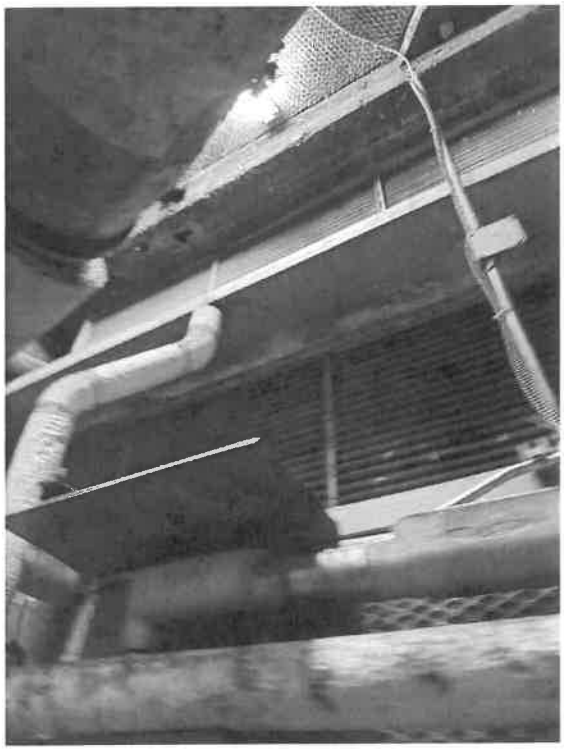


Photo 65: Auditorium Fan System

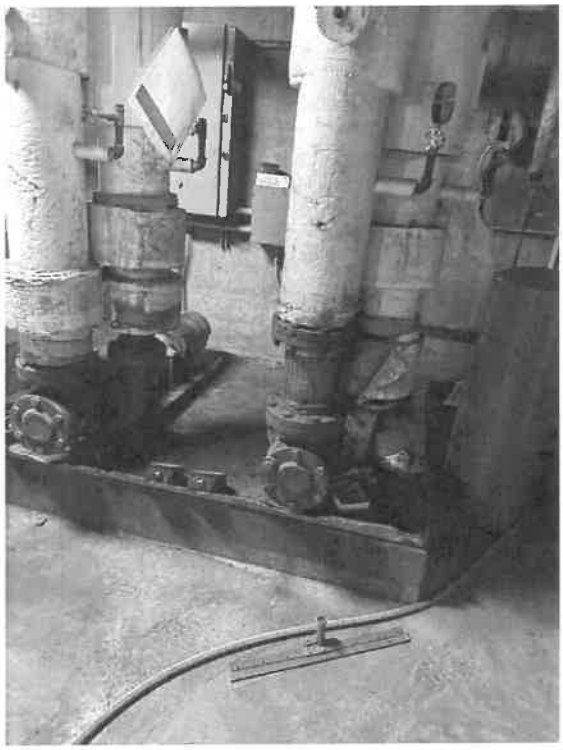


Photo 66: Chilled Water Pumps

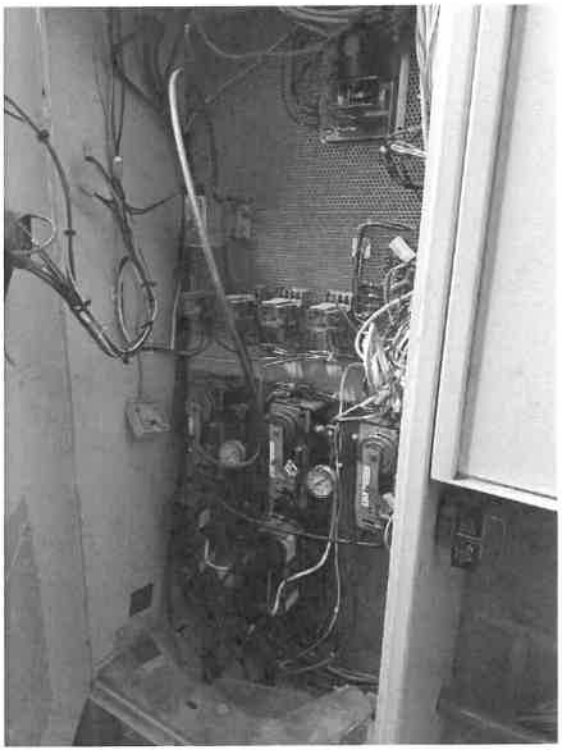


Photo 67: HVAC Controls

Photo 69: HVAC Controls

Photo 69: Chillers

Photo 70: Concessions Heat Pump (Photo Unavailable)

The systems have remained as described above to the current day, with general maintenance and equipment replacement on an as-needed basis. The latest equipment replacement was in 2020. The existing air-cooled chillers failed. Ten new air-cooled chillers replaced the existing two chillers. Each has a capacity of 120 MBH with 1,200 MBH (100 Tons) of cooling. The control systems still date back to the 1965 renovations.

Observations:
A site visit was conducted at the facility on January 30, 2024, to observe the condition of the mechanical system. During that visit, the following conditions were observed:

- The combustion air for the Columbus Air Systems unit is ducted from a louver through the existing return air plenum and to the room with the six gas-fired burners. The combustion air appears undersized and does not comply with the 2018 International Fuel Gas Code.
- The return air systems, as originally designed, incorporate under-floor returns. These returns have been covered by carpeting. This has limited the capacity of the return ductwork, causing pressure issues around the return air fans.
- The heat pump systems serving the concession area appear to be non-functional.
- The existing control systems range in age and condition. They have failed and are now bypassed, with the equipment running in manual mode.
- The existing filtration systems filter the return air via a filter located in the return fan room. These filters appear to be minimum MERV 8. The outdoor air (OA) appears to enter the systems unfiltered.
- Given the age of the facility and the age of the existing equipment, hazardous materials are likely present throughout the facility. A hazardous material survey should be completed prior to undertaking any improvements.
- The stage fan system has a cooling coil above the unit in the plenum space of the stage area. A section of this ductwork is uninsulated. This can lead to condensation on the ductwork and water damage to surrounding areas.
- The existing stair towers serving the dressing rooms are heated by a dedicated supply fan served from the Columbus Air Systems unit. It is ducted directly to the stair towers. This is not compliant with the current State Fire Code.
- The existing HVAC systems have been damaged in several areas. This includes the existing projector room where the wall and existing supply ductwork have a hole cut into them to supplement the cooling in this space. This has led to uncontrolled air entering this space and damaging the air balance of this system.
- Nearly all the HVAC equipment, except the chillers that were replaced in 2020, has exceeded the expected service life.
- The existing HVAC systems appear not to have any duct smoke detectors. These are required under the current State Fire Code.
- The primary heating source is the gas-fired Columbus Air Systems unit. Carbon monoxide monitoring was not observed. There are assembly spaces adjacent to the system and this presents an immediate hazard to occupants.

Recommendations:
With the extensive list of deficiencies and code violations we recommend the replacement of the entire HVAC and control system. If a complete system replacement is not undertaken, ZMM recommends the minimum following corrective actions:

- Provide a new complete HVAC control system.
- Provide new supply and return smoke detectors to shut down the HVAC systems when the smoke detectors are annunciated.
- Provide a new HVAC system for the concession area.
- Provide a new HVAC system for the projector room.
- Provide carbon monoxide detection and monitoring.
- Provide new insulation on existing ductwork (where identified above).
- Patch and repair damaged ductwork.
- Inspect the existing underground return air ductwork. Clean and patch as required. Ensure the return air pathway is unobstructed (by carpet).
- Conduct a hazardous materials assessment. Abate any hazardous material and reinsulate/patch abated areas.
- Inspect and pressure test the existing Columbus Air Systems firebox. Repair any leakage identified.

As noted above, given the age and condition of the existing HVAC equipment, ZMM recommends that the existing HVAC system be replaced with a modern system. The new system will improve safety, occupant comfort, control, and efficiency. The scope of the new system is described below:

Demolish the existing Columbus Air Systems firebox, return fan, and supply air fans serving the stage and auditorium. Provide new air-handling units (AHUs) to serve the stage area, auditorium area, and concession area. The three (3) units would consist of chilled water cooling coils, hot water heating coils, and a supply air fan. Supply, return, and outdoor air would be ducted to the appropriate area.

New high efficiency heating hot water boilers, distribution pumps, and piping would be provided to serve the units. Similarly, new chilled water pumps and distribution piping would be provided, although the existing chiller system could be reused.

Provide supplemental heating and cooling units for dressing rooms and other support spaces. The units would consist of DX cooling/heat pump and auxiliary electric heating. Hot water heating only units would be provided in storage areas.

A new HVAC control system with integration to the Charleston Coliseum and Convention Center would be provided. An interface would be provided to allow for a unified control system.

Data/IT Infrastructure and Security Systems

In the event of renovation, it is recommended that all technology systems throughout the building be replaced / upgraded to current technology and output as demonstrated at the Coliseum / Convention Center. Including additional CCTV security camera coverage, access controls and door intrusion monitoring, facility wide high-speed Wi-Fi access, and additional wired drops to area network for stage production staff.

Kitchen and Other Specialty Items

The kitchen and concession areas were created in the basement during a renovation in the 1990s. The spaces are dated and wholly inadequate for a modern concert venue. At a minimum the concession areas need to be moved to the main level with adequate space for queuing. Ideally, the concessions and bar areas would be distributed throughout the venue to provide ease of access for the audience.

Photo 71: Basement Concession Area

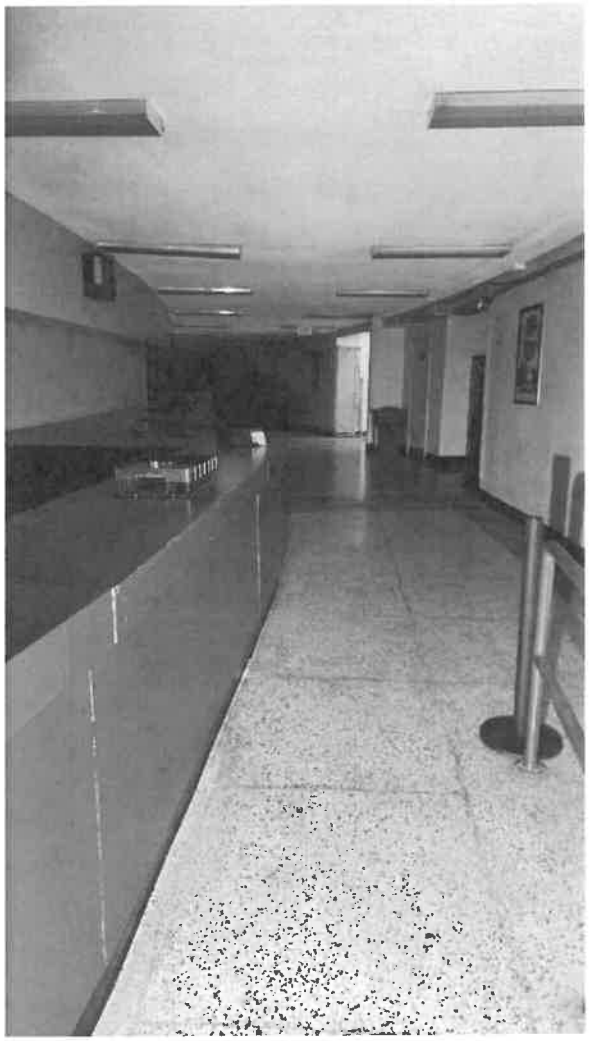


Photo 72: Basement Concession Area

Reconfiguration Analysis

ZMM explored an option to fully renovate the auditorium and reconfigure the space to move the concession and toilet areas to the main level. This required taking space out of the house (auditorium). The plan (see below) would have also provided a flat area in front of the stage, like that provided at more modern facilities. Ultimately this option reduced the seating capacity to a level that would render the auditorium unviable, while still not providing an inadequate number of toilets to serve the audience.

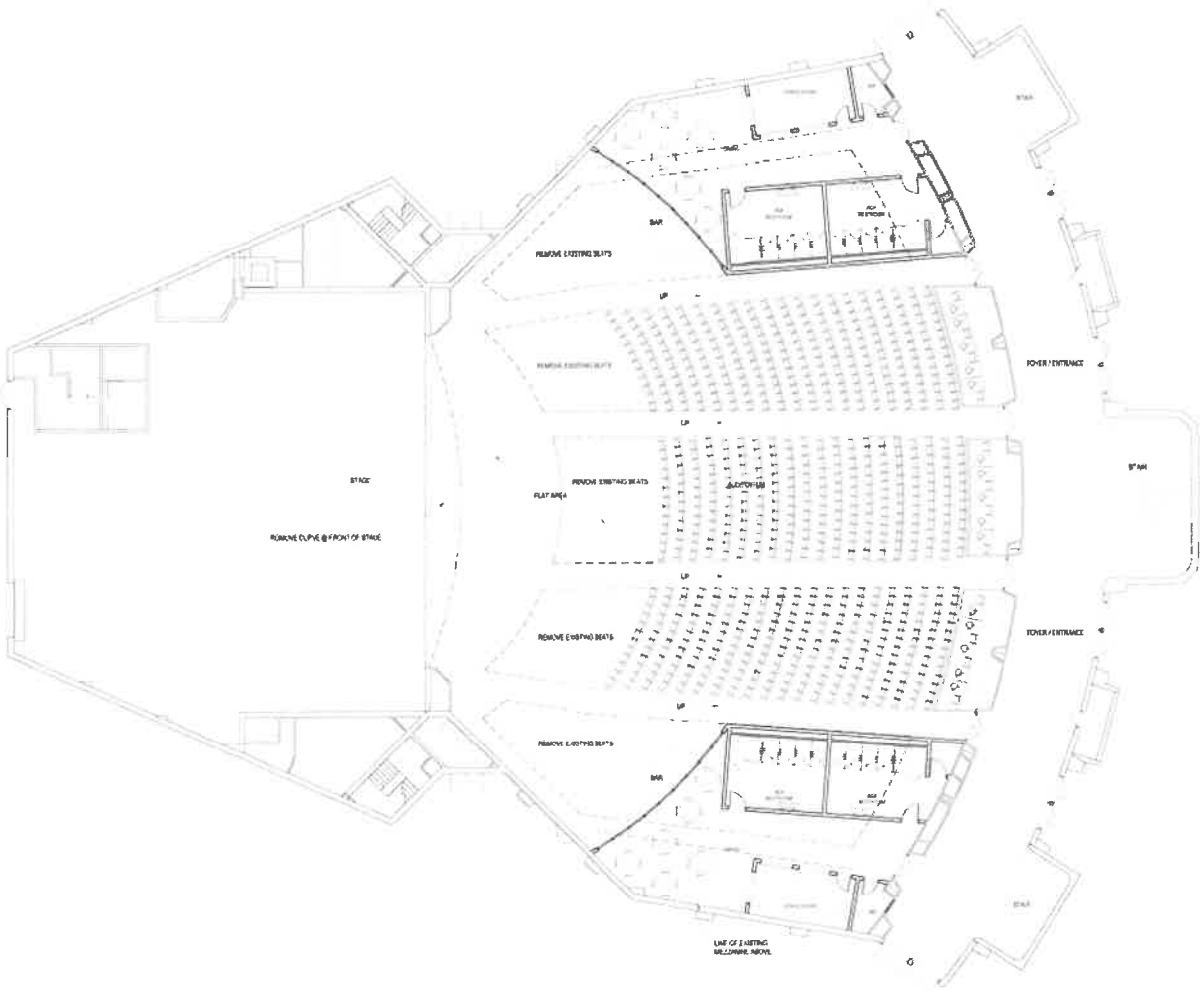


Figure 5: Modified Main Level Plan

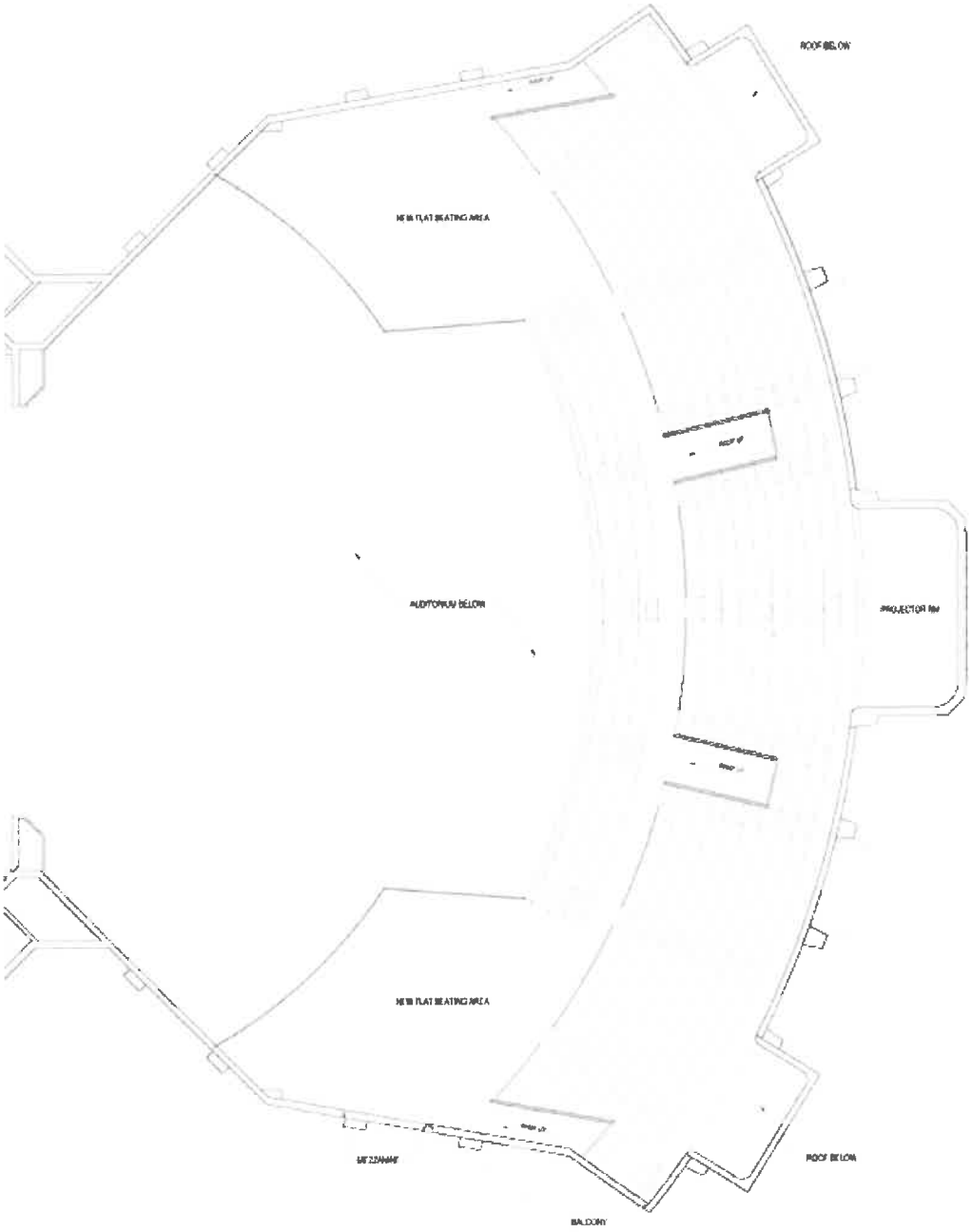


Figure 6: Modified Balcony Level Plan

Option #1: Fully Renovate the Existing Auditorium with an Addition

- Sidewalk and Pipe Handrail Replacement
- Asphalt Resurfacing
- Brick Replacement (25%)
- Repair and Repoint Remaining Brick
- Repair, Reseal, and Repaint Front Façade
- Roof Replacement, Including Resetting Coping, Additional Roof Drains and Overflow Drains, Continue Roofing Up Parapet Walls, New Metal Coping
- Replace Exterior Doors
- New Electrical Service Entrance (480V Switchgear) and New Distribution Panels:
  The new service entrance would be in a new room created above the existing stage level.
- Replace the Entire Electrical System including Lighting and Branch Wiring
- Provide Security and CCTV Systems
- Install a Natural Gas Generator for Life Safety Systems
- New Fire Alarm System
- Provide an Automatic Fire Suppression (Wet Pipe Sprinkler) System
  This entails removing and replacing the existing plaster ceiling in the auditorium. Removing and replace the existing plaster ceiling will likely require the removal of the auditorium seating.
- New Fire Curtain at Stage
- New HVAC System with Components Elevated Above the 100 Year Flood Plain:
  Demolish the existing Columbus Air Systems firebox, return fan, and supply air fans serving the stage and auditorium. Provide new air-handling units (AHUs) to serve the stage area, auditorium area, and concession area. The three (3) units would consist of chilled water cooling coils, hot water heating coils, and a supply air fan. Supply, return, and outdoor air would be ducted to the appropriate area.

  New high efficiency heating hot water boilers, distribution pumps, and piping would be provided to serve the units. Similarly, new chilled water pumps and distribution piping would be provided, although the existing chiller system could be reused.

  Provide supplemental heating and cooling units for dressing rooms and other support spaces. The units would consist of DX cooling/heat pump and auxiliary electric heating. Hot water heating only units would be provided in storage areas.

  A new HVAC control system with integration to the Charleston Coliseum and Convention Center would be provided. An interface would be provided to allow for a unified control system.
- Add a Separate Fire Water Service Entrance

- Replace Sump Pumps and Ejectors
- Replace Domestic Hot Water Heaters
- Install Flood Protection for 100 Year Flood Plain, Move Existing Chillers Out of Flood Plain
- Provide Some Level of Accessible Seating in Auditorium
- Update Finishes Throughout the Auditorium
- Refurbish or Replace Seating

Even if the building is fully renovated the facility lacks an adequate pre-function space, adequate and accessible toilet facilities, adequate and accessible concessions, general accessibility, and adequate amenities for performers (including dressing rooms). ZMM recommends abandoning the use of the basement areas except for storage. Additional sump pumps will be needed to keep the basement dry. Additionally, due to egress concerns, ZMM recommends abandoning the use of the dressing rooms on the upper levels. All spaces currently provided in the basement (and the elevated dressing rooms), including the large toilet facilities, concession areas, and gathering space for performers below the stage should be provided in an addition that would be located to the Northwest of the existing Municipal Auditorium.

ZMM anticipates a 17,500 SF addition would be required to provide the space needed to accommodate the functions identified. To accommodate 40% of the maximum audience, nearly 10,000 SF of space is required for pre-function gathering (3,500 people x 7 SF/person x 40%). The remaining space would be for toilets, concessions, and dressing rooms. The addition would also include at least one elevator to provide access to the stage and lower-level seating area.

Figure 7: Rendering of Addition to Northwest of Municipal Auditorium (Origin Unknown)
Provided by Patrick Leahy (OVG/Charleston Coliseum and Convention Center)

Renovation/Addition Estimate:

RENOVATIONS & ADDITION TO MUNICIPAL AUDITORIUM

	Renovate Existing Municipal Auditorium	Cost
0	General Conditions	545,050
1	Sidewalk and Pipe Handrail Replacement	172,600
2	Asphalt Resurfacing	203,190
3	Planting	13,900
4	Brick Replacement (25%)	258,700
5	Repair and Repoint Remaining Brick	388,000
6	Repair, Reseal, and Repaint Front Façade	133,700
7	Roof Replacement (includes new drains & scuppers)	738,600
8	Replace Exterior Doors	149,400
9	New Electrical Service Entrance	96,880
10	Replace the Entire Electrical System including Lighting and Branch Wiring	977,090
11	Provide Communication Systems	120,110
12	Provide Security and CCTV Systems	107,510
13	New Fire Alarm System	92,500
14	LED Lighting Package	249,840
15	Install a Natural Gas Generator for Life Safety Systems	95,700
16	Provide an Automatic Fire Suppression (wet pipe sprinkler) System	418,450
17	Add a Separate Fire Water Service	72,600
18	New Fire Curtain at Stage	118,800
19	New HVAC System with Components Elevated Above the 100 Year Flood Plain	1,626,160
20	Replace Sump Pumps and Ejectors	116,380
21	Replace Domestic Hot Water Heaters	32,600
22	New Plumbing Fixtures	169,840
23	Install Flood Protection for 100 Year Flood Plain,	350,000
24	Provide Some Level of Accessible Seating in Auditorium	82,680
25	Update Finishes Throughout the Building	1,928,420
26	Refurbish or Replace Seating	1,370,690
27	Hydraulic Elevator	180,000
28	Reinforcing and Bracing of Interior Partitions	90,300
29	New Interior Doors and Hardware	114,200
30	Selective Demolition of Interior Building Systems	232,000
31	Asbestos Removal *(allowance)*	200,000
	Sub-Total	**11,445,890**
	B&O Tax	246,000
	Contractor Insurance	35,750
	Bond	110,090
	Contractor OH&P	743,990
	Contingency @ 20% of Cost	2,289,178
	Total Renovation Costs	**14,870,898**
	Addition - 17,500 SF @ $450/SF	**7,875,000**
	Total Construction Cost	**22,745,898**
	Soft Costs	
	Advertising & Legal (estimate)	5,000
	Property Survey	30,000
	Geotechnical Investigation (Design Phase)	20,000
	Special Inspections & Testing (Bldg. Const)	150,000
	Additional Building Envelope Inspection and Testing	350,000
	Design Fees (@8%)	1,819,672
	Commissioning (@1%)	227,459
	Permitting	15,000
	Sub-Total	**2,617,131**
	Total Project Cost (Renovation/Addition)	**25,363,029**

ZMM ARCHITECTS ENGINEERS

Option #2: **New 50,000 SF Auditorium**

The second option includes the demolition of the Municipal Auditorium and construction of a new 50,000 SF facility with the modern amenities identified in the case studies below. The facilities identified below are closer to 57,000 SF and 62,000 SF but have a greater seating capacity than is anticipated for a new auditorium in Charleston. Both projects appear to have been constructed by private developers.

New Construction Case Study – Vibrant Music Hall

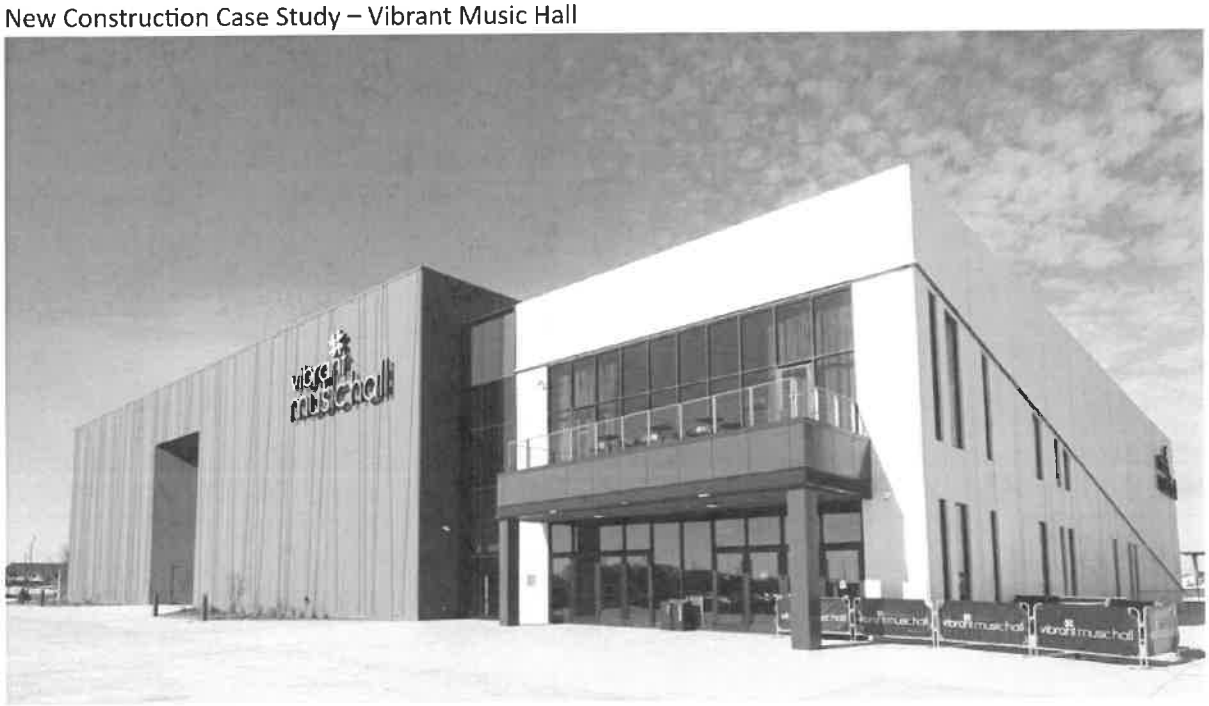


Photo 73: Vibrant Music Hall (Photo by Duane Tinkey, Business Record)

Live Nation constructed a new concert venue called Vibrant Music Hall in Waukee. "With a capacity of 3,300 people, the space is designed for more intimate shows. The Vibrant CEO says a venue like this will be new to the area. The hall includes about 57,000 SF of space, including ground floor for a stage and seating or standing space for concertgoers. Also included is tiered seating, a VIP lounge, a kitchen and seven bars." The cost of the venue was publicly identified as $25M.

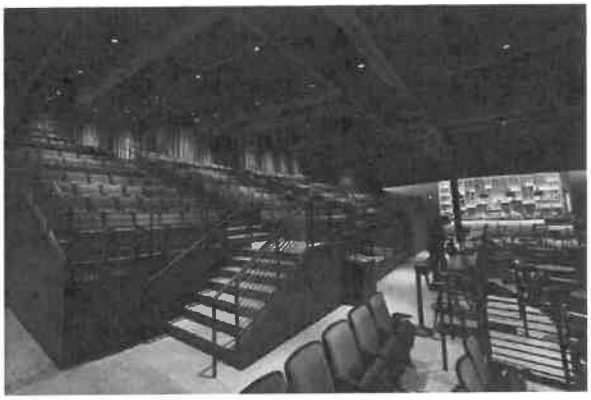


Photo 74: Courtesy of Des Moines Register

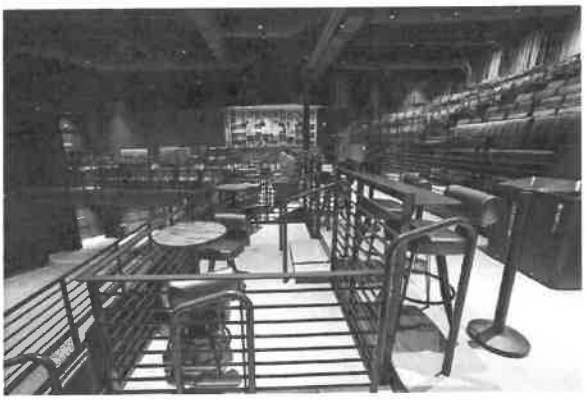


Photo 75: Courtesy of Des Moines Register

New Construction Case Study – The Andrew J. Brady ICON Music Center

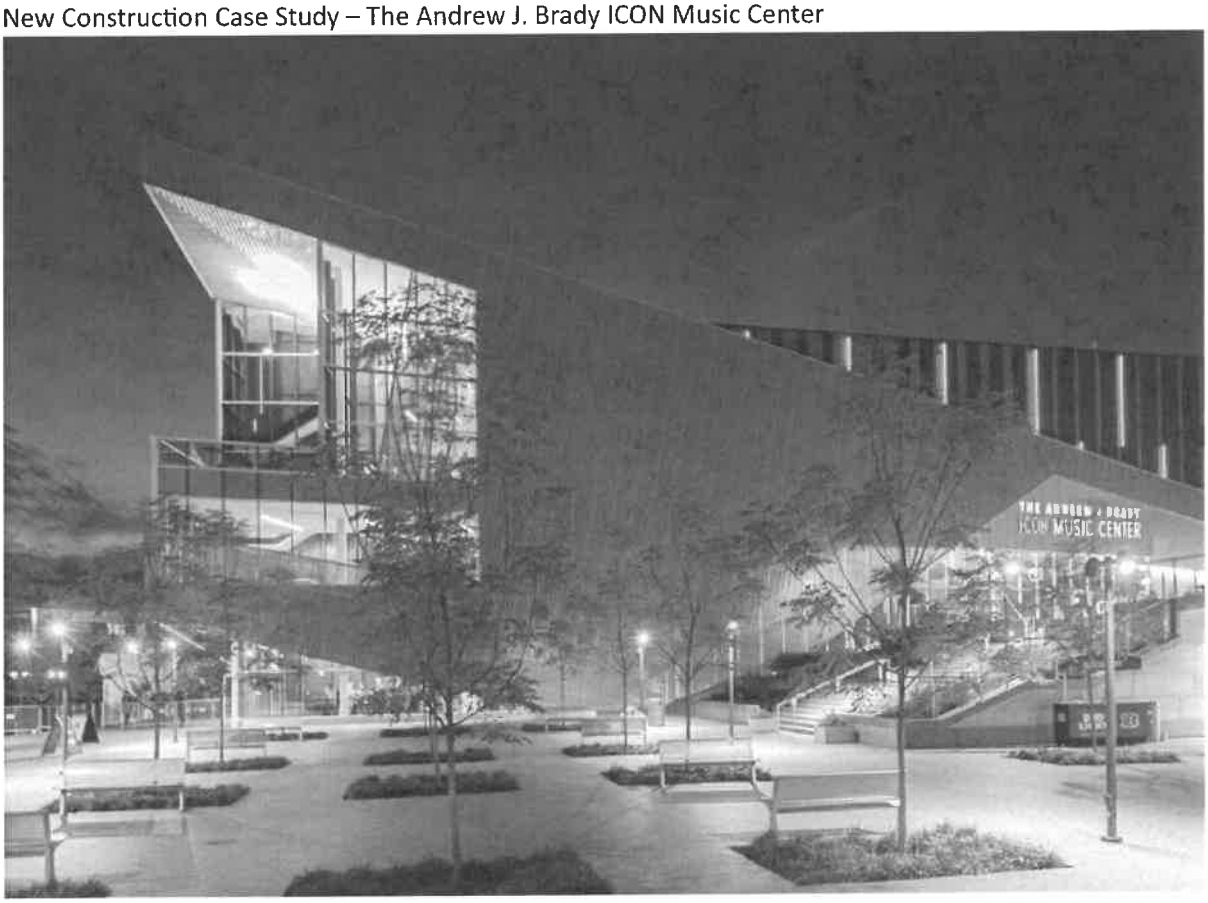


Photo 76: ICON Music Center (Image Courtesy of CMTA Consulting Engineers)

The Andrew J. Brady Music Center, operated by Music & Event Management, Inc. is located along the riverfront in Cincinnati, Ohio. The following is a description of the venue from the CMTA website:

"The venue seats 4,200 people on three levels and includes dressing rooms, VIP spaces, concessions, restrooms, outdoor patios and an enclosed dock to back of house.

The Andrew J. Brady Music Center opened in July 2021. The 62,000 square foot venue is located along the Ohio River in the Banks development in downtown Cincinnati. The engineering team worked closely with the architect, interior designer, theater consultant, acoustical consultant, and computational fluid dynamics (CFD) consultant to create an outstanding performance venue that is nationally recognized. This facility provides a site for over 150 shows annually, seating 4,500 people on 3 levels. The building was constructed on top of a new 60,000 square foot garage." The cost of the venue was publicly identified as $27M, although the parking deck located under the facility may have included the cost for the foundations.

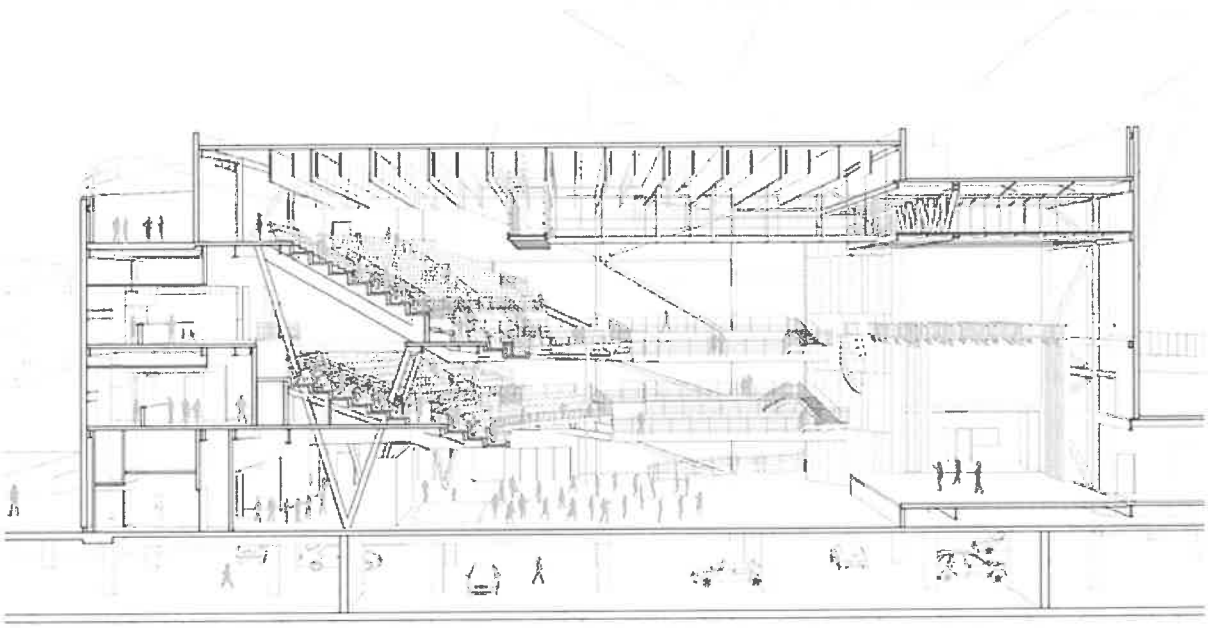


Figure 8: Section of ICON Music Center (Courtesy of Architect Magazine)

Photo 78: Courtesy of Architect Magazine

New Construction Estimate:

NEW CHARLESTON AUDITORIUM

	New Auditorium	Cost
0	Asbestos Removal *(allowance)*	200,000
1	Demolition	350,000
2	New Construction (50,000 SF @ $450/SF)	22,500,000
	Total Construction Cost	**23,050,000**

	Soft Costs		
	Advertising & Legal (estimate)		5,000
	Property Survey		30,000
	Geotechnical Investigation (Design Phase)		40,000
	Special Inspections & Testing (Bldg. Const)		300,000
	Design Fees (@6.5%)		1,498,250
	Commissioning (@1%)		230,500
	Permitting		15,000
		Sub-Total	**2,118,750**

Total Project Cost (Renovation/Addition)	**25,168,750**

ASSESSMENT OF THE
CHARLESTON MUNICIPAL AUDITORIUM

244 VIRGINIA ST. EAST
CHARLESTON, WEST VIRGINIA
03.06.2024

PRELIMINARY

OWNER

Municipal Auditorium
West Virginia

244 VIRGINIA STREET EAST,
CHARLESTON, WEST VIRGINIA
25301

ARCHITECT AND ENGINEER

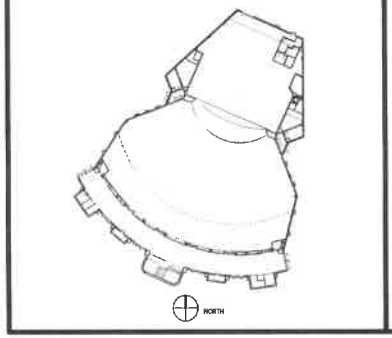
ZMM
ARCHITECTS
ENGINEERS

222 Lee Street, West
Charleston, West Virginia 25302
Phone: 304.342.0159
Fax: 304.345.8144

www.zmm.com

SITE LOCATION MAP

KEY PLAN



DRAWING INDEX

BUILDING INFORMATION

USE AND OCCUPANCY CLASSIFICATION

CONSTRUCTION CLASSIFICATION

BUILDING AREA

MAIN LEVEL	37,883 Sq. Ft.
CONCESSIONS LEVEL:	4,672 Sq. Ft.
BASEMENT @ STAGE	7,543 Sq. Ft.
MEZZANINE	9,134 Sq. Ft.
DRESSING ROOMS	3,375 Sq. Ft.
TOTAL AREA	~62,607 Sq. Ft.

PROFESSIONAL SEALS

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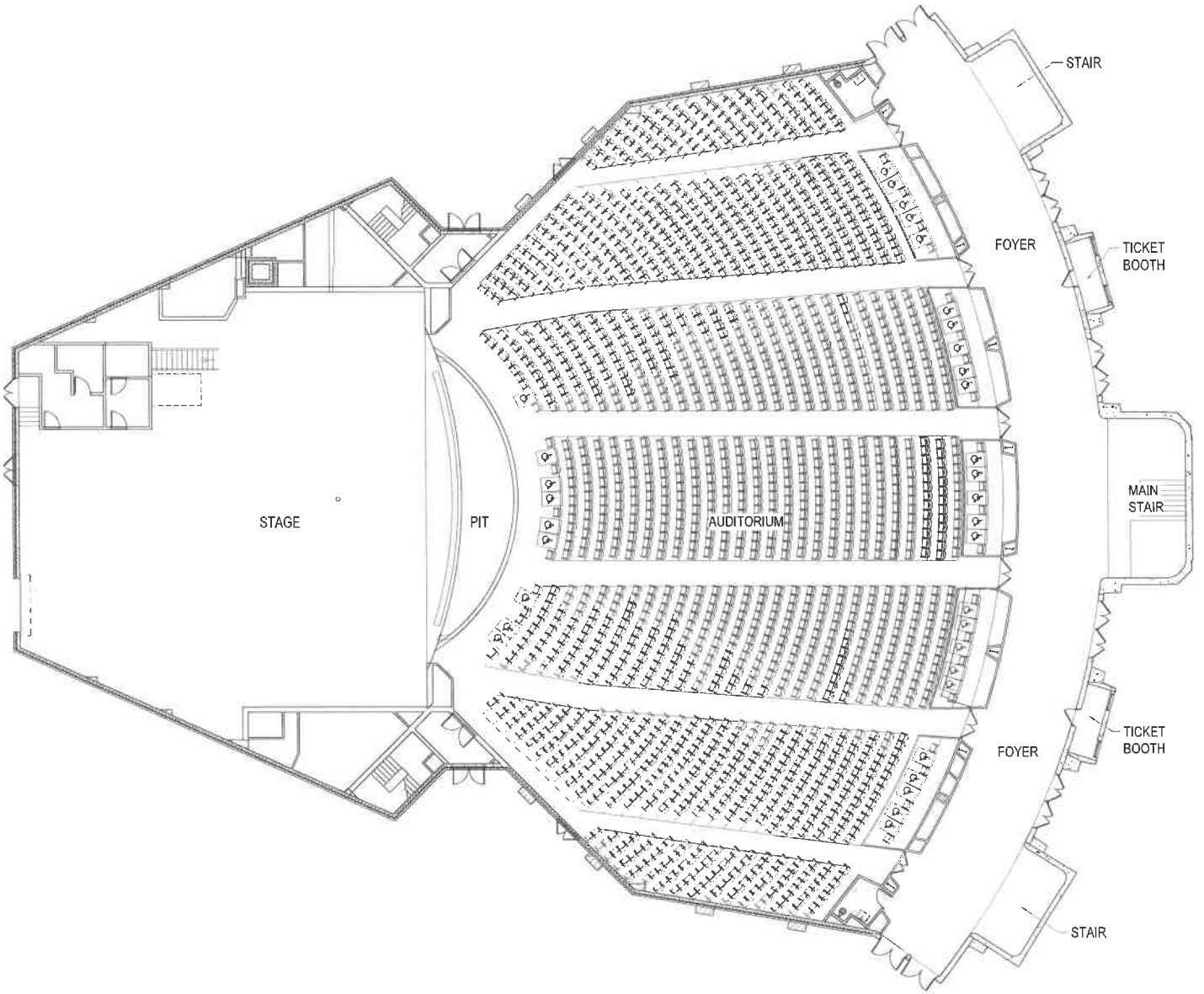

1 MAIN LEVEL - EXISTING
A131

PRELIMINARY
NOT FOR CONSTRUCTION

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222 Lee Street, West
Charleston, West Virginia 25302
Phone: 304.342.0159
Fax: 304.345.5164
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REVISIONS
NO. | DESCRIPTION | DATE

ASSESSMENT OF THE
CHARLESTON MUNICIPAL AUDITORIUM
244 VIRGINIA ST. EAST
CHARLESTON, WEST VIRGINIA

PRELIMINARY

MAIN LEVEL - EXISTING

DRAWN	CHECKED
JSA	ARK
DATE	03.08.2024
COMM. NO.	24002

A131

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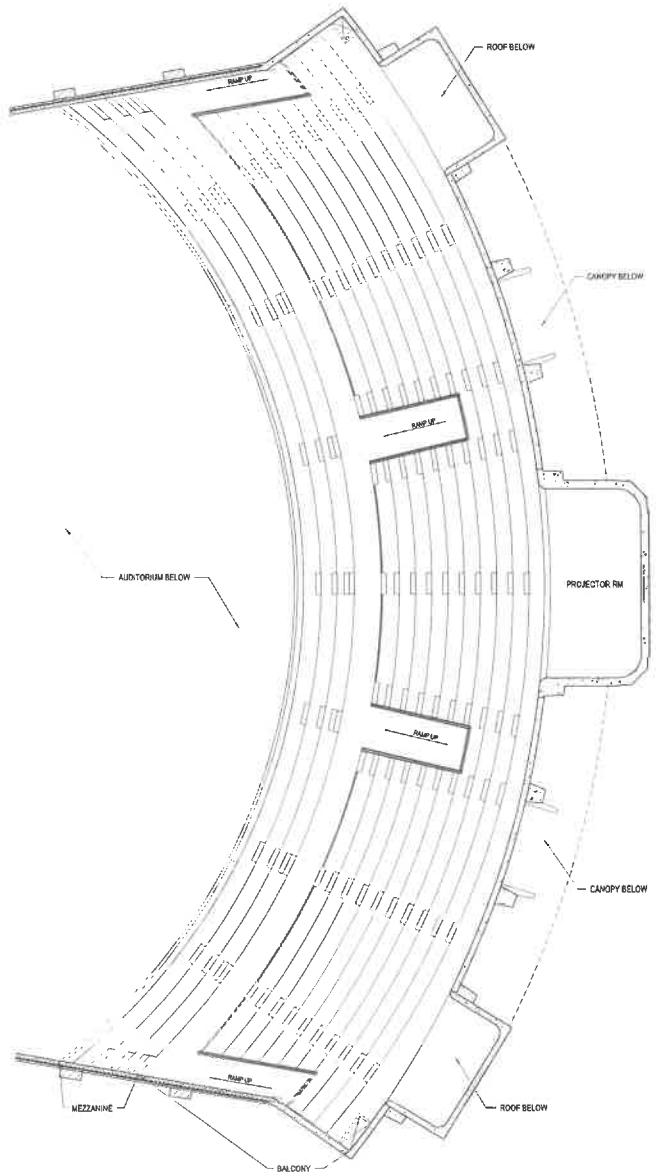
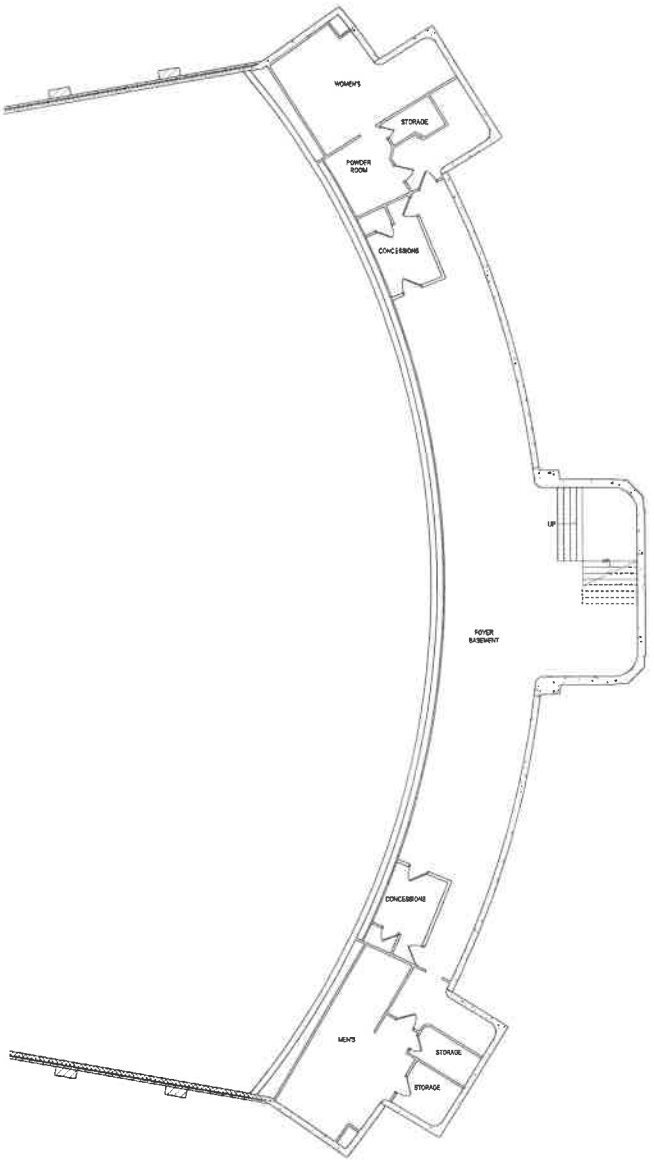


1 MEZZANINE / BALCONY
A321 1/8" = 1'-0"



2 BASEMENT @ ENTRANCE
A321 1/8" = 1'-0"

ZMM ARCHITECTS ENGINEERS
212 Lee Street, West
Charleston, West Virginia 25302
Phone: 304.342.9188
Fax: 304.343.8144
www.zmm.com

NO.	REVISIONS DESCRIPTION	DATE

ASSESSMENT OF THE
CHARLESTON MUNICIPAL AUDITORIUM
244 VIRGINIA ST. EAST
CHARLESTON, WEST VIRGINIA

PRELIMINARY

PRELIMINARY
NOT FOR CONSTRUCTION

BASEMENT AND MEZZANINE PLANS - EXISTING

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JSA	ARK
DATE	03.06.2024
COMM. NO.	24002

A131A

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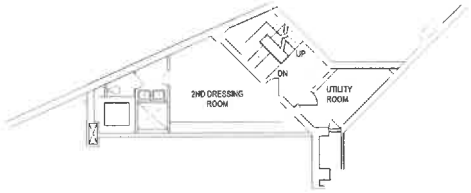
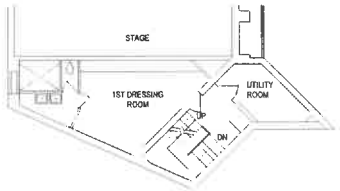
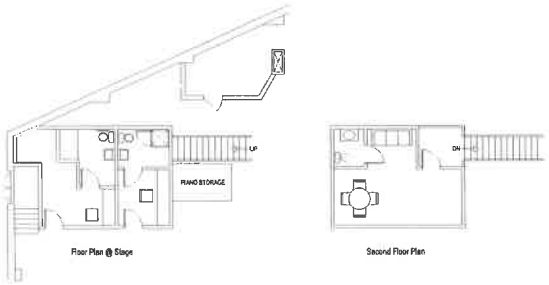


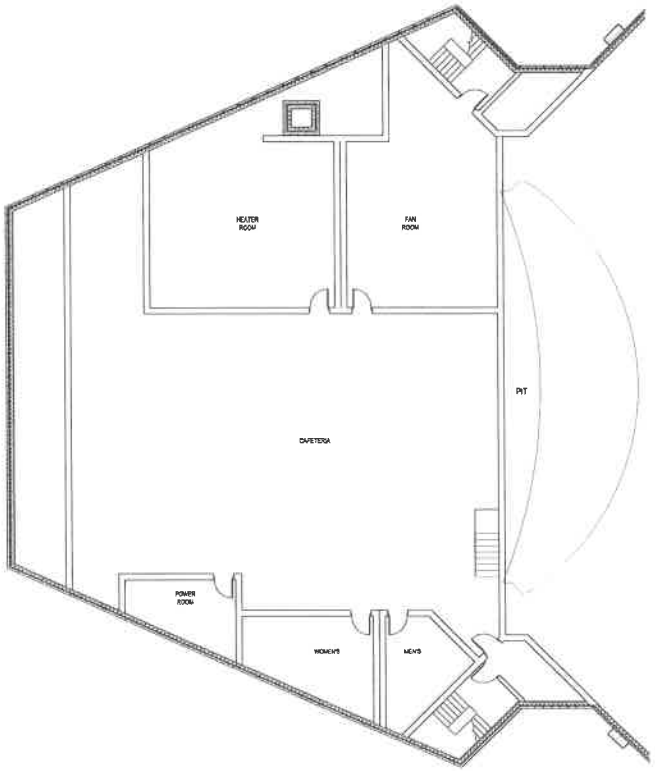
4 2ND DRESSING ROOM TYP.
1/8" = 1'-0"



3 1ST DRESSING ROOM TYP.
1/8" = 1'-0"



2 BACKSTAGE DRESSING ROOMS
1/8" = 1'-0"



1 BASEMENT @ STAGE
A101 1/8" = 1'-0"

PRELIMINARY
NOT FOR CONSTRUCTION

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232 Lee Street, West
Charleston, West Virginia 25302
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Fax: 304.343.8144
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REVISIONS
NO. | DESCRIPTION | DATE

ASSESSMENT OF THE
CHARLESTON MUNICIPAL AUDITORIUM
244 VIRGINIA ST. EAST
CHARLESTON, WEST VIRGINIA

PRELIMINARY

BASEMENT & DRESSING ROOM PLANS - EXISTING

DRAWN	CHECKED
JSA	ARK
DATE: 03.06.2024	
COMM. NO. 24002	

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1 MAIN LEVEL - NEW
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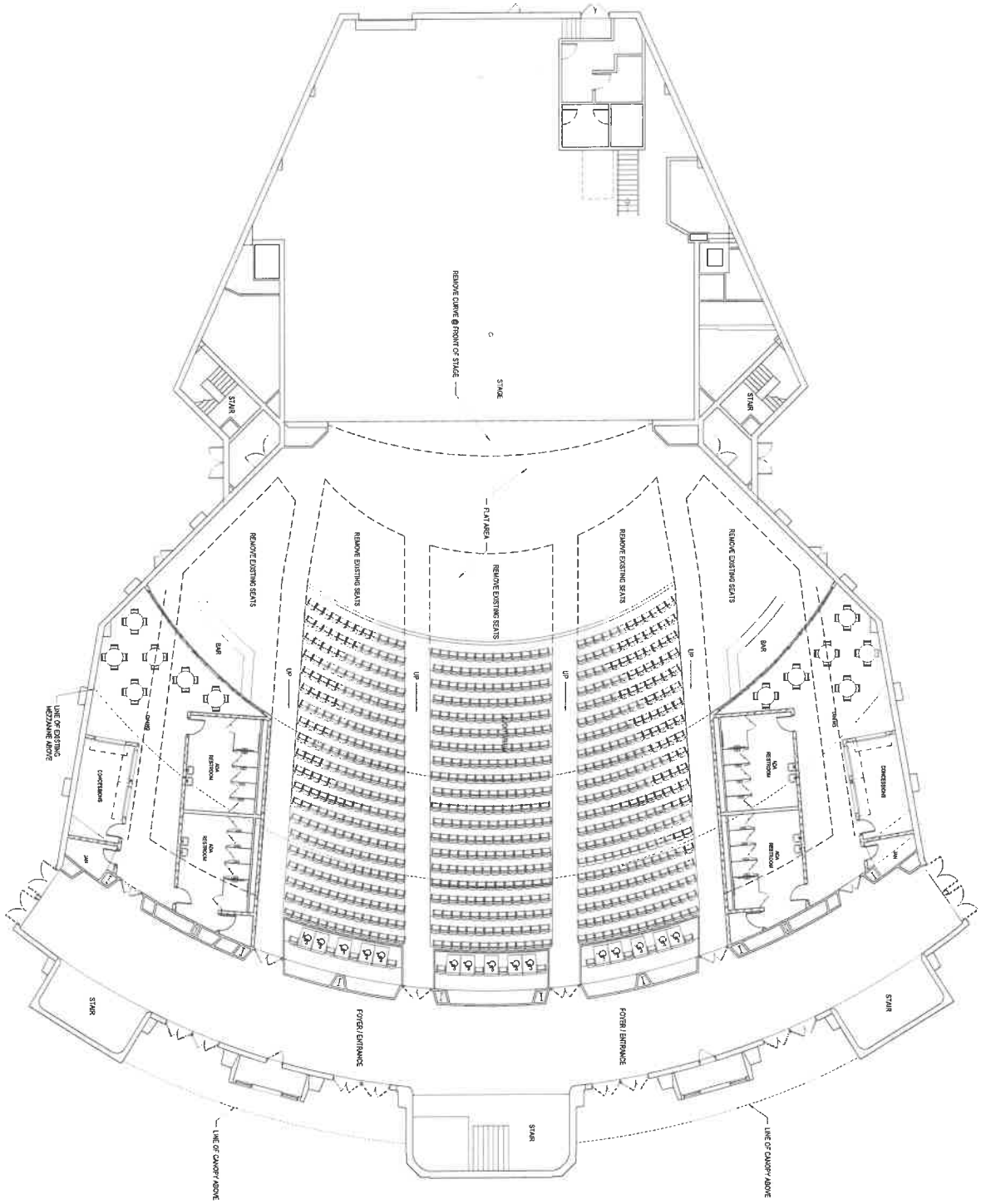

PRELIMINARY
NOT FOR CONSTRUCTION

A132

MAIN LEVEL - NEW

DRAWN: JSA
CHECKED: ARK
DATE: 03.08.2024
COMM. NO.: 24002

ASSESSMENT OF THE
CHARLESTON MUNICIPAL AUDITORIUM
244 VIRGINIA ST. EAST
CHARLESTON, WEST VIRGINIA

PRELIMINARY

REVISIONS		
NO.	DESCRIPTION	DATE

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223 Lee Street, West
Charleston, West Virginia 25302
Phone: 304.343.4199
Fax: 304.343.1944
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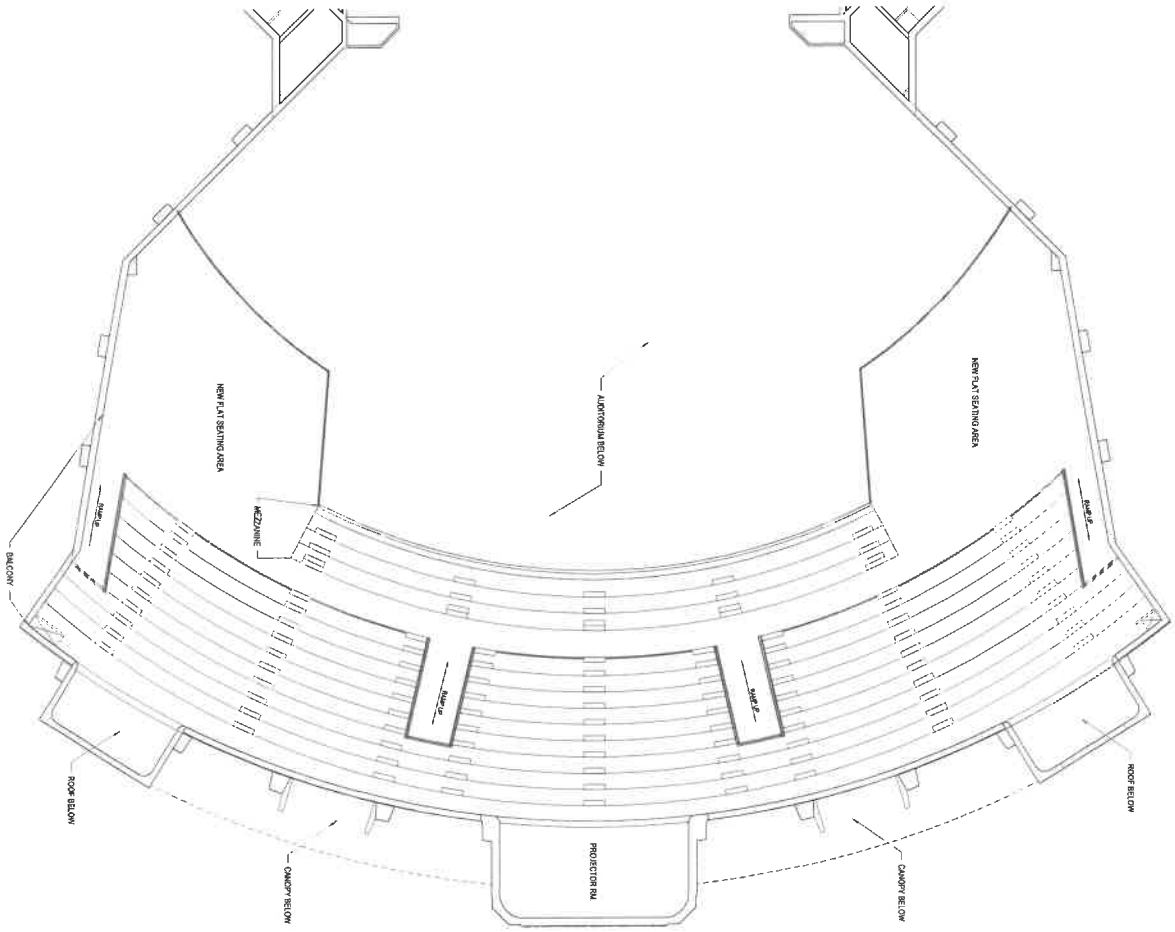
A201 1 MEZZANINE / BALCONY NEW
1/8" = 1'-0"



PRELIMINARY
NOT FOR CONSTRUCTION

A132A	DRAWN: JSA	MEZZANINE PLAN - NEW	ASSESSMENT OF THE **CHARLESTON MUNICIPAL AUDITORIUM** 244 VIRGINIA ST. EAST CHARLESTON, WEST VIRGINIA
	CHECKED: ARK		
	DATE: 03.06.2024		
	COMM NO: 24002		PRELIMINARY

REVISIONS		
NO.	DESCRIPTION	DATE

ZMM ARCHITECTS ENGINEERS
223 Lee Street West
Charleston, West Virginia 25302
304.343.3144
Fax 304.343.3164
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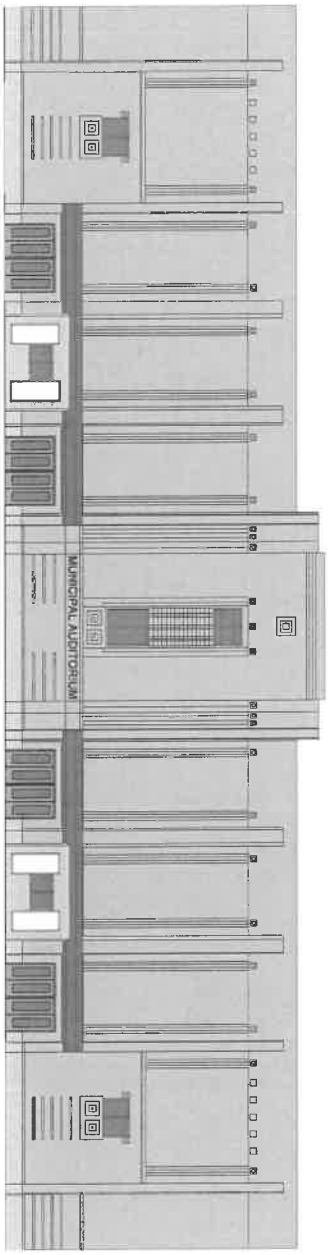


PRELIMINARY
NOT FOR CONSTRUCTION

A311

DRAWN: AB
CHECKED: ARK
DATE: 03.06.2024
COMM. NO. 24002

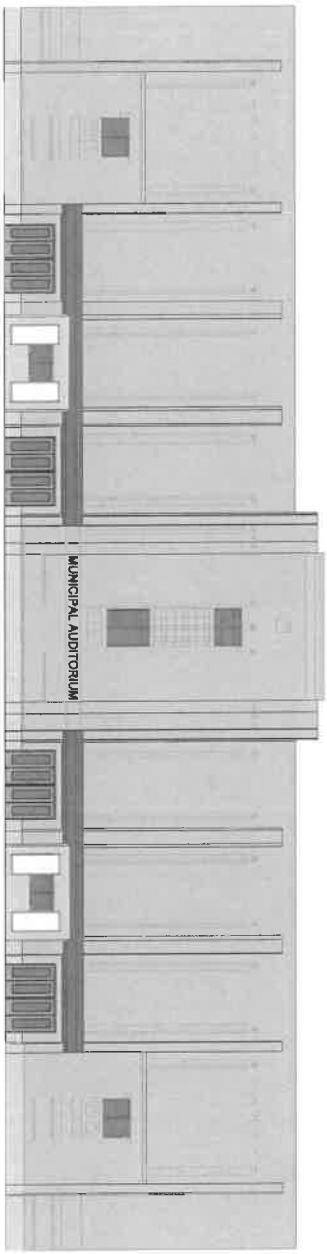
BUILDING ELEVATIONS

ASSESSMENT OF THE
CHARLESTON MUNICIPAL AUDITORIUM
244 VIRGINIA ST. EAST
CHARLESTON, WEST VIRGINIA

PRELIMINARY

REVISIONS		
NO.	DESCRIPTION	DATE

ZMM ARCHITECTS ENGINEERS
331 Lee Street, West
Charleston, West Virginia 25339
Phone: 304.343.8314
Fax: 304.343.3144
www.zmm.com



PRELIMINARY
NOT FOR CONSTRUCTION

A311

BUILDING ELEVATIONS

DRAWN: AB
CHECKED: ARK
DATE: 03.08.2024
COMM. NO: 24002

ASSESSMENT OF THE
CHARLESTON MUNICIPAL AUDITORIUM
244 VIRGINIA ST. EAST
CHARLESTON, WEST VIRGINIA

PRELIMINARY

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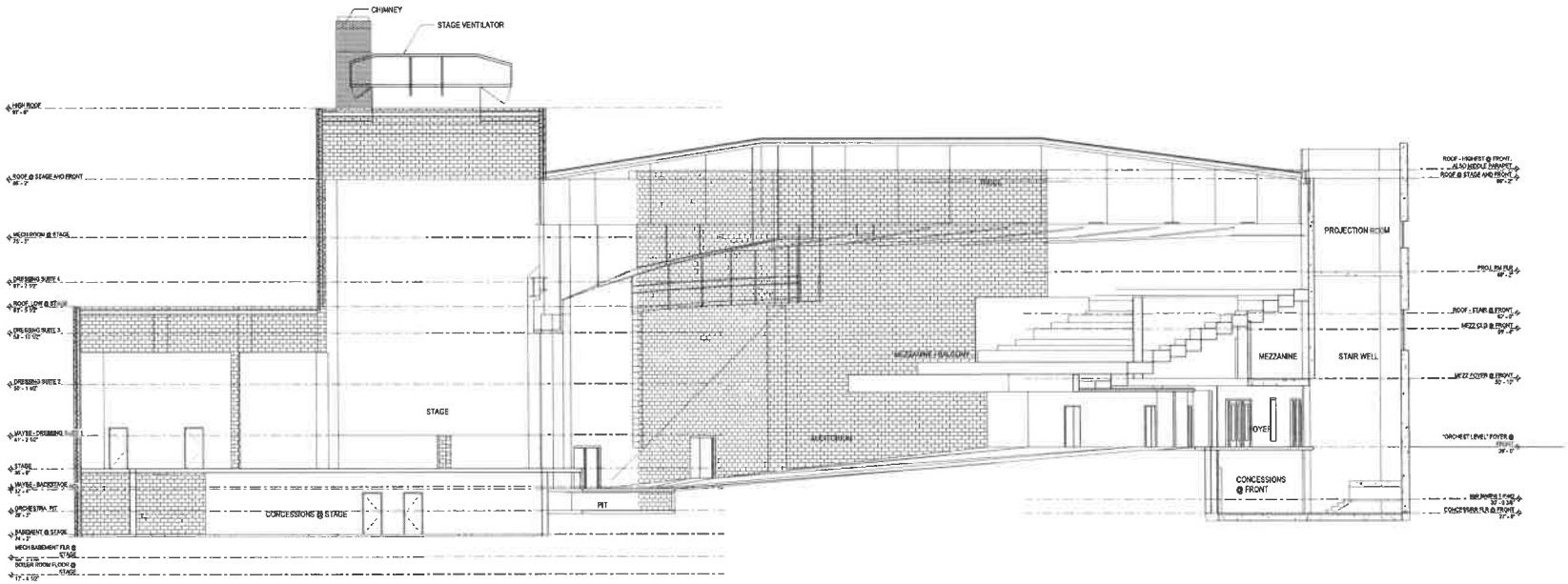
Charleston, West Virginia 25301
Phone: 304.343.8158
Fax: 304.343.5165
www.zmm.com

GENERAL NOTES

1. CONTRACTOR TO COORDINATE ALL MASONRY HEIGHTS AND OPENINGS WITH EXISTING MASONRY COURSING.



1 BUILDING SECTION
1/8" = 1'-0"

PRELIMINARY
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Charleston, West Virginia 25301
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NO.	REVISIONS DESCRIPTION	DATE

ASSESSMENT OF THE
CHARLESTON MUNICIPAL AUDITORIUM
244 VIRGINIA ST. EAST
CHARLESTON, WEST VIRGINIA

PRELIMINARY

BUILDING SECTIONS

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DATE	03.06.2024
COMM. NO.	24002

A321

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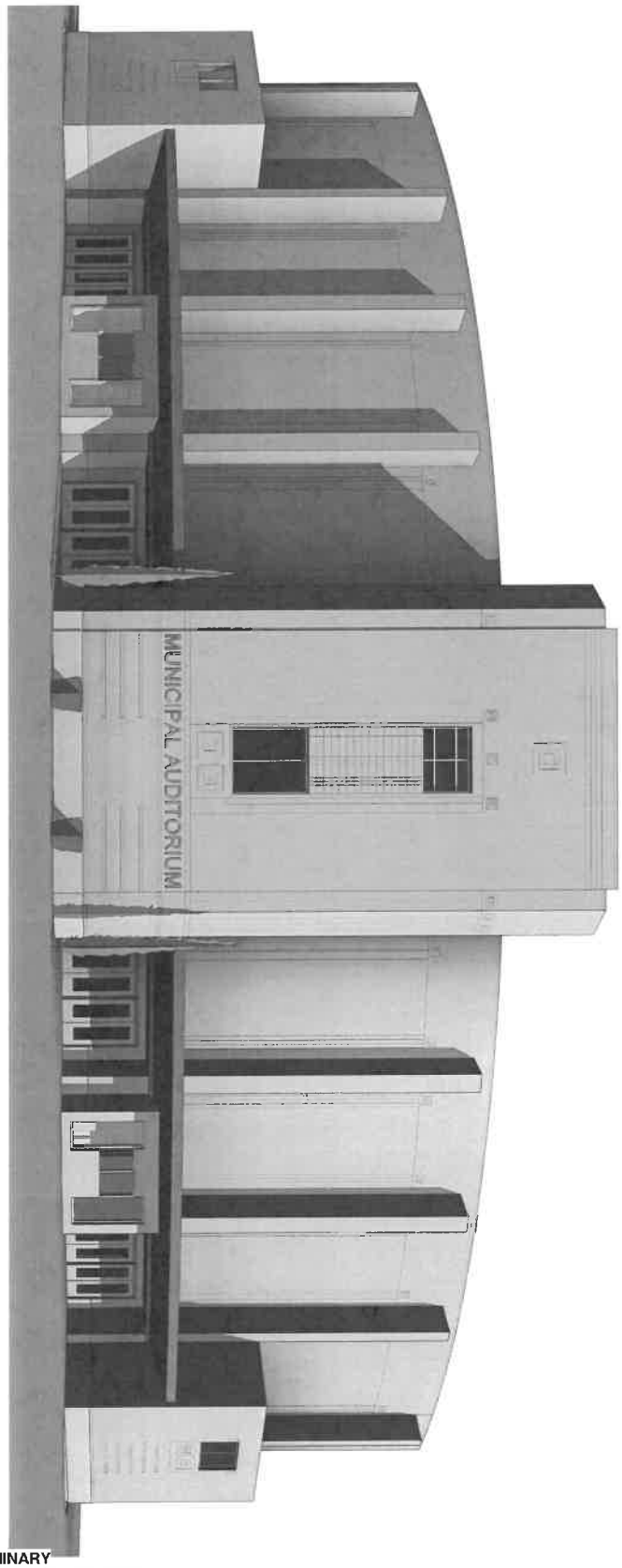
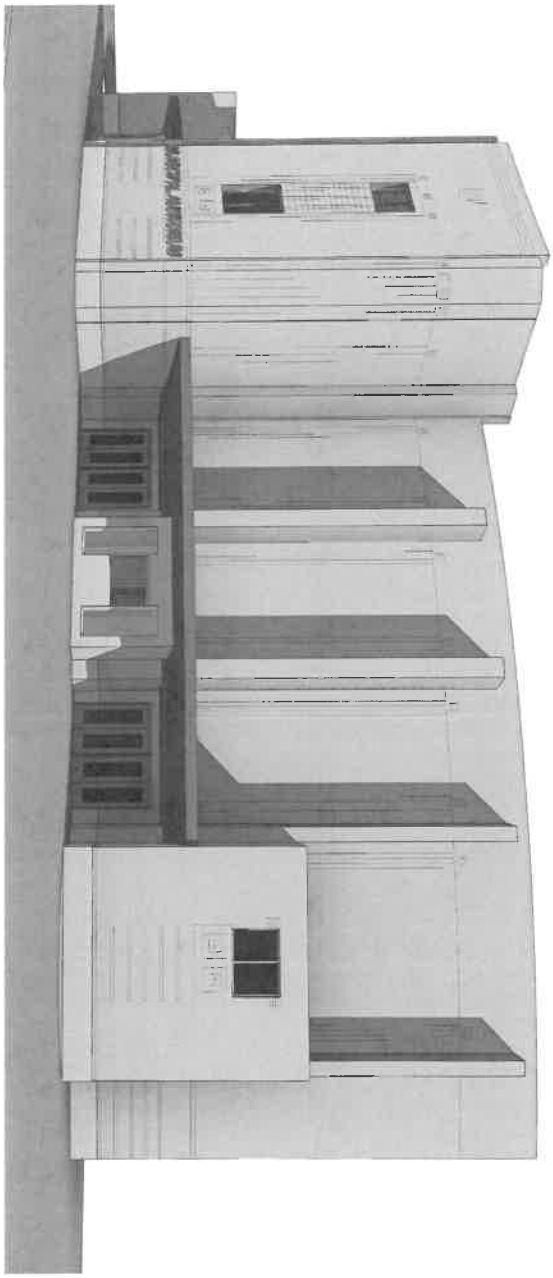


1 3D View 1



2 3D View 2

PRELIMINARY
NOT FOR CONSTRUCTION

A600

DRAWN

CHECKED

DATE 03.06.2024

COMM. NO. 24002

3D - VIEWS

ASSESSMENT OF THE
CHARLESTON MUNICIPAL AUDITORIUM
244 VIRGINIA ST. EAST
CHARLESTON, WEST VIRGINIA

PRELIMINARY

REVISIONS		
NO.	DESCRIPTION	DATE

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225 Lee Street, West
Charleston, West Virginia 25302
Phone: 304.343.5176
Fax: 304.343.8144
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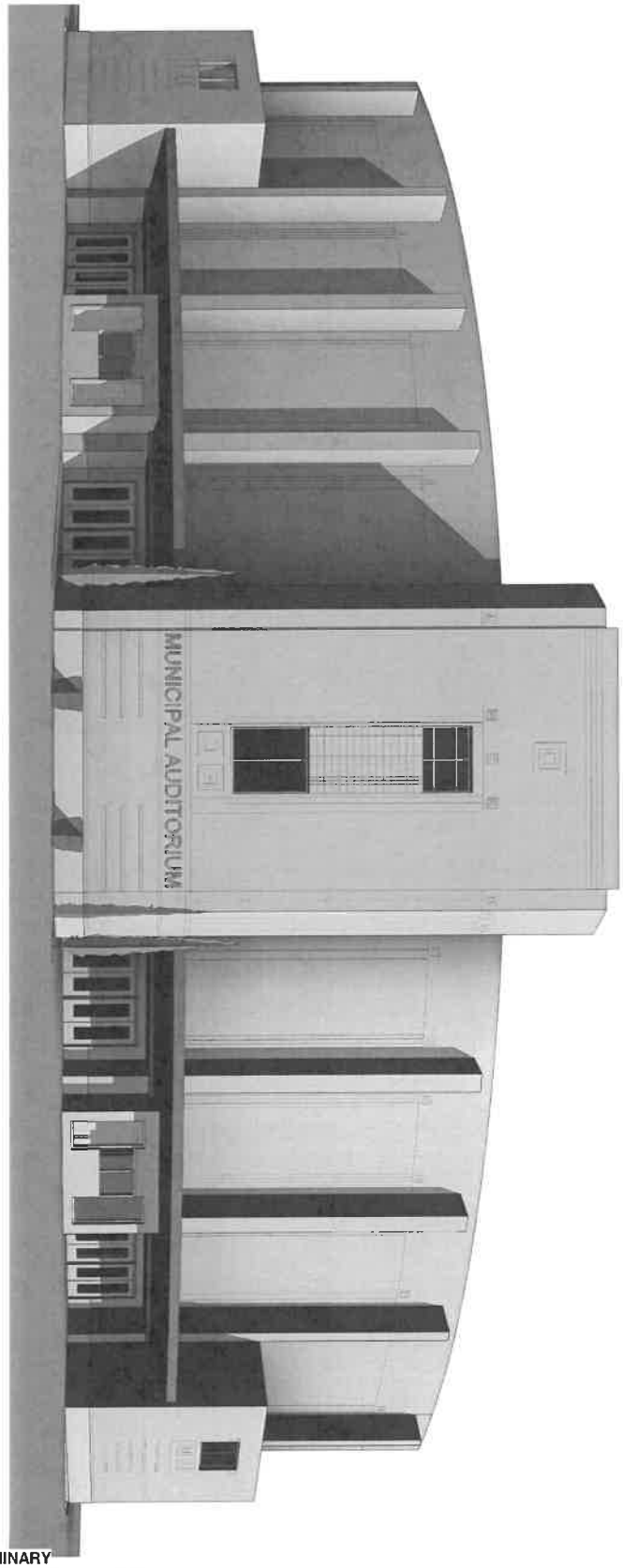
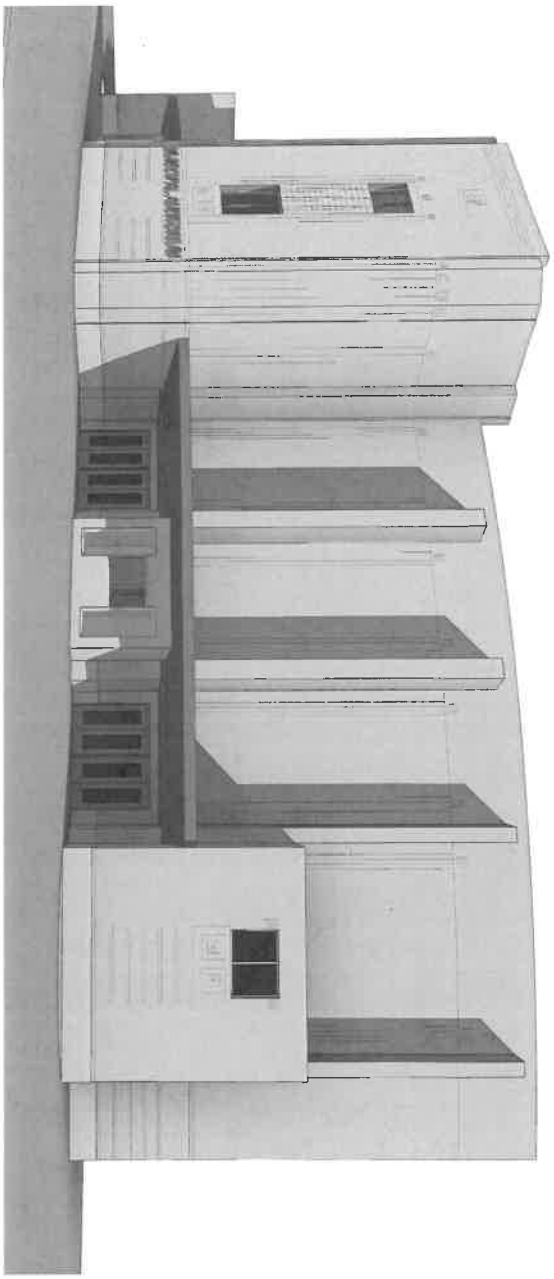


1 3D View 1



2 3D View 2

PRELIMINARY
NOT FOR CONSTRUCTION

A600

DRAWN

CHECKED

DATE 03.05.2024

COMM. NO. 24002

3D - VIEWS

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ASSESSMENT OF THE
CHARLESTON MUNICIPAL AUDITORIUM
244 VIRGINIA ST. EAST
CHARLESTON, WEST VIRGINIA

PRELIMINARY

REVISIONS		
NO.	DESCRIPTION	DATE

ZMM ARCHITECTS ENGINEERS
223 Lee Street, West
Charleston, West Virginia 25301
304.343.3166
Fax: 304.343.3168
www.zmm.com

NPS Form 10-900
(Oct. 1990)

OMB No. 10024-0018

United States Department of the Interior National Park Service
NATIONAL REGISTER OF HISTORIC PLACES REGISTRATION FORM

1. Name of Property

historic name: Charleston Municipal Auditorium
other name/site number:

2. Location

street & number: 224-232 Virginia Street, East not for publication: N/A
city/town: Charleston vicinity: N/A
state: WV county: Kanawha code: 039 zip code: 25301

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this _X_ nomination ____ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property _X_ meets ____ does not meet the National Register Criteria. I recommend that this property be considered significant ___ nationally ___ statewide _X_ locally.

Susan M. Pierce 10/8/99
Signature of Certifying Official Date

State or Federal agency and bureau Date

In my opinion, the property ____ meets ____ does not meet the National Register criteria.
(____ See continuation sheet for additional comments.)

Signature of Certifying Official/Title Date

State or Federal agency and bureau Date

Name of Property: Charleston Municipal Auditorium

County/State: Kanawha/West Virginia

4. National Park Service Certification

I, hereby certify that this property is:	Signature of Keeper	Date of Action
____entered in the National Register ____ See continuation sheet.	_____	_____
____determined eligible for the National Register ____ See continuation sheet.	_____	_____
____determined not eligible for the National Register	_____	_____
____removed from the National Register	_____	_____
____other (explain): _____	_____	_____

5. Classification

Ownership of Property:
(Check as many boxes as apply)
- ____ private
- _X_ public-local
- ____ public-State
- ____ public-Federal

Category of Property
(Check only one box)
- _X_ building(s)
- ____ district
- ____ site
- ____ structure
- ____ object

Number of Resources within Property
(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
1		buildings
		sites
		structures
		objects
1	0	TOTAL

Name of related multiple property listing N/A
(Enter "N/A" if property is not part of a multiple property listing.)

Number of contributing resources previously listed in the National Register 0

Name of Property: Charleston Municipal Auditorium

County/State: Kanawha/West Virginia

6. Function or Use

Historic Functions	Current Functions
RECREATION AND CULTURE	RECREATION AND CULTURE
Auditorium	Auditorium

7. Description

Architectural Classification

MODERN MOVEMENT
Art Deco

Materials

Foundation	Concrete and Steel
Walls	Concrete-front facade
	Brick-back and sides
Roof	Concrete
Other	

Narrative Description
(See continuation on sheets.)

8. Statement of Significance

Applicable National Register Criteria
(Mark "X" in one or more boxes for the criteria qualifying the property for National Register listing.)

_X_ **A** Property is associated with events that have made a significant contribution to the broad patterns of our history.

____ **B** Property is associated with the lives of persons significant in our past.

_X_ **C** Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.

____ **D** Property has yielded, or is likely to yield, information important in prehistory or history.

Name of Property: **County/State:**

Charleston Municipal Auditorium — Kanawha, West Virginia

Criteria Considerations
(Mark "X" in all the boxes that apply.)

Property is:

_____ **A** owned by a religious institution or used for religious purposes.
_____ **B** removed from its original location.
_____ **C** a birthplace or grave.
_____ **D** a cemetery.
_____ **E** a reconstructed building, object, or structure.
_____ **F** a commemorative property.
_____ **G** less than 50 years of age or achieved significance within the past 50 years.

Areas of Significance

Architecture
Entertainment/Recreation
Performing Arts

Period of Significance

1939

Significant Dates

1939

Significant Person

N/A

Cultural Affiliation

N/A

Architect/Builder

Alphonso F. Wysong

Narrative Statement of Significance
(Explain the significance of the property on one or more continuation sheets.)

Name of Property : Charleston Municipal Auditorium

County and State: Kanawha, West Virginia

9. Major Bibliographical References

Bibliography
(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS):
_____ preliminary determination of individual listing (36 CFR 67) has been requested.
_____ previously listed in the National Register
_____ previously determined eligible by the National Register
_____ designated a National Historic Landmark
_____ recorded by Historic American Buildings Survey #_____
_____ recorded by Historic American Engineering Record #_____

Primary location of additional data:
_____ State Historic Preservation Office
_____ Other State agency
_____ Federal agency
_____ Local government
_____ University
__X__ Other

Name of Repository: Kanawha Valley Historical & Preservation Society has a small collection of newspaper articles, photographs, construction drawings and other historical information on the auditorium at its office: 817 People's Building (179 Summers Street), P.O. Box 2283, Charleston, WV, 25301, (304)342-7676.

10. Geographical Data

Acreage of Property: less than one acre

UTM References Charleston West Quad Map

Zone	Easting	Northing
17	444080	4244950

Verbal Boundary Description
(Describe property boundaries on a continuation sheet.)

Boundary Justification
(Explain why the boundaries were selected on a continuation sheet.)

Name of Property:	County/State:
Charleston Municipal Auditorium	Kanawha, West Virginia

11. Form Prepared By

Name/Title:	Dr. Billy Joe Peyton		
Organization:	Paul D. Marshall & Associates, Inc.	Date: July 1999	
Street & Number:	209 Washington Street, West	Telephone: (304)343-5310	
City or Town:	Charleston	State: WV	ZIP: 25302

Property Owner

(Complete this item at the request of SHPO or FPO.)

Name:	City of Charleston Civic Center Board John Robertson, Facility Manager		
Street & Number:	200 Civic Center Drive	Telephone: (304)345-1500	
City or Town:	Charleston	State: WV	Zip: 25326

Description of Property:

The Charleston Municipal Auditorium is a monolithic concrete and steel structure of massive proportions situated in the southwestern section of Charleston, West Virginia's central business district. It is an excellent representation of the Art Deco architectural style in a public building, and one of the finest extant examples in the greater Charleston area. The major decorated facade is curvilinear and oriented towards the intersection of Virginia and Truslow Streets. This great curve is representative of Art Deco innovation which broke with, yet reflected in part, the revivalist tradition in architectural style. Revivalist designs (Neo-Gothic, Neo-Classicism, etc.) had been introduced to counter the eclecticism spawned in the Victorian era.

Professor JoEllen Kerr of the Carleton Varney Department of Interior Decoration at the University of Charleston (West Virginia) notes that Art Deco was a prominent art style of the early twentieth century that reached its peak in the United States in the 1920s-30s. Art Deco, variously called Moderne or Modernistic, was a style of decoration applied to jewelry, clothing, furniture, crafts, and buildings. Based on modern materials, repetitive geometric patterns, low relief surface decoration, and highly stylized and classical motifs, it often contained faceted panels, elongated shapes, bold lines, and geometric patterns of Machine Age imagery.

The Art Deco style incorporated bold materials and designs that impressed the eye and represented speed in motion, embodied fantasy, and responded to the modernization of society. It was simple in design, utilitarian in function, and typically represented as a decorative veneer or skin that lent itself nicely to architecture through modern building materials like concrete and steel. Some well-known national examples of Art Deco buildings include the Chrysler Building, Rockefeller Center, and Radio City Music Hall in New York City, and a number of hotels and other commercial properties in Miami Beach, Florida. Art Deco became a popular revival style in the 1960s and again in the 1980s. With one of the nation's largest Art Deco historic districts, Miami Beach celebrates its outstanding heritage with an Art Deco weekend each January.

Description of Property:

True to its characteristic Art Deco design, the Charleston Municipal Auditorium consists of modern steel joist construction and a steel frame resting on concrete piles. It is surrounded by a watertight subterranean retaining wall, concrete floors and roof, metal lath and plaster ceilings, concrete and cinder block brick-faced curtain walls, and a stylistic concrete facade. Project architect Alphonso F. Wysong of Charleston described the building style as "Conservative Modern," an appropriate term since its classical architectural elements are treated in a modern, shorthand manner that substitutes simple piers for elaborate columns and incorporates simple geometric shapes.

The curved facade is interrupted by three stair tower blocks. A center block dominates the front and incorporates the grand central stair. It rises to nearly the full height of the auditorium and is the building's most prominent physical feature. Two smaller blocks at the southeast and southwest corners are about half the height and bulk of the central unit, giving enhanced importance to the verticality of the main block and the symmetry of the whole. Representative architectural elements prominently displayed on the front facade include many classic angular and rounded geometric design elements of the Art Deco form. At ground level, the facade is pierced by six entrances--four on the front (south) elevation and one at each of the side (east and west) elevations, and two box offices with exterior ticket windows.

Enveloping the front and wrapping around the east and west sides, the molded concrete facade encompasses approximately one-third of the exterior space. In keeping with the building's symmetry and consonance, many of the exterior elements echo the verticality of its Art Deco design. These include a series of eight (four on each side of the center tower) vertical, angular buttressed steel members covered in concrete and extending from ground level to just below the cornice line. They replace columns found in more classic designs and tie into concrete piles to provide structural stability for the massive face wall.

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The buttresses are a bold and significant design element second only in prominence to the center stair tower. An additional noteworthy vertical element appears on the facade as a type of fluting that borders either side of the center projection and is reminiscent of fluted columns.

Another distinctive feature of the front facade is the name "Municipal Auditorium" which is cast in concrete and prominently emblazoned across the front of the building just above ground level in large letters with an Avant Garde typestyle painted a deep red. Below the lettering is a series of horizontal recessed striations that are consistent with those beneath the front cornice line. These smaller edge projections feature the same horizontal recesses found along the border around the windows in the side stair towers. Additionally, two additional sets of geometric designs above them consist of a series of recessed squares with smaller squares inside. This pattern is repeated on both sides of the buttresses and also crowns a series of vertical fluting details. A prominent horizontal string of recessed squares runs along the entire width of the facade below the cornice and at the angled top of the buttresses. These horizontal recessed squares seem to recall the horizontal rustication in stone masonry of an earlier period. A larger single square-within-a-square crowns the center of the main stair block, which also incorporates a stepped reveal, decorative bead, and flutes at its corners. A row of hollow reversed fluting (or beads) appears in a recurring pattern along the entire front facade below the cornice. Secondary stair blocks have truncated corners with a beveled cornice.

The cantilevered roofs with square patterns overhanging the front entrances and ticket windows attach to the center projection and smaller side projections to shelter event-goers from the elements. Square recessed panels are used to decorate the overhanging ceilings.

Description of Property:

Arching outward to form a semicircular motif that echoes the arched, open fan-shaped design of the building, they create a horizontal delineation between the small-scale pedestrian level entrances and the massive and dominant facade that towers three stories above. Four original stainless steel Art Deco light fixtures remain in place over the front entrances.

Both box offices are offset from the main facade and covered with charcoal gray granite panels with large (6' high) waffle-pattern plate glass surrounds on either side. These glass panels displayed playbills, posters, and other information about events held at the facility. A water table encircling the base of the facade accentuates the primary building entrances. Public access is gained through any one of four double doorways aligned in a symmetrical pattern across the front (south) elevation or by two individual double doorways located on the east and west sides of the building, respectively. Rustication is found at the two end entrances. Each of the six primary entrances originally had two solid panel doors with a single octagonal porthole-style window in each, but these were replaced in the 1960s by the current glass and aluminum doors with push bar openers.

Originally, the distinctive molded concrete facade was a monochromatic gray that lacked any contrasting color except for the letters spelling out the building's name, but in recent years the main surface has been painted a light cream shade with some of the geometric elements highlighted in red. Aside from this bolder paint scheme that accentuates the most prominent architectural features, the most noticeable alteration to the facade since 1939 has been the replacement of the original entrance doors. Despite a few areas where the paint is peeling and routine maintenance is needed, the exterior surface shows little outward signs of deterioration and is relatively sound.

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Contrasting with the sleek, ornate, and finished Art Deco styling of the main facade, the three remaining sides of the building are covered with yellow facebrick laid in a Flemish bond (one header at each seven courses). The form of the massed walls on the east and west sides follow the design of the interior auditorium floor plan and epitomize the symmetrical nature of the building. There are stone-capped structural buttresses on the facades of the main auditorium high walls, and the stage fly area is a major high block. On each side of the fly block is a stepped facade that originally featured symmetrical arrangements of window and door openings which have subsequently been filled with brick. On Truslow Street, the auditorium facade is decorated with a pattern of recessed and projected square panels above a recessed and projected water table. Located high on the rear elevation of the fly block is a large cast concrete panel bearing the name "Municipal Auditorium" in an Avant Garde typestyle painted in red.

On the east and west sides of the brick portion of the building are four sets of steel fire doors providing outside egress from the auditorium floor. Two doors open below ground level on each side and incorporate a ramp and stairs with pipe rail to reach the surrounding parking lots. These are typically not used as public entrances, but are exit routes most commonly used after performances. Two additional door openings at the rear of the building permit direct access to the backstage area. Specifically, the easternmost opening has a single steel door with stairs and a landing for pedestrian use, while the westernmost opening accesses a loading dock via a roller-mounted, vertical-opening steel door.

Upon entering the Municipal Auditorium at any of the public front or side entrances, the first interior space encountered is the main foyer or lobby area. In keeping with the curvilinear design of the building's exterior, the 16' wide foyer follows an arcing pattern its

Description of Property:

entire 46' length. Interior lobby walls are painted plaster over lath and trimmed at the base with 20" black baseboard molding. Two black metal air vents with a star pattern design are located on the north interior partition wall separating the lobby and main auditorium.

Although some modern improvements have been made in the main foyer, the space retains most of its original Art Deco character. Along the front (south) interior wall are three sets of stairs that extend into the corresponding stair towers to the second floor mezzanine and continue down to the lower level. Each stairway has handsome stainless steel railings its entire length and aluminum Art Deco wall sconces on each landing (four per stairway, a total of twelve in all) to light the area between floors. A large metal-framed casement window pierces the front facade in the main center landing between the main foyer and mezzanine.

The main foyer area is covered with a highly decorative and polished light gray-brown Terrazzo floor that extends its entire length from east to west. It is inlaid with a series of 21 square geometric inserts that are framed in a darker charcoal gray Terrazzo and set off from the rest of the floor with stainless steel strips outlining a black border. On the floor in front of each of the six passages to the main hall are stylistic Art Deco aisle numbers highlighted with white cement and white marble enclosed in a circle design (starting on the east end, the aisles are numbered one through six). Entrances are covered with an identical set of double wooden doors, each of which has a distinctive round porthole window centered near its top. These six sets of doors, which are original to the 1939 construction period, are covered in a green-blue laminated plastic and reflect the style of original exterior entrance doors removed in the 1960s.

Description of Property:

Flanking the center stairs along the front wall of the foyer are two other double wooden doors without porthole windows. These allow interior access to the box offices along the front of the building. An interior ticket counter installed in the easternmost box office in the 1960s allows patrons to purchase tickets from the main foyer. The interior ticket office doors are covered in the same blue-green laminated plastic as the ones leading to the auditorium. In addition, they retain decorative beehive-shaped Art Deco style metal hinges and are thought to be original. The curving lobby ceiling is covered in a white textured acoustical spray (possibly asbestos) and is punctuated by eleven modern square overhead lights, each of which is mounted in the middle of two concentric squares. Located in the center of the foyer is a single overhead ceiling light of a chrome circular dish design with round globe. Also on the ceiling are four chrome bowl-shaped air vents with wire strap connectors between each one. Extant circular light and air vents appear to be original.

According to auditorium maintenance staff, the original partition wall separating the foyer and main hall reputedly incorporated rows of inlaid glass blocks for nearly its entire length. No physical investigations have been undertaken to verify this assertion or determine if any glass blocks remain in place behind the acoustical tile which was installed later. Several years ago the city installed two handicapped accessible toilet rooms just off the east and west ends of the foyer, respectively.

Description of Property:

Hanging in the main foyer of the auditorium is a large (24" wide x 30" high) commemorative brass plaque honoring many of the key officials who participated in the Municipal Auditorium project. Mounted in the center of the inside wall, the plaque reads as follows:

MUNICIPAL AUDITORIUM
FEDERAL
EMERGENCY ADMINISTRATION
OF PUBLIC WORKS
PROJECT NUMBER W.VA. 1072-DS

1 1 9 3 8 CITY OF CHARLESTON D. BOONE DAWSON - MAYOR 1 9 3 9

CITY PLANNING COMMISSION

CARL L. DAVIS
ALEXANDER P. GATES
HARRY L. MATHEWS
R. S. SPILMAN, JR.
DR. H. H. SMALLRIDGE
GEORGE E. SUTHERLAND, CHAIRMAN

CITIZEN'S ADVISORY COMMITTEE

HARRY R. HOWELL
JOHN C. MORRISON, JR.
HARRY SILVERSTEIN, CHAIRMAN

A. F. WYSONG, ARCHITECT
C. P. FORTNEY, CONSULTING ENGINEER

BUILT WITH FUNDS MADE AVAILABLE THROUGH A BOND ISSUE BY THE CITY OF CHARLESTON AND A GRANT FROM THE FEDERAL GOVERNMENT

Description of Property:

The main floor of the Municipal Auditorium originally held 2,411 persons and the balcony accommodated 1,158, bringing total seating capacity to 3,569 (this number has been reduced to 3,450 due to the removal of seats for handicapped access at the rear of the main hall). In the rare occasions where additional seating is required, 1,500 more temporary seats can be placed on the stage and still leave room for speakers to appear. Manufactured by the American Seating Company, the permanently-installed metal folding seats feature decorative end details and cushions and backs upholstered in red cloth. All permanent seats received an overhaul during the major renovations undertaken in the mid-1960s.

Seating on the main floor is divided into seven sections separated by eight aisles running the length of the floor from the entrance doors at the rear to the base of the stage at the front of the hall. Located directly below the front of the stage and footlights is a shallow (approximately 2' deep) orchestra pit which remains concealed under a hard cover that supports foot traffic when not in use. Access to the orchestra pit is obtained through a door in the basement located directly beneath the stage area.

The auditorium ceiling employs the familiar semicircular configuration that is a prominent detail throughout the building. It contains a succession of seven cantilevered sections which are lit from the recesses between each section. This type of recessed lighting casts a low reflective luminescence on the auditorium and bathes the space in a soft, warm glow. Also on the ceiling are seven large disk-shaped air intakes, while mounted in the main floor beneath one seat per row in each aisle from the balcony to the fourth row are 10" mushroom ventilators that exhaust into concrete ducts beneath the floor to circulate air throughout the hall.

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A massive proscenium arch frames the elevated stage in the main hall. Measuring 64' across by 25' high and "comparable to any in the nation," it provides an unobstructed view of the performing area from virtually all seats on the main floor and balcony. Plaster walls in the main auditorium are painted to match the buff/tan color scheme in the foyer, while the proscenium arch sports a decorative linear border in an alternating red and white paint pattern. The spacious 8,400-square-foot stage area is the center point of the auditorium proper. As originally designed, a fireproof asbestos stage curtain could be lowered with the touch of a button and the stage area isolated from the main auditorium for meetings, conferences, and other smaller gatherings. In these cases, the stage could accommodate up to 1,000 persons and be heated separately from the rest of the cavernous building. Exhibit space could be made available on the ground floor and lower level foyer, as well.

The main stage area measures 52' high to the grid, with 29 lines of drops originally providing ample apparatus for scene shifting. Behind the heavy red curtains that frame the performing area is a utilitarian space that displays none of the interesting design details that adorn the public areas. Walls are concrete block painted white, and the floor is tongue and groove pine boards. Mechanical controls for the stage, curtains, and drop lines are located along the west side wall (stage right) next to the main electrical breaker panel for the stage and house lights. Two prefabricated dressing rooms, installed in the 1960s, are located behind the stage along the east wall. Also in this area is a large acoustical shell, grand piano, and portable orchestra seating that the West Virginia Symphony uses during performance.

Access to the second level of public space is gained by the three interior stairways located off the main foyer. This area contains a narrow curving outer mezzanine and balcony

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with a concrete floor. A combination light and projection room is located behind the back wall of the balcony and is used by technical crews during performances. In this room, which is located within the top portion of the central stair tower, is a windowless opening that affords a sweeping view of the stage. Its back wall fronts on Virginia Street and is pierced by a two-over-three light casement window centered on the main stair tower and visible from the front facade.

From the second floor mezzanine, the balcony is reached by passing under four open stadium-style concrete portals. Arching in a semicircular pattern around the main hall, the balcony extends the entire width of the auditorium. It features a curving concrete balustrade with the familiar square-in-square geometric motif cast in its front border. The balustrade is covered with acoustical spray and painted a deep red to match other interior features. Two levels of upholstered balcony seats are identical to those on the main floor. A walkway separates the two balcony seating levels, with decorative copper handrails adorning the upper seating area and plain steel rails along the lower seating area. The back wall of the balcony is lined with acoustical tiles installed in the 1960s or later.

Public access to the lower level is through one of the three interior stairways located off the Virginia Street (front) entrance to the main foyer. On this subterranean level also are the primary public toilet facilities for non-handicapped individuals (men on the west end and women on the east). Both lower level restrooms were remodeled and updated for handicapped accessibility (sinks and lavatories, toilets, urinals, etc.) in the 1990s. Since the building has no elevator, physically impaired patrons use the toilet facilities in the main foyer. Between the restrooms located at either end of the lower level are two modern concession areas with service counters for use by auditorium patrons. Originally,

Description of Property:

sliding partitions could be used to divide the lower level into three smaller rooms known as the men's committee room, central exhibit room, and women's committee room. These spaces could be individually used for small meetings or as lounge rooms, and by sliding back the accordion-style partitions they offered a larger area for art exhibitions (picture moldings were provided), sales meetings, displays, etc. Except for the Art Deco stair railings that terminate on the lower level, no historic fabric or original detailing remains in this area.

An expansive basement with unadorned concrete and block walls is located beneath the stage and backstage areas. It is reached by descending one of two sets of metal stairs located on either side of the main stage. This space is not open to the public, but is used primarily as a staging and preparation area by performers, stagehands, and technical crews who work the various events held in the auditorium. Directly beneath the stage in the basement is a large central room with steel I-beam column supports, concrete block walls, and open ribbed concrete ceiling. Immediately adjacent to the west are toilet facilities for men and women. Other basement spaces include the furnace room housing six vertical tube heaters, gas burners, and main breaker, the boiler room containing the main 6' floor-mounted blower fan, and the fire control room that houses a modern alarm system. Nearby is the recently installed sump pump apparatus that pumps raw sewage from the auditorium up to the level of city sewer lines.

Two sets of stairs located on either side (east and west) of the backstage area provide direct access to the basement and upper floors. These spaces, which are utilized by performers and others involved in staging performances at the facility, are not accessible to the public. On the second and third levels are a series of ten backstage dressing rooms and several storage closets. Dressing rooms on the west side are slightly larger than those on the east. From the top (fourth floor) stair level, a door opens to an extensive array of ductwork that circulates heating, ventilation, and air conditioning throughout the

Description of Property:

building. Also from this vantage point, maintenance staff access the attic crawl space leading out over the ceiling of the auditorium in order to replace burned out bulbs and otherwise service the recessed lighting and other systems located directly above the main seating area.

One of the grandest and most monumental examples of the Art Deco architectural style to grace the skyline of Charleston, West Virginia, for six decades the Municipal Auditorium has been the venue for musical and theatrical shows, concerts, and other performances by local, state, national, and international artists. The monolithic building has undergone relatively few alterations or changes in that time, and continues to operate in its original function as a public performing hall. Overall, it remains in a good state of preservation.

Statement of Significance:

The Municipal Auditorium is significant under Criteria A for its important contribution to entertainment/recreation and the performing arts in Charleston, West Virginia, and under Criteria C because of its architecture which is of the Art Deco building style. The period of significance has been determined to be 1939, which corresponds to its date of completion and opening as the city's premier playhouse.

Initial discussions on the viability of building a civic auditorium in downtown Charleston began with a public debate in the early 1930s that rapidly became a source of local controversy. Supporters of the proposed hall felt that the area needed such a facility to attract quality performers and enhance the cultural life of the expanding capital city. Conversely, opponents regarded it as an unnecessary and frivolous waste of public funds. Despite outspoken opposition, the city forged ahead and in 1936 applied for a $412,000 grant-in-aid through the Public Works Administration (PWA), a New Deal agency established by President Franklin Delano Roosevelt in 1933.

Establishment of the Public Works Administration began with Roosevelt's inauguration in March of 1933 at a time when demand was great for a strong public works agency to lead the nation out of the Great Depression. Secretary of Labor Frances Perkins and Secretary of the Interior Harold Ickes became the primary advocates of a nationwide public works program intended to help alleviate unemployment, prime the pump for

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economic revitalization, and provide the instrument for building necessary and useful public works that might not otherwise find the necessary funding sources. The proposal to establish the PWA passed through Congress as Title II of the National Industrial Recovery Act of 1933 with a budget of $3.3 billion. During its existence in the 1930s, the Public Works Administration distributed nearly $6 billion for the construction of roads, tunnels, bridges, dams, hydroelectric power projects, public buildings, municipal water and sewage systems, and railroad equipment and facilities nationwide. With the primary purpose of creating jobs and stimulating economic recovery, it became a major source of construction money during the Great Depression--in 1933 alone it accounted for an incredible thirty percent of all construction nationwide.

Because PWA projects were generally large, complex, and relatively slow to develop, the agency disappointed those who hoped it would provide a quick and easy remedy for the nation's high unemployment rate. Ultimately, the PWA spent only $2.8 billion of its initial $3.3 billion appropriation--with much of that sum being used to fund construction projects undertaken by other agencies. Growing disillusionment with the PWA finally led Congress to shift the primary relief burden to the Works Progress Administration by 1935. As a result, President Roosevelt took $400 million from the PWA and gave it to the Civil Works Administration because he felt the newly-created agency could achieve the desired results more expeditiously. Consequently, PWA funds totaled only $313 million through the Emergency Relief Appropriation Act, and it was not until 1938 that Congress allocated another $1.6 billion for the agency to spend on its own projects. Passage of the Reorganization Act of 1939 precipitated the transfer of PWA's 2,000 employees to the Federal Works Agency.

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Nationwide, the PWA contributed funding to more than 34,000 projects during the depression era. It averaged nearly 140,000 workers each year that it existed, indirectly created more than 600,000 other jobs, and allocated approximately $1.8 billion to fund numerous federal agencies. Despite the agency's failure to become the juggernaut for an anticipated economic recovery, the PWA did accomplish three significant objectives during its short existence: it pioneered the pattern of direct federal appropriations to municipal governments, initiated the federal housing program, and many of its projects--including Grand Coulee Dam, Queens Midtown Tunnel, All-American Canal, and Charleston's Municipal Auditorium--were extremely high caliber constructions that remain functional at the close of the twentieth century.

In 1936, the Public Works Administration turned down Charleston's initial request for financial assistance due to insufficient federal funds. Not to be deterred, the city reapplied the following year. After considerable deliberations, voters helped to decide the outcome of the project by approving a $250,000 municipal bond issue for auditorium construction. Charleston city council sanctioned the bond issue at the same time it authorized one for building the South Side Bridge, another large public works project financed in part by the federal Works Progress Administration. This success spurred other WPA projects in the city, including a new bridge over Elk River and improvements to the nearby Columbia Boulevard.

Consulting engineer C. P. Fortney and project architect A. F. Wysong worked diligently to prepare plans and estimates for the proposed auditorium. Fortney was Charleston's city engineer, while Wysong was a prominent local architect hired to design the facility. Born in 1880 in Newport (Giles County), Virginia, Alphonso F. Wysong relocated to Mercer County, West Virginia, in the second decade of the twentieth century and established offices in Princeton and Bluefield. From 1916 to 1921 he served in the West Virginia House of Delegates from Mercer County before moving to Charleston in 1924. Wysong

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died in Charleston of a heart attack on February 12, 1944 at the age of 64. He is buried at Ashland, Kentucky.

Professionally, Alphonso F. Wysong was a respected and influential architect who collaborated with others to define the practice of architecture in West Virginia and provide for the examination and registration of architects. Among his most noteworthy commissions was the Wyoming County Courthouse (1916) located in Pineville and built in a Neo-Classical Revival style, and the Gilmer County Courthouse (c. 1924) in Glenville. After World War I, Wysong affiliated with Thomas P. Jones in the firm of Wysong and Jones, maintaining offices in Princeton and Charleston. One known construction of this partnership was the Princeton residence of Lower G. Bowling. Wysong also established a brief association with W. H. Eason in 1920.

An important achievement in Wysong's career was his election to the West Virginia House of Delegates from Mercer County in 1916. There he introduced House Bill No. 176 that provided for a state board of examiners of architects who were responsible for the establishment of rules for examination and registration of architects in order for potential recipients to develop proficiency in technical and professional subjects. Wysong's bill passed legislative scrutiny on April 27, 1921 and Governor Ephraim F. Morgan approved it on May 3, 1921. Throughout the 1920s Wysong was a member of the Board of Examiners, serving as its secretary for most of this period. In the late 1920s he resumed his practice in Charleston with the firm of Wysong, (Ludwig T.) Bengston, and Jones.

Thanks in large part to the joint efforts of Wysong and Fortney, optimism for PWA funding of the auditorium proposal ran high. In fact, in the fall of 1937 the local press confidently reported on the positive prospects for passage of a $2 billion federal relief

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appropriations bill being debated in Congress. Its imminent approval meant that "Charleston is virtually assured of receiving a $400,000 federal grant for the erection of a public auditorium." Since the request was the only one submitted by the city to the PWA, "the proposed auditorium is looked upon favorably by both state and federal officials." As anticipated, the massive federal relief bill made it through Congress and benefited Charleston immensely. Although the municipality did not get the full amount requested, it received $212,000 in funding from the Public Works Administration. The federal grant-in-aid provided the city with forty-five percent of necessary construction funds, and the $250,000 in municipal bond money covered the remaining balance.

It became apparent at the outset that the city wanted its civic auditorium built close to the central business district. One of the prime sites being considered was a parcel of land owned by the Wehrle family estate. Situated just east of the Kanawha County Courthouse and one block from Kanawha River, the property extended from an alley adjoining the old City Hall on the east, Alderson Street (now known as Laidley Street) on the west, and Kanawha Street (Kanawha Boulevard) on the south. It incorporated the former site of the landmark St. Albert Hotel that had burned several years earlier.

Despite its apparent favored status, city officials decided against acquiring the Wehrle tract in favor of a 2.04 acre lot situated about two blocks west of there and bordered by Virginia and Truslow Streets on the south and east, respectively. Disparagingly referred to as "the hole in the ground" because it lay in a swale several feet below street level, the local press dubbed the low-lying tract a "debris-littered, weed-clogged catch basin for stagnant rainwater" which city officials considered a public eyesore. Starting in 1874, the Kanawha Woolen Mills Company had a factory on the site which engaged in the manufacture of yarns, flannels, jeans, and blankets. However, the plant disappeared long before plans materialized for the auditorium. According to Sanborn Map and Publishing Company insurance maps and local newspaper reports, in the mid-1930s the block of

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Virginia Street between Truslow and Clendenin Streets contained an auto sales and service center dating from 1924, a used car lot, cinder block office building, and cinder block service station. To make room for the auditorium, workers demolished a frame garage and service station and relocated another frame structure elsewhere.

Official groundbreaking for the new performing hall took place on the morning of Thursday, January 20, 1938. With a throng of about 500 bystanders looking on approvingly from the sidewalk above, the mayor, city manager, project architect, two city councilmen, and several other dignitaries descended into the chasm for a brief dedication ceremony. As the appointed chairman of a special citizen's advisory committee in charge of the project, Harry L. Silverstein had the honor of turning over the first spadeful of earth. Under guidelines established by the Public Works Administration, all work had to be completed within 208 days.

Alphonso F. Wysong worked in conjunction with consulting architects C. W. and George L. Rapp of Rapp and Rapp, Inc. of Chicago to complete the construction specifications by December of 1937. Site clearing began in January of 1938 and construction got underway shortly thereafter. The city awarded the construction contract to Ward and Ward, a general contracting firm from Charleston. It took slightly over a year to erect the steel framework and concrete edifice, and another half a year for crews to finish the interior and landscaping work. Charlestonians got their first glimpse of the building's sleek Art Deco facade after workers removed the exterior scaffolding on Saturday, April 22, 1939.

Although construction did not meet the PWA's mandated 208-day time frame, completion of the impressive concrete and steel monolith occurred before the end of 1939. When finished, it garnered effusive praise and was reputed to be one of the largest performing halls of its type in the eastern United States. Local newspaper reports called it "beautiful in coloring, and complete in detail," while hailing it as the "crown-jewel in Charleston's

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cultural crown." Amenities in the state-of-the-art facility included a public address system and arrangements for setting up outside speakers as needed, a system of chimes on all three levels to call audiences back to the hall between acts before the curtain rose, an intercommunicating (intercom) telephone unit to connect different locations throughout the building, a backstage sound control room, and a combination light and projection room behind the upstairs balcony.

Project supporters were generally pleased to see their quest for a first-class civic auditorium in West Virginia's capital city reach a successful conclusion, and at least one stakeholder in particular was ecstatic with the final result. Founded in 1932, the local Community Music Association sponsored a series of annual concerts first at the Shrine Mosque and then at the Charleston High School auditorium, which held 2,004 patrons. This created obvious problems for the association, which had over 3,000 members in 1935 and rejected many more applications due to space limitations. Association president Harry L. Silverstein publicly apologized to those who could not be accommodated before announcing potential plans for a new concert hall: "Maybe in two years, or five or ten...we'll have an auditorium that's a credit to the city, and where music lovers can hear without distortion and without crowding."

Silverstein was vice president of Midwest Steel, a city councilman, respected civic leader, and a charter member of the Community Music Association. He acted as the primary protagonist whose activism provided a tremendous driving force behind the organization which was (and still is) dedicated to enhancing the cultural life of the Charleston area. Working with Simon Galperin and other key members of the group, Silverstein put his considerable talents behind the effort to build a first-rate performing space.

According to Silverstein, three possibilities existed for a new hall. The city could either build a combination auditorium and farmer's market--a proposal that garnered little support from either the city or federal government, enlarge the existing Shrine Mosque