Martin Luther King, Jr. Building Renovation

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Initial Findings and Recommendations
Presented by Tinker Ma, LLC
February 20, 2025

tinker

Mr. Michael Kirk
Director of Property Management
4005 Cromwell Rd
Chattanooga, TN 37421

RE: Martin Luther King Jr. Building Renovation - Initial Findings Submittal

The following pages comprise our Existing Conditions Review submittal, which serves to identify areas in need of renovation and additional recommendations for future programing and continued use of the structure. Based on our previous communication and the pre-design meeting on-site with the owner's team on January 7, 2025, we understand the scope and problem statement to be as follows: Assess the existing conditions of the building including mechanical, electrical, and plumbing systems.

The existing building was built around 1928 and is on the National Register of Historic Places. The building is 4 stories in height and approximately 30,000 square feet. The front façade (southern) assembly is primarily brick and sandstone, and the other three facades are comprised of brick and structural clay tile with a brick exterior. Destructive investigations of the facade and floor assemblies have not been conducted at the time of this report. However, a proposal from Pillar Construction is attached for review and approval to complete further investigations of the building assemblies on an as needed basis.

On the following pages, you will find a summary of our findings broken down for each element of the assessment. Each summary provides a description of the current conditions, recommendations for alterations, and a preliminary opinion of probable cost associated with these recommendations. Because destructive investigations have not been undertaken, our findings are limited to readily accessible areas and visual assessments. The current primary known risk to this project is the difficulty of accurately predicting cost relative to current and near-team volatility surrounding construction material and labor pricing as well as unknown covered conditions. Tinker Ma will continue to evaluate these factors when the design work commences.

Please let us know if there are any questions we can answer regarding this submittal.

Best Regards,

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Attachments

Mechanical, Electrical, and Plumbing Report

ACM's & LBP Report

Masonry Specialist Proposal

Destructive Investigation Proposal

PROJECT OVERVIEW

A kick-off meeting was held on January 7th, 2025 during which the County's ambitions for the project were discussed. Meeting minutes were prepared and submitted to the attendees. Tinker Ma (Trey Wheeler and Josh Rudisin) made additional trips to the building to verify and identify potential items of concern. Additionally, Tinker Ma's consultants have visited the site to identify potential items of concern for their respective disciplines.

The project consists of the investigation of the current existing conditions of the MLK Jr. Building located at 317 Oak Street, Chattanooga, Tennessee. The investigations include high level code analysis with recommendations for future use of the building and any required renovations to the means of egress and/or fire protection, potential hazardous materials identification and recommendations for removal including asbestos containing materials (ACM's) and lead-based paint (LBP). The existing condition of the exterior masonry facades have been visually assessed.

The following areas of assessment are included in this report: Architectural high level code analysis and reports on existing conditions including: the means of egress, accessibility, roofing, windows, masonry, and mechanical, electrical, and plumbing systems. Recommendations for alteration of the existing conditions, and an early opinion of probable costs are also included herein.

The items listed above represent our minimum recommendations to continue occupying the building. In addition to these items, we would recommend renovation of the interior finishes including flooring, ceilings, and painting all exposed surfaces.

ARCHITECTURAL | OPC $150/SF

MEANS OF EGRESS

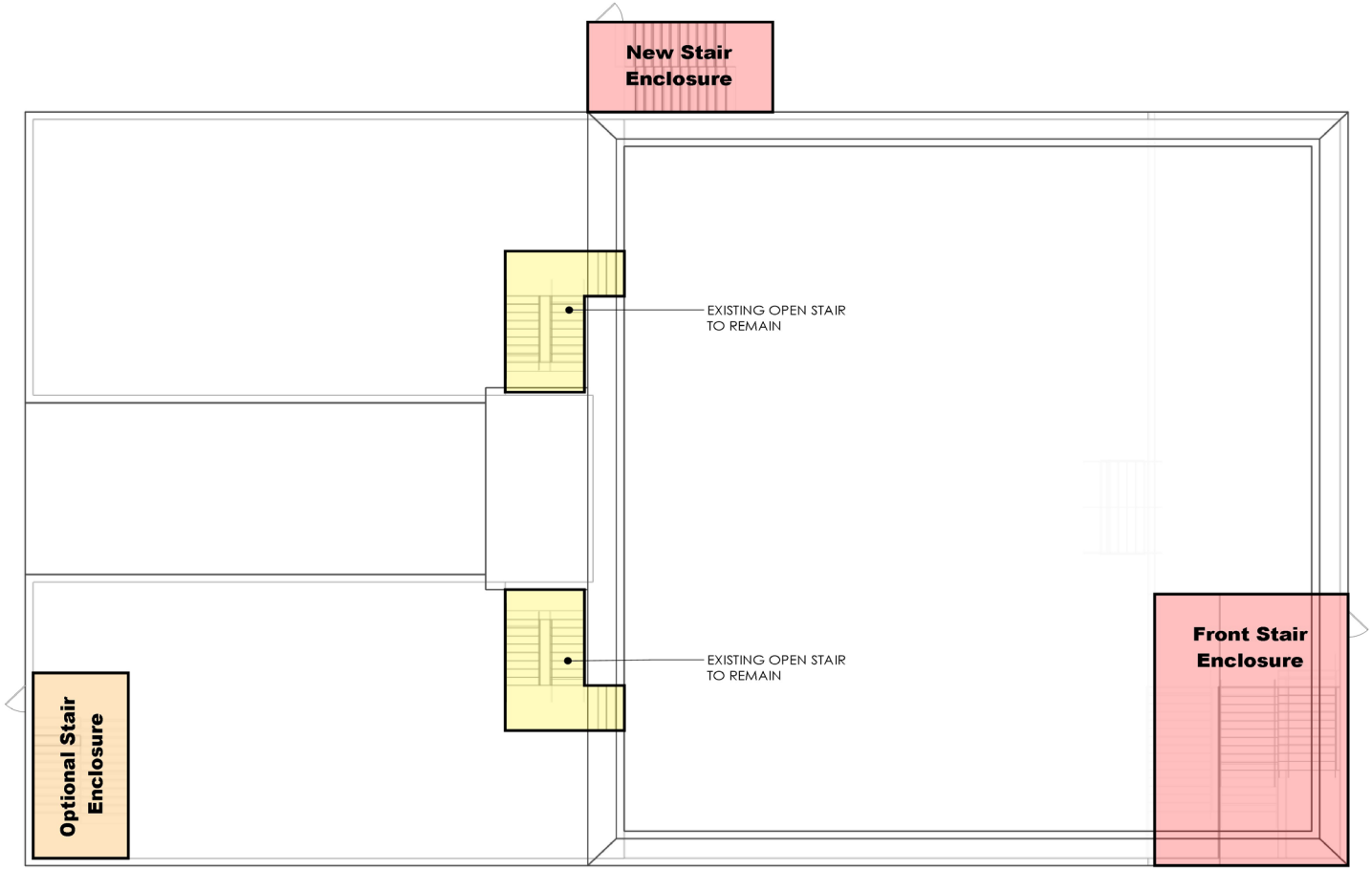
- Main Stair Enclosure
- New Stair Enclosure

The building's stairways do not meet current (or recent) building code standards. While there are three stairways, only the main stair connects all four floors. However, it lacks a fire-rated enclosure, rendering it non-compliant. The other two stairways only connect the second and third floors, and while the need for a rated enclosure for at least one of these two stairs might be debatable, neither has a proper exit directly to the exterior. Two means of egress are required for each floor to meet current building code standards. The ground floor has two exits, but the second, third, and fourth floors each effectively only have one.

RECOMMENDATIONS:

Main Stair: **Provide an enclosure for the main stair at the front of the building by adding fire ratings to the existing walls and new walls and doors at the landings of the second, third, and fourth floors.**

New Stair Tower: **Design and construct a new stair tower that connects all stories and provides a direct exit to the exterior.**



MEANS OF EGRESS OPTIONS

MEANS OF EGRESS

- Main Stair Enclosure
- New Stair Enclosure
- Optional Stair Enclosure

In order to address the lack of a means of egress system, we recommend enclosing the main stairway at the front of the building with a fire rated enclosure and a new “exit only” door to the public way. Additionally, a second enclosed stairway is required to provide a second means of egress from all stories. We propose adding a stair tower to the exterior of the east facade (parking lot side). The new tower would serve as the second means of egress from the 2nd, 3rd, and 4th stories. The open stairs connecting the 2nd and 3rd stories may be able to remain as they are. Optionally, a second stair tower may be constructed in the Northwest corner of the building (rear). This stair would only serve the 2nd and 3rd floors and would aid in addressing or eliminating any dead-end corridors that may need to be addressed.

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ARCHITECTURAL | OPC $30/SF (EXTERIOR) $150/SF (INTERIOR)

ACCESSIBILITY

- Existing Entry
- Existing Accessible Entrance
- New Accessible Entrance

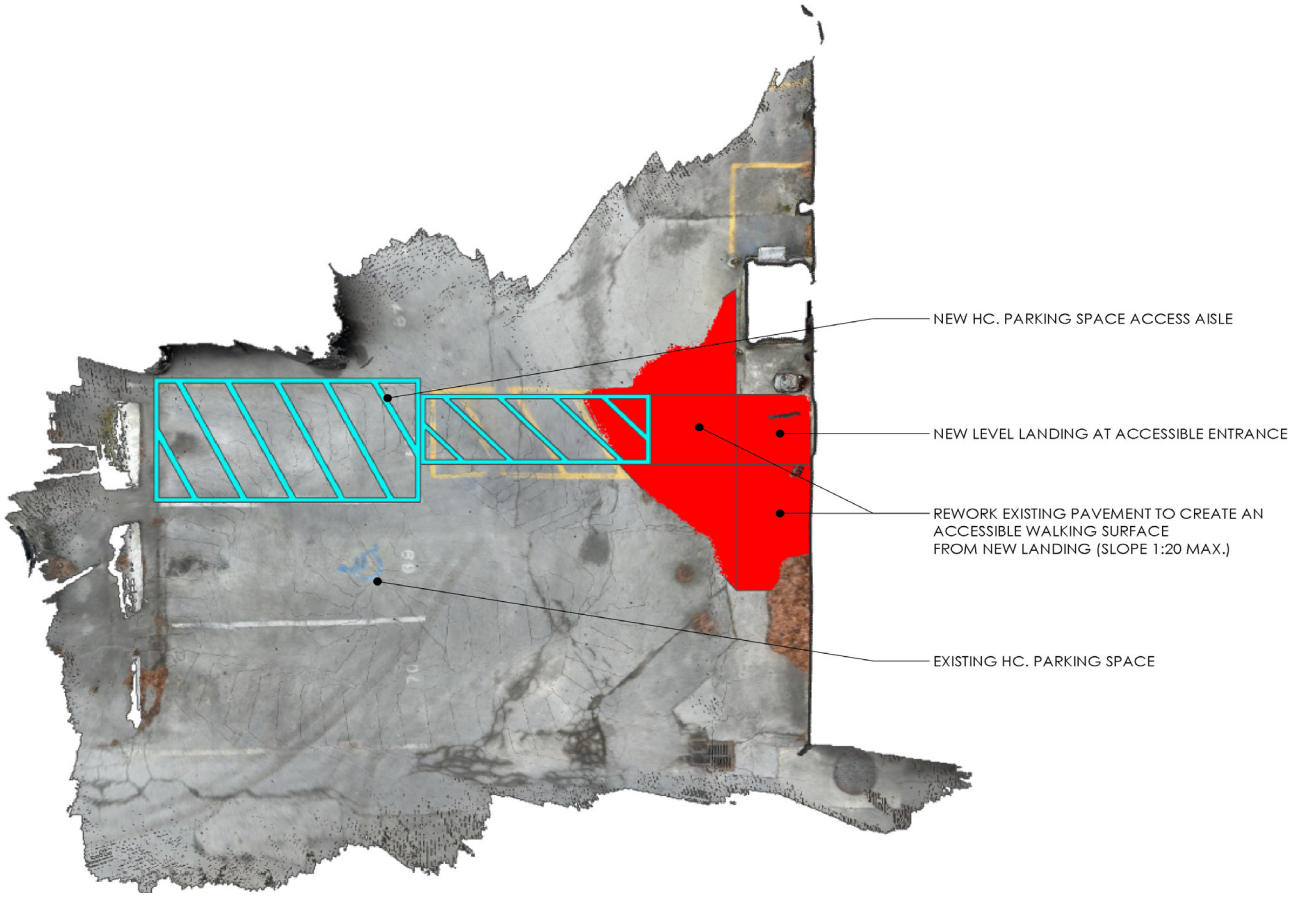
The building's main entrance has a 7" step and a 5-step stairway from the lobby to the main level, making accessible access difficult. While a rear parking lot entrance is labeled accessible, it lacks a proper landing at the top of its 1:12 ramp, and the adjacent accessible parking space lacks a required 5' clear aisle (though a striped area connects the space to the entrance). Slopes in the parking lot and along the striped path seem compliant. An elevator serves all four floors, but the split-level 3rd floor leaves about half of that level inaccessible. Any essential functions on the inaccessible part of the 3rd floor must be duplicated on an accessible level. The current bathrooms do not meet 2010 ADA standards, but there appears to be room to modify them for compliance.

RECOMMENDATION:

Rear Entrance: Install a level landing at the top of the ramp at the accessible entrance. Restripe the adjacent parking space to include a 5' clear aisle complying with accessibility standards.

3rd Floor: Relocate or duplicate any essential functions (conference rooms, offices, break rooms, restrooms, etc.) from the inaccessible portion of the 3rd floor to an accessible level. Consider a platform lift or other means to provide access to the split level if feasible.

Bathrooms: Develop a plan to renovate the bathrooms to meet 2010 ADA standards.



ACCESSIBLE ENTRANCE AND PARKING REWORK

ACCESSIBILITY

- New Accessible Entrance
- Parking

To address accessibility, we recommend adding a 5'-0" by 5'-0" level landing at the exterior of the rear egress door, and reworking the slopes of the pavement up to the landing to provide an accessible walking surface at a maximum slope of 1:20. In addition, we recommend striping the parking space adjacent to the existing handicap parking space to provide an access aisle.

ARCHITECTURAL | OPC $50/SF

ROOFING

- Existing Membrane
- Existing Standing Seam Metal

According to information provided by the County, the existing roof was installed in 2013 by TBM Roofing. In general, the existing roofing is in good condition. There is evidence of ponding water on the large flat portion of the 4th floor, but the roofing does not appear to be damaged. The standing seam metal roofing and gutters appear to be in good condition. There is a possibility that the flashing at the front parapet may be compromised and causing water to leak into the building on the 4th floor.

RECOMMENDATION:

Membrane: Clean and repair as required.

Standing Seam Metal: Investigate the condition of the existing flashings at the front parapet and repair or replace as required.

ARCHITECTURAL | OPC $3,800/WINDOW INSTALLED

WINDOWS

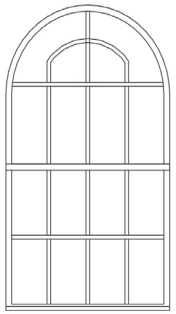
- Arch Single: 5
- Single: 98
- Double: 12
- Triple: 4

The existing aluminum replacement windows, likely installed after the building's 1980 listing on the National Register of Historic Places, detract from its historic integrity. Furthermore, the condition of the window heads, jambs, and sills suggests potential for future water intrusion.

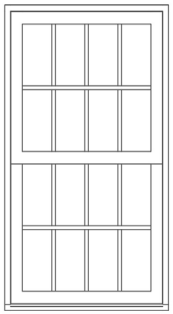
RECOMMENDATION:

Windows: **Install new historically appropriate windows and repair heads, jambs, and sills as required by cleaning and waterproofing the existing conditions.**

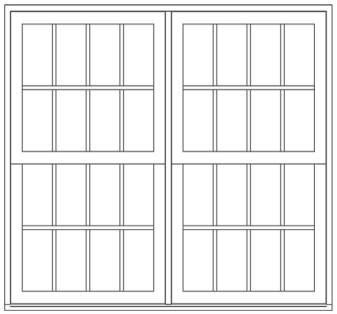
If the windows are not replaced, we recommend cleaning and repairing the heads, jambs, and sills as much as possible.



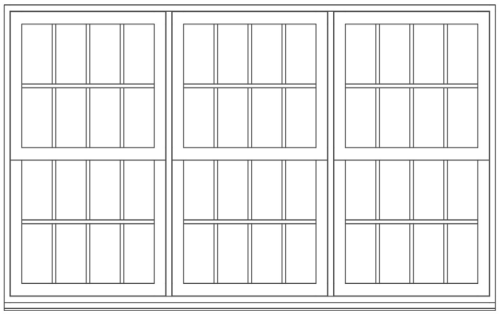
New Front Arch Windows with Grid Pattern



New Single Windows with Grid Pattern



New Double Windows with Grid Pattern



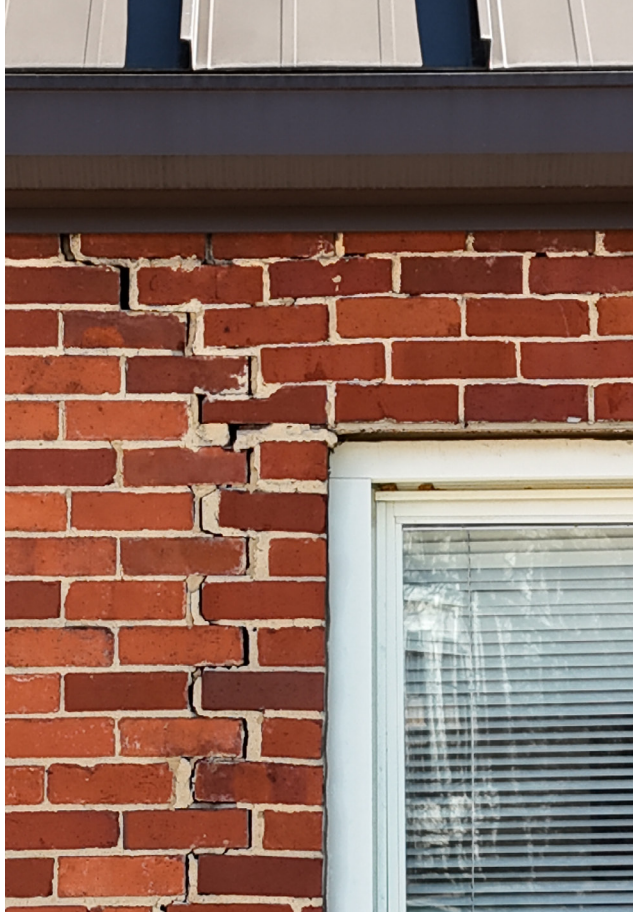
New Triple Windows with Grid Pattern

WINDOW REPLACEMENT ELEVATIONS

WINDOWS

- Arch Single: 5
- Single: 98
- Double: 12
- Triple: 4

To restore the historical nature of the building, we recommend replacing the windows with modern historic replacement windows, which will provide energy efficiency as well as restore the original character of the building with elevations and profiles which are much closer to the original (historically correct) windows.



ARCHITECTURAL | OPC ~$80 K + 40/SF FOR POINTING PER PROPOSAL

MASONRY

- Exterior Masonry
- Interior Masonry

In general, the masonry is in good condition. The sandstone on the front façade (southern) appears to be in very good condition. Based on the visual investigation, the original mortar on the front façade has been pointed over, but even in areas where the "new" mortar has been removed, the original mortar appears to be in good condition as well. Similarly, the brick on the remaining facades appears to be in good condition. There is evidence of previous brick and mortar patching and pointing work scattered over all facades. There are a few areas where the brick and mortar have separated from each other as shown in the photographs above. In addition to the areas on the exterior, a brick pilaster on the 4th floor is also cracked and separating.

RECOMMENDATION:

Exterior: Repair areas of cracking as required with brick and mortar compatible with the existing conditions and the historic nature of the building. Grind and point mortar joints as required. Wash and seal all rockface stone, limestone sills, base, bands, accents, and brick.

Interior: Repair interior pilaster. (Refer to the attached masonry proposal for more information on proposed method of repair.)

MECHANICAL, ELECTRICAL, PLUMBING | OPC $1.9 M PER REPORT

MECHANICIAL

- Existing Systems
- New Systems

The existing mechanical systems include five large direct expansion (DX) split systems for cooling, with some units equipped with 2-stage fans but most being constant volume. The air handling units (AHUs) and condensing units were replaced in the early 2000s, with a few recent replacements. Heating and zone temperature control are managed by duct-mounted electric reheat coils and motorized control dampers. The control system uses pneumatic thermostats and damper actuators, with a Building Automation System (BAS) installed for the central AHUs. The ductwork is mostly rectangular, galvanized, and internally lined, with some reports of 'black soot' at supply diffusers indicating poor air quality. Ventilation air is limited, with only one AHU having a fresh air connection, and the building relies on operable windows for natural ventilation. The HVAC systems do not meet the current energy code, and there are issues with control zoning, corridor return air paths, and energy inefficiency.

RECOMMENDATION:

Replace the mechanical systems including all lined ductwork with a Water Source Heat Pump (WSHP) system, which is preferred for its long-term energy and maintenance benefits. This system would involve installing new central plant equipment, including a boiler, closed circuit fluid cooler, and hydronic accessories, with a new gas service recommended. The WSHP units would be distributed throughout the building, with new ductwork and condensate piping. The design would also incorporate a Dedicated Outside Air System (DOAS) to provide fresh ventilation air.

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MECHANICAL, ELECTRICAL, PLUMBING | OPC $150 K PER REPORT

ELECTRICAL

- Existing Systems
- New Systems

The existing electrical system includes a 120/208V, 3-phase, 4-wire service from a pad-mounted transformer, with a 2000A GE switchboard that has a bolted pressure switch. This switchboard, along with most panelboards, is from the same installation period and has reached the typical lifespan of electrical equipment. The building's power distribution system includes GE type NAB/NHB and DB/NLTQ, NLAB panelboards, which are still functional but aged. The normal electrical distribution may need additional receptacles if the space layout changes, and the emergency lighting system, which uses "bug-eye" wall packs, has some fixtures that failed to operate during testing. Most interior lighting has been updated to LED flat panels, and the existing lighting controls are primarily wall-mounted toggle switches. The fire alarm system is relatively new, featuring a fully addressable Simplex 4100U fire alarm control panel.

RECOMMENDATION:

Perform preventative maintenance on the bolted pressure switch or replace it with a modern circuit breaker, and re-torque all connections to prevent arc faults. The wall in front of the switchboard should be modified to ensure a minimum of 36 inches of clearance. For the HVAC renovation, new circuits, breakers, conductors, conduit, and supports will be required for the WSHP and DOAS units. It is also recommended to replace the emergency lighting fixtures instead of just the battery packs due to their age. Existing light fixtures will need temporary support during ceiling removal for ductwork replacement, and any exterior lighting should be replaced with LED fixtures as part of general maintenance. The fire alarm system can be modified or expanded as needed for the HVAC renovation and any layout modifications.

MECHANICAL, ELECTRICAL, PLUMBING | OPC $60 K PER REPORT

PLUMBING

- Existing Systems
- New Systems

The existing plumbing system includes domestic water service from Oak Street, with an 80-gallon electric tank water heater located in the first-floor mechanical room. The domestic water piping is primarily copper, with some newer sections made of PEX, and the main service line is galvanized steel. The sanitary piping is mostly cast iron with some newer CPVC sections, and it appears to be in fair condition despite some signs of previous leaks and rust. Public restroom fixtures, including lavatories, toilets, and urinals, have been replaced within the last 10 years and are in good working condition, although the lavatory flow rates exceed the current code maximum.

RECOMMENDATION:

Replace as much exposed domestic and sanitary piping as possible during any major renovation, as this will be the most cost-effective and least intrusive time to do so. Replace the existing public lavatories with faucets that comply with the maximum flow rate of 0.5 GPM. Refer to the Accessibility section above for modifications to existing bathrooms for ADA compliance.

OPINION OF PROBABLE COST SUMMARY

Due to the inherent variability of costs associated with project scope and material selections, the minimum recommendations presented in this report establish a foundation for usable space. However, the resulting post-renovation quality would likely align with a Class C office standard. To elevate the space to Class A or B office standards, a corresponding increase in the total cost per square foot must be anticipated. For the County's present objectives, we advise pursuing Class B interior upgrades as a general approach. Furthermore, a thorough assessment of the departments designated for relocation may reveal specific areas where Class A interior upgrades would be advantageous and contribute to enhanced operational efficiency.

BREAKDOWN - MINIMUM RECOMMENDATIONS

Means of Egress	$150.00 / SF
Accessibility (Exterior Improvements)	$30.00 / SF
Roofing & Flashing Repair	$50.00 / SF
Interior Finishes	
Class C	$150.00 / SF
Masonry	$80 K+$40 / SF (Refer to Proposal)
ACM's and LBP Removal	$20.00 / SF Maximum
Mechanical	$1.9 M (Refer to Report)
Electrical	$150 K (Refer to Report)
Plumbing	$60 K (Refer to Report)

BREAKDOWN - OPTIONAL RENOVATIONS

Window Replacement	$3,800 per Window
Interior Finishes	
Class A	$250.00 / SF
Class B	$200.00 / SF
Interior Lighting & Controls	
Class A	$30.00 / SF
Class B	$20.00 / SF

RANGE OF PROBABLE COST

Minimum Recommendations	$5,500,000.00
With Class B Finishes & Windows	$7,500,000.00
With Class A Finishes & Windows	$8,500,000.00

CONCLUSIONS

In conclusion, the assessment of the MLK Jr. Building has revealed several key areas requiring renovation to meet modern building standards and ensure the building's long-term usability and continued functionality. The primary focus should be on upgrading the means of egress, enhancing accessibility, replacing the mechanical systems, maintenance and modifications of the electrical systems, limited modifications of the plumbing systems, and the abatement of asbestos containing materials (ACM's) and lead based paint (LBP). While the building's structure seems sound on visual assessment, the masonry and roofing require some targeted repairs. The windows may warrant replacement to improve energy efficiency and historical accuracy, and at a minimum, the heads, jambs, and sills should be cleaned and repaired. Interior finishes should also be refurbished and renovated to meet the desired level of office class standards, depending on the desired level of modernization, refinement, and budgetary considerations.