



December 15, 2014

Ms. Kathy Morgan
City of Wichita
455 North Main Street
Wichita, KS 67202
Email: kmorgan@wichita.gov

**Re: Wichita-Sedgwick Historical Museum Building Condition Assessment and
Maintenance Plan
CASE Project No. 2439001**

STATEMENT/BACKGROUND INFORMATION

At the request of Kathy Morgan, Senior Planner, CASE Forensics Corporation (CASE) personnel visited the Wichita-Sedgwick Historical Museum the week of September 22, 2014 to perform an exterior condition assessment of the building. The assessment was performed by Mark Liebman, Senior Forensic Investigator and Alec Liebman, Forensic Investigator with CASE. They were assisted by Jason Sandbo of Vertigo High Access Services, Inc. Mr. Eric Cale, Museum Director, provided access to the building and grounds.

The Wichita-Sedgwick Historical Museum is housed in the Old Wichita City Hall Building. It was designed by the architectural firm Proudfoot and Bird, and built between 1890 and 1892. The building is constructed of large blocks of rough cut Cambridge Limestone. At the center of the structure is a large clock tower and the corners of the building feature round turrets. In 1938, an annex was added on the east side of the structure. The building is listed on the National Register of Historic Places and is a significant historic building in downtown Wichita.

PURPOSE and SCOPE

The purpose of this assessment was to determine the condition of the limestone façade, windows, entryways, balconies, roofs and other elements of the exterior masonry envelope and to develop a long term maintenance plan for the facility. To facilitate the survey of the clock tower, rappelling (rope access) was employed; while a 60 foot articulating lift was utilized to assess the exterior walls. Representative images of the assessment program in progress can be found in appendix A. The scope of the assessment also included visual examination of the interior of the clock tower,



exposed interior portions of the exterior walls via the 4th floor access above the ceiling at the north and south sides of the structure, and the plastered interior wall surfaces throughout.

The assessment of the clock tower began on the south side of the tower. Our rappelling team (forensic assessor and rope rigger/standby rescue personnel) then proceeded to the west side. The following day the north and then east sides of the tower were assessed. The assessment of the building exterior via articulating lift began on the south side, proceeding to the east, north and west sides on subsequent days.

SUMMARY OF FINDINGS

Overall, the building is in excellent condition. The massive, rough cut, limestone blocks have largely held up well over the years. The structure retains its original integrity but is in need of some repair and maintenance to ensure its ongoing performance.

Clock Tower: The limestone in the clock tower is exposed to the weather and elements to a greater degree than the stone at lower elevations. The extent of localized surface spalling and exfoliation provides evidence of this fact. Stone deterioration is most evident at exposed surfaces not integral to the tower, i.e. at the balconies and along the outer edges of the turrets.

The extent of surface deterioration of the stone in the clock tower may also be attributable to poorer (softer) pieces of stone being used at this less visible location. The loss of the rough cut surface detail, most noticeable at the arches is likely due to a combination of the inherent characteristics of the stone combined with water finding egress from the stone at this location. While the vertical surfaces of the rough cut stone are affected by the level of exposure, the sky facing stone elements exhibit the greatest deterioration. This is due to the ability for water and snow to remain on the surface for extend periods of time.

It is worthy of note that the mortar installation at the tower exhibits extremely poor workmanship. The majority of the mortar appears to be a repointing mortar, installed long after the original construction. Perhaps documents existing regarding the repointing program but these were not reviewed in the preparation of this report.

Unfortunately, it appears that the masons, knowing that the clock tower would only be viewed from street level, did extremely shoddy work with a questionable mortar material that was mixed with too much water. This would allow for the work to be accomplished rapidly; to the aesthetic detriment of the building, poor performance of the mortar and negative impact on the stone. At the present time this is largely a cosmetic issue and will be prioritized as such.



Balconies: While the balconies are not regularly accessed, the extent of deterioration of the stone railing is a matter of concern. We do not consider that, in their current condition, the railings offer fall protection (they could give way if leaned upon) and, even in the absence of an external force, some of the deteriorating stone could detach and present a danger if falling on the roof (and through or onward to the street). This matter will be addressed further later in this report. Until remediated, we recommend that access to the balconies be limited to staff familiar with these concerns and that warning signs be posted regarding leaning against the balcony railings.

Interior: The interior of the clock tower exhibits considerable remaining evidence of the historic fire. While load transfer issues likely contributed to the cracking around the arches, the heat generated by the fire may have played a role. Most notable is the unique intermixing of stone and brick in a random, uncoursed manner. Time attests to the lack of issues due to this mode of construction, but the tower is a diverse mix of materials, including metal I-beams and embedded wood beams, corner wood beams and pocketed joists. Other than some minor missing mortar, the interior components appear to be in serviceable condition.

Roofs: The metal roof appears to be in good condition. The only item of concern is at the intersection with the bottom of the tower. Here, there are open, cracked and failing mortar joints in close proximity and some of the sealant between the stone and metal has debonded. There are known issues regarding minor water ingress into the building likely from this vicinity that will need to be addressed.

Perimeter Stone: As is the case with the tower, all sides of the chimneys, spires and roof peak stone are exposed to the weather. As a result, there are regions of mortar deterioration and stone loss that pose a life/safety issue. The distinct possibility that stone may be dislodged and fall to the sidewalks along the north and west sides of the structure make repairs in these regions a high priority. They will be addressed as such in the maintenance plan.

Wood Windows and Doors: While the windows in the lower portions of the building have been infilled or replaced with contemporary metal elements, the windows at the tower level and corner turrets appear to be the original wood components. The wood casements, frames and mullions do not appear have recently been treated or painted to protect them from the elements, and so are decaying. The mortar/caulking joints at the corners of the stone ledges below are likewise deteriorated presenting a means of water infiltration into the structure. The doors to the tower balconies are not experiencing the same level of deterioration but would benefit from regular maintenance and repainting.

* Images of the conditions on the clock tower, roofs, upper windows, perimeter stone and tower interior can be found in appendix B



Exterior Walls: The stone in the lower walls has held up better than the stone in the tower, though localized issues do exist. Some of the rough cut surface areas are spalling or exfoliating. As is the case throughout, these rough dressed, chisel cut surfaces offer areas for water to dwell and have been impacted during the original tooling.

A number of cracked or separated mortar joints were noted in the exterior walls, giving evidence to the fact that the building is likely still accommodating load transfer issues. Given the age of the building and lack of significant exterior modifications, this may be due to issues occurring in the subgrade resulting in minor subsidence or settlement. There are also a number of cracked window header stone that attest to historic or contemporary changes that may be occurring.

At the intersection of the stone with the sidewalks, the stone and mortar are deteriorating. We speculate that this may be due to the use of slats to remove snow. If salts are used to melt snow and ice, we recommend that another material or methodology be adopted. We further recommend that consideration be given to providing space between the building and foliage in the landscaping. Keeping roots and branches away from the stone will contribute to its longevity.

At the SE corner of the building, a parging has been applied to a few of the limestone pieces. We assume this was due to surface deterioration. The parging has failed at one location providing a means for water ingress and exacerbated deterioration of the remaining stone.

Lower Balconies: Similar to the conditions at the balconies in the clock tower, the lower balconies exhibit a higher degree of deterioration of the stone and mortar than elsewhere. Both balcony railings should be considered problematic as regards fall restraint. Until the balconies and railings are addressed, access to both balconies should be limited to museum staff aware of the issues and warning signs should be posted regarding leaning against the balcony railings.

1938 Addition: The stone and mortar in the addition is in good condition. In question is the presence of airborne deposition on the surface of the stone not seen elsewhere on the building. The material appears to be dirt particulates, perhaps due to the protected nature of this side of the building and the lack of air movement and rain that might facilitate its natural removal. But the presence of landscaping suggests that organics may play a role. There is no visual evidence of the material causing damage to the stone so the issue is mainly aesthetic.

Windows: The sealant around the metal windows appears to have reached the end of its service life and is beginning to fail. The cement board and wood infilled windows also appear to be in need of replacement. As evidenced by the detachment of the board on the south side, the possibility exists of the outer board detaching and falling to the ground. In all instances we suggest that the current infill be redesigned and replaced with a more durable material.



Entryways: The main west and north entryways appear to be in good condition. The east side entry at the addition also appears to be in good condition. No work at these areas is currently envisioned.

* Images of the conditions on the exterior walls, balconies, addition, windows, and entryways can be found in appendix B

CONCLUSIONS:

Following is a list of items that will need to be addressed:

1 to 3 years:

- Select stone repair and mortar repointing of the perimeter stone above the roof line at the chimneys, spires, roof peak and corner turrets
- Replacement of all window infills
- Installation of mortar, caulking or sealant at window ledges and scaling of loose stone
- Repointing of open, cracked and separated mortar joints and installation of new sealant in select areas at the tower to metal roof intersections
- Reconstruction of all balcony railings at the tower.
- Reconstruction of the balcony railings and associated repairs at the NW corner balcony
- Repair of the balcony railings above the main entry on S, Main Street

3 to 5 years:

- Repair and paint wooden windows and doors
- Replace metal window sealant
- Clean stone on addition
- Repair/replace paving near grade at SE corner
- Have structural engineer knowledgeable of historic construction means, methods and materials evaluate cracked window headers for structural stability and potential load transfer to window elements
- Have geotechnical engineer evaluate site subgrade soils conditions
- Repaint exterior fire escape



5 to 10 years:

- Implement repointing program for the clock tower including stone repairs and scaling of loose stone
- Repoint interior of clock tower and beneath north and south roofs where necessary

10 to 15 years:

- Implement repointing program for the exterior walls including stone repairs and scaling of loose stone

CASE reserves the right to supplement or amend this report should additional information become available.

If you have any questions or comments regarding any element of our report, please do not hesitate to contact us at 425-775-5550.

Respectfully Submitted:



Mark Liebman
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CASE Forensics



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Reviewed by:



Steve Pignotti
Principal, Corporate Business Development
CASE Forensics Corporation



MAINTENANCE PLAN

Year:	Scope:	Estimated Cost: based on 2014 \$
2015 - 2017	Hire masonry contractor to utilize man lifts to repair roof level perimeter stone at chimneys, spires, roof peak and corner turrets. All loose, friable stone shall be scaled off. Where extensive damage is present, the stone shall be repaired. All loose mortar should be replaced and all deteriorated mortar repointed. The repointing mortar mix design should set the precedent for all future repointing at the building and should be specified by a historic masonry specialist. Stone repair protocols and procedures should be similarly specified.	
	Design, specifications, quality assurance during construction:	\$18 - \$20,000
	Construction:	\$100 - \$120,000
2015 - 2017	Design (by local architect with approval of Museum Board and Historic Preservation Officer) and have contractor install new secure, durable, weather resistant window infills.	
	Design and specifications:	\$10 - \$12,000
	Construction:	\$70 - \$80,000
2015 - 2017	Hire contractor to install mortar, caulk and sealant (as appropriate) at all window ledges and at the tower to roof intersections.	
	Design and specifications:	\$3 - \$5,000
	Construction:	\$35 - \$40,000



2015 - 2017	Design and reconstruct all tower balcony railings	
	Design, specifications, quality assurance during construction:	\$8 - \$10,000
	Construction:	\$80 - \$90,000
2015 - 2017	Reconstruct NW corner balcony railing	
	Design, specifications, quality assurance during construction:	\$5 - \$7,000
	Construction:	\$45 - \$50,000
2015 - 2017	Repair main entry balcony	
	Design, specifications, quality assurance during construction:	\$4 - \$5,000
	Construction:	\$35 - \$40,000
2018 - 2020	Restore remaining wooden windows and doors (including removal and replacement as necessary)	
	Design and specifications:	\$30 - \$35,000
	Construction:	\$200 - \$250,000
2018 - 2020	Replace metal window sealant	
	Design and specifications:	\$2 - 3,000
	Construction:	\$30 - \$35,000
2018 - 2020	Clean limestone on addition	
	Design, specifications, quality assurance during construction:	\$6 - \$8,000
	Construction:	\$35 - \$40,000



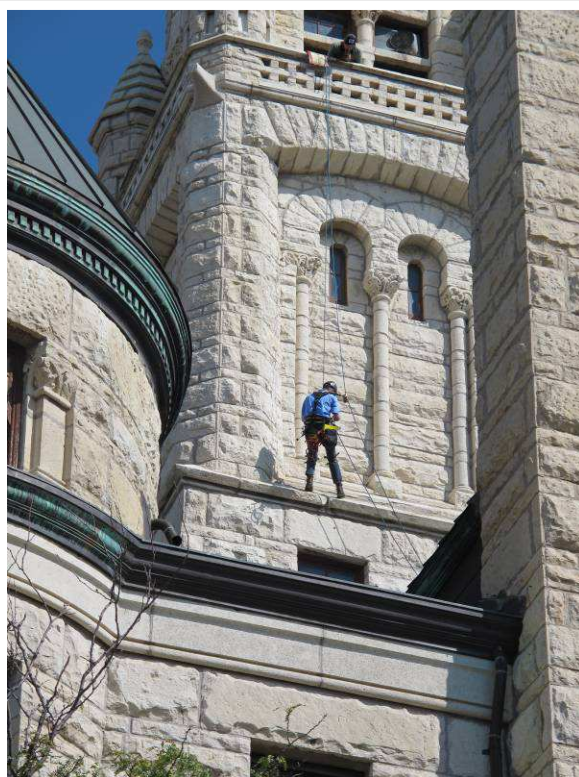
2018 - 2020	Repair/replace parging at SE corner	
	Design and specifications:	\$2 – 3,000
	Construction:	\$3 - \$5,000
2018 - 2020	Have engineering studies performed of window headers and geotechnical site conditions	
	Structural Engineer:	\$4- \$5,000
	Geotechnical Engineer, including site investigation:	\$20 - \$25,000
2018 - 2020	Have fire escape repainted	
	Design and specifications:	\$2 - \$3,000
	Construction:	\$10 - \$12,000
2020 – 2025	Design and implement clock tower stone repair and repointing program	
	Design, specifications, quality assurance during construction:	\$35 - \$40,000
	Construction:	\$500 - \$600,000
2025 - 2030	Design and implement exterior building stone repair and repointing program	
	Design, specifications, quality assurance during construction:	\$30 - \$35,000
	Construction:	\$400 - \$500,000



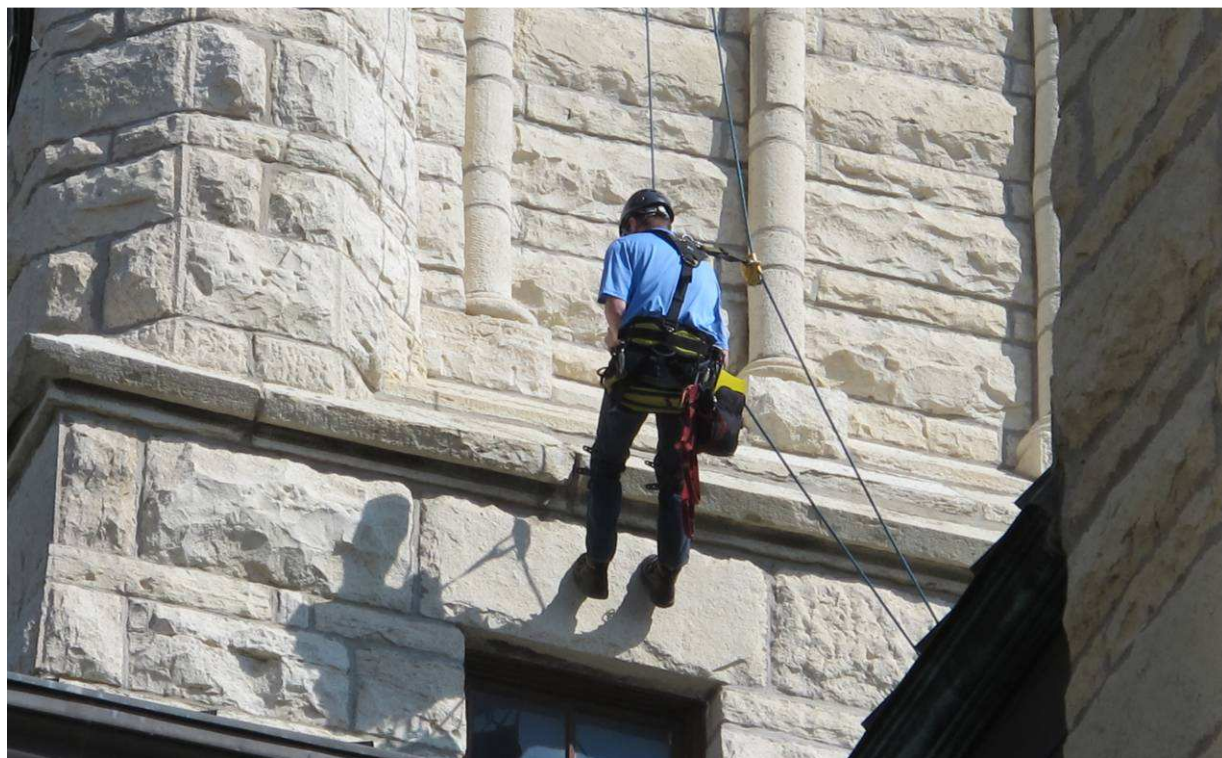
Appendix A



Preparing to rappel down the clock tower



Assessment underway on south face



Assessing the limestone on the south face





Assessment ongoing on south face



First drop on south face almost complete



2nd drop assessment underway on south face of clock tower

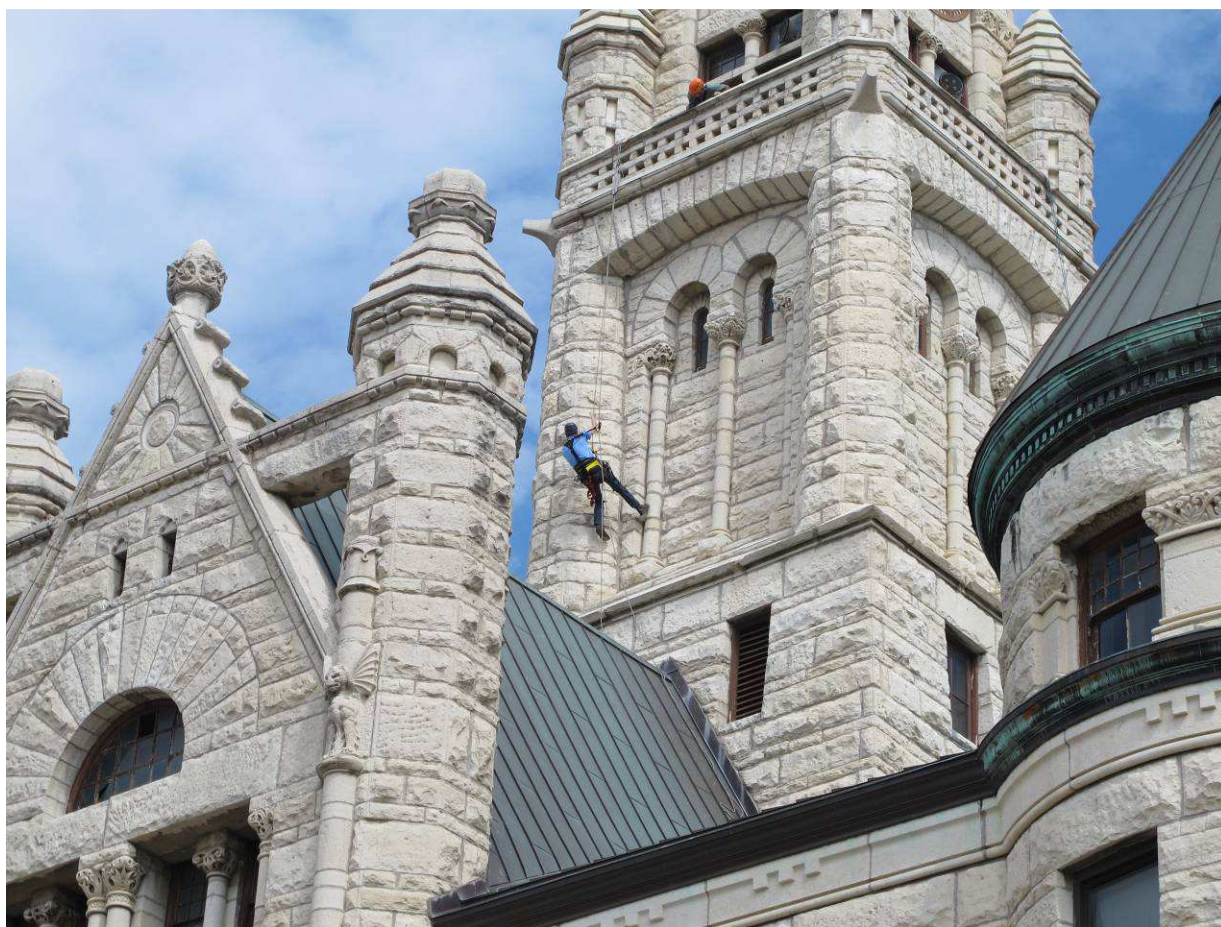




Closer view of assessment



Close up showing rappelling system



Initial drop on west face





Using the ropes to maneuver on the tower



Recording digital images of the conditions



2nd drop on west face, with an eye on the weather

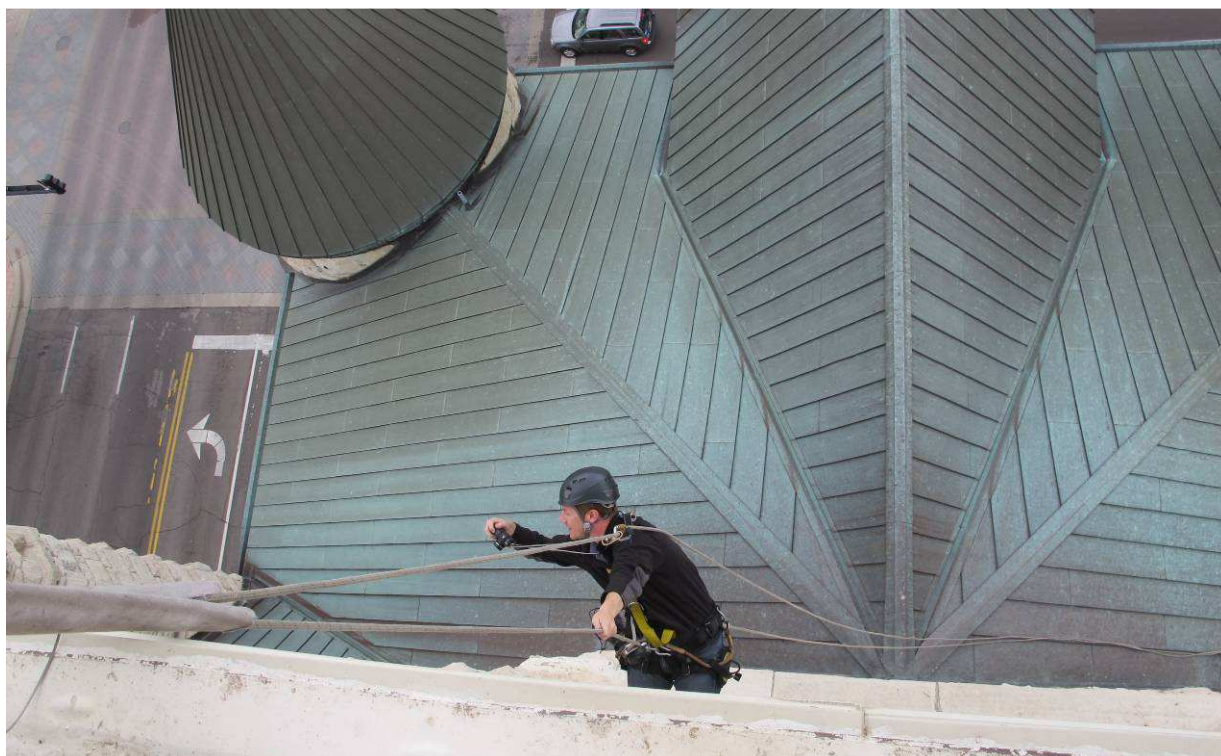




Digital documentation of conditions



First drop on west face almost complete



Assessment of the north face from above





Completing the assessment on the east face of the tower



Assessing the northwest corner balcony from the 60' articulating lift



APPENDIX B
- South side of tower -



Clock and limestone on south face



Clock and limestone on south face



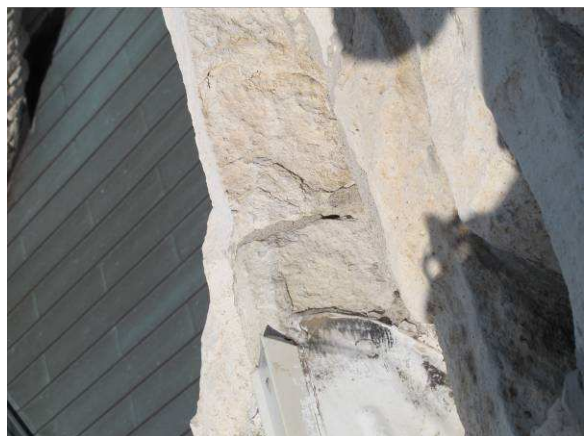
Poorly installed mortar and deteriorated limestone



Separation at mortar joint



Loss of carving detail in stone



Deterioration at top of stone





Deteriorating limestone at balcony rail



Deteriorating limestone at balcony rail



Deteriorating limestone at balcony rail



Poor quality repair at balcony rail

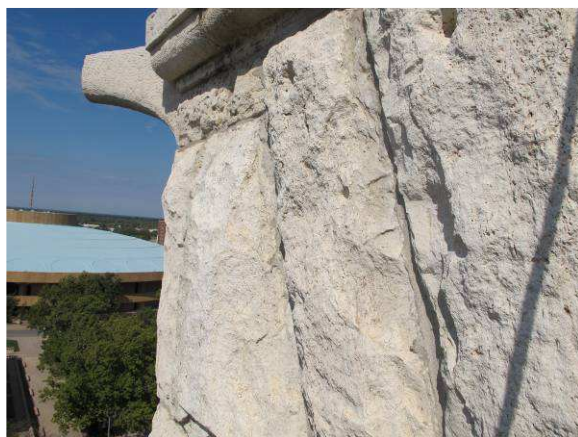


Deterioration at top of stone



Poor repairs at balcony rail





Spalling stone and mortar loss near balcony rail



Mortar separation above arch



Deteriorating limestone



Loss of surface detail at arch



Deteriorating carved detail

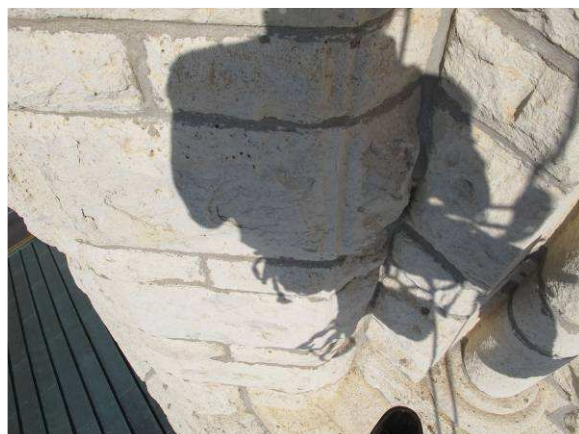


Poor mortar installation and decaying wood





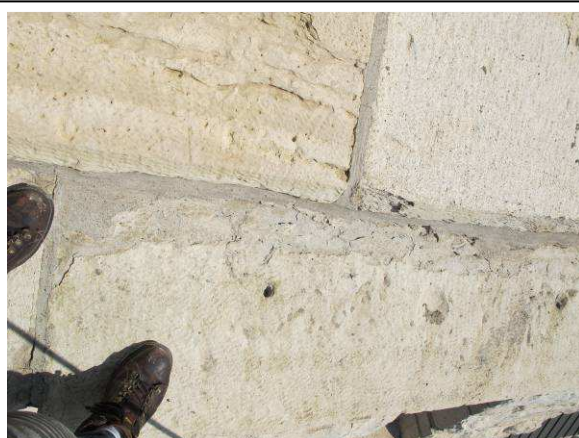
Deteriorated mortar and spalling stone



Poor mortar installation



Deteriorating stone at column base



Deteriorating mortar and limestone



Deteriorating mortar and limestone



Debonded mortar



Deteriorating limestone



Wood window and ledge in need of treatment



Questionable flashing detail



Deteriorating mortar near flashing

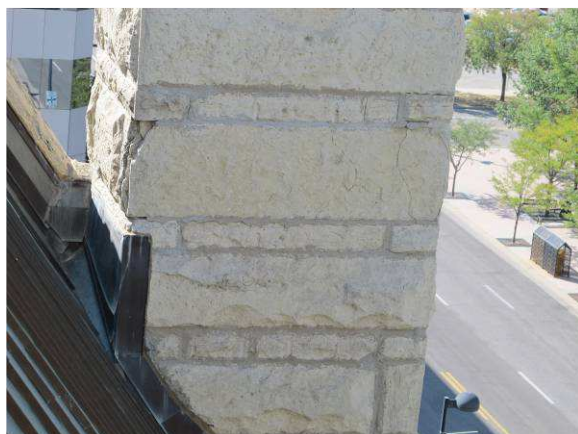


Poor flashing detail



Back of south side chimneys





Deteriorating stone near base of west chimney



Close up of deteriorated stone



Deteriorating window, limestone and mortar



Deteriorating window, limestone and mortar



Poor mortar installation at return



Failed caulking near flashing





Poor mortar installation



Spalling stone and poor mortar



Poor repairs and deteriorating stone at balcony



Poor repairs and deteriorating stone at balcony



Deteriorating stone



Deteriorating stone





Loss of detail at arch



Spalling stone



Poor mortar installation at arch



Poor mortar installation



Spalling stone

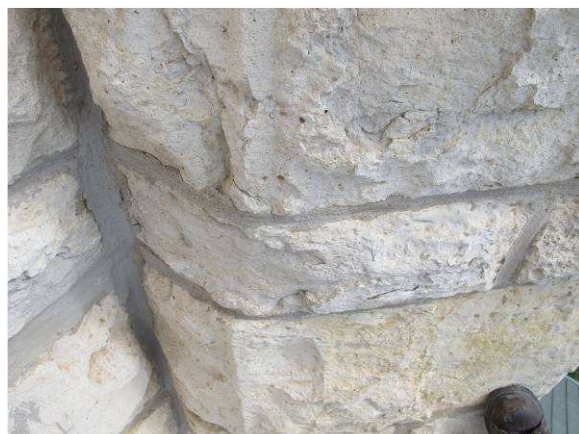


Poor mortar installation





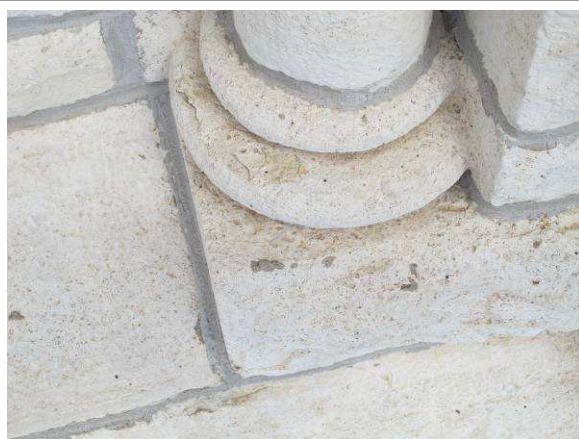
Deteriorating stone and wood window frame



Poor mortar installation and deteriorating stone



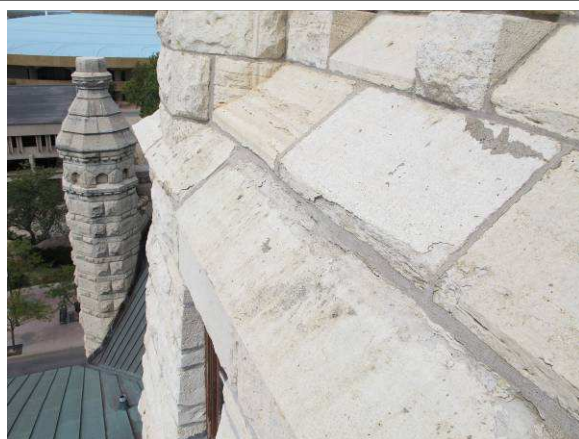
Deteriorating limestone



Deteriorating limestone at column base



Delaminating naturally bedded stone



Poor repair and deteriorating stone below column





Broken edge of stone



Separation at mortar joint



Mortar loss and stone deterioration



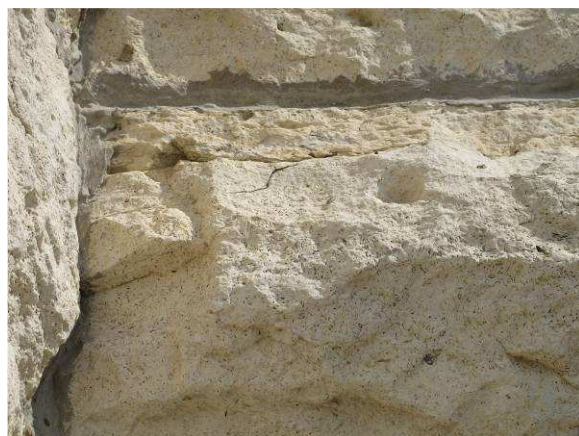
Failing mortar at roof edge spire



APPENDIX B
- West side of tower -



Separating mortar joint



Deteriorating limestone



Deteriorated stone and mortar at balcony



Failing stone at balcony



Deteriorated mortar joint



Delaminating stone





Open mortar joint and spalling stone



Open mortar joint



Poor mortar installation



Poor mortar installation



Deteriorating wooden window and ledge



Deteriorating and spalling stone





Spalled face of stone



Partially spalled stone



Poor mortar installation



Failing stone and mortar below columns



Failed mortar joint and spalled stone



Failed mortar joint and spalled stone





Spalled and delaminating stone



Separated caulk at window



Deteriorating stone and mortar



View of back of perimeter stone



APPENDIX B
- North side of tower -



Clock and limestone on north face



Poor mortar installation



Broken mortar in joint



Deteriorating stone and mortar



Delaminating stone at balcony



Delaminating stone at balcony





Loss of detail above arch



Failing mortar joint



Deteriorating mortar



Spalling limestone



Poor workmanship and failing joints



Poor workmanship





Poor mortar installation



Poor mortar installation



Backside of chimney at south end of bldg



Deteriorated stone in chimney



Poor mortar installation



Natural inclusion in limestone





Failing mortar below columns



Deteriorating stone and poor repair below column



Separated mortar joint



Deteriorated stone at joint



Delaminating limestone



Delaminating limestone





Deteriorating wood window and caulking



Deteriorated caulking and stone



Failed caulking and separated mortar



Deteriorated limestone



Failing mortar at balcony



Failing mortar at balcony





Exposed brick at balcony corner



Deteriorating stone at balcony corner



Exposed brick at balcony corner



Missing brick at balcony corner



Deteriorating balcony



Deteriorating balcony





Deteriorated limestone at balcony



Deteriorated limestone at balcony



Deteriorated limestone and poor mortar



Exfoliating limestone



Spalling limestone



Loss of detail in carving





Spalling limestone



Poor mortar installation



Poor mortar installation



Poor mortar installation

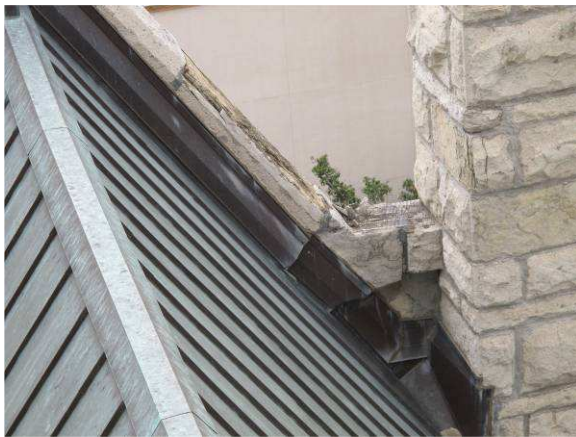


Chimney at NW corner



Deteriorating stone at chimney





Deteriorating stone at roof peak



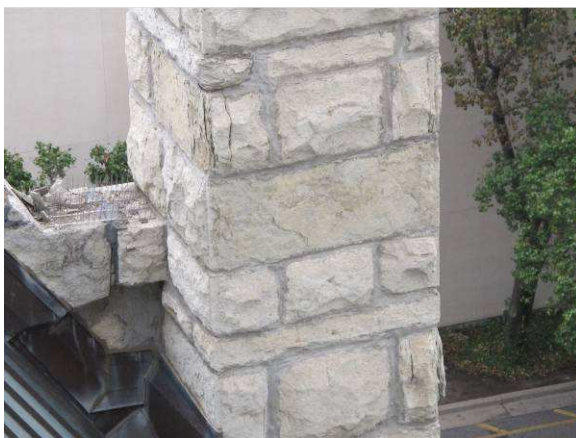
Close up of deteriorating stone



Chimney at NE corner



Mortar loss and deteriorating stone



Spalling stone in chimney



Close up of stone damage





Spalling stone on opposite side of chimney



Separated mortar joint



Exfoliating limestone



Failed mortar joint and deteriorated stone



Decaying wood window



Failed caulking





North side of east roof peak



North side of east roof peak



Mortar failing at spire



Poor mortar and failing stone



Poor mortar installation



Poor mortar installation





Failed mortar and deteriorating stone



Spalling stone at NE corner of tower



Deteriorating limestone at balcony



Failed mortar and damaged stone



Deteriorating limestone



Poor mortar installation





Deteriorating stone and poor mortar installation



Spalling limestone



Poor mortar and stone damage at arch



Deteriorating limestone



Poor mortar installation



Broken stone





Deteriorating column base



Loss of mortar at column base



Deteriorating stone below columns



Spalling stone



APPENDIX B
- East side of tower -



Damaged balcony rail



Decaying wood and missing mortar



Vertical crack in mortar joints



Crack in mortar at header



Water evidence at window headers



Separating mortar at corner of balcony





Vertical mortar separation and crack in stone



Deteriorating stone at balcony



Deteriorated limestone



Deteriorated stone and failed mortar joint



Missing mortar

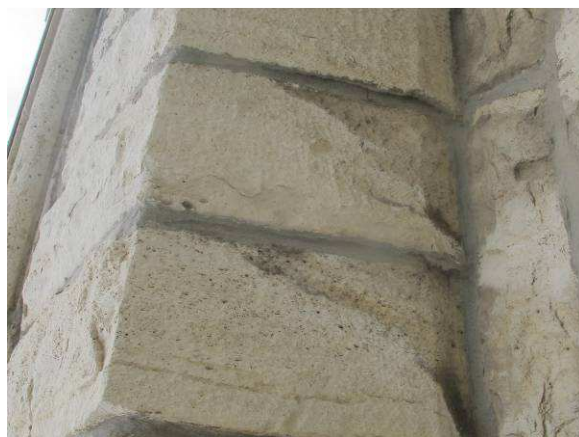


Crack in mortar joint





Deteriorating stone above arch



Deteriorated stone at arch



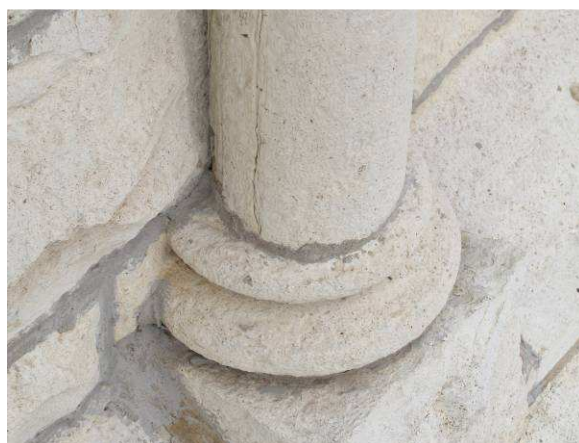
Failed mortar and stone loss at arch



Poor mortar installation



Exfoliating stone



Crack in column stone





Poor stone patch



Poor mortar installation



Poor mortar installation and deteriorating stone



Failed mortar in spire



Failed mortar



Deteriorating stone





Missing mortar and stone



Failing mortar installation



Spalled limestone



Poor mortar installation



Deteriorating wood window and stone ledge



Deteriorating wood window and stone ledge





Poor mortar installation



Missing mortar above flashing



Failed caulking above flashing



Missing stone and mortar



Missing mortar



Failed sealant





Missing stone and deteriorated mortar



Poor mortar installation and exfoliating stone



Exfoliating stone



Loss of stone detail



Missing mortar



Missing mortar





Separating mortar joints



Failed caulking and deteriorated wood



Spalling stone



Spalling stone



APPENDIX B
- Inside tower -



Repaired cracks above arch



Repaired cracks above arch



Repaired cracks above arch



Close up of repaired crack



Missing mortar in interior brick wythes



Repaired crack below window





Repaired cracks from above



Metal I beams inset in brick



Metal and wood beams



Wood beam at corner



Mix of brick and stone evidence of smoke damage



Stone, brick, metal beams, wood beams & joists



APPENDIX B
- Under north & south roofs -



Interior brick wythes and seated ceiling rafters



Uncoursed mix of brick and limestone



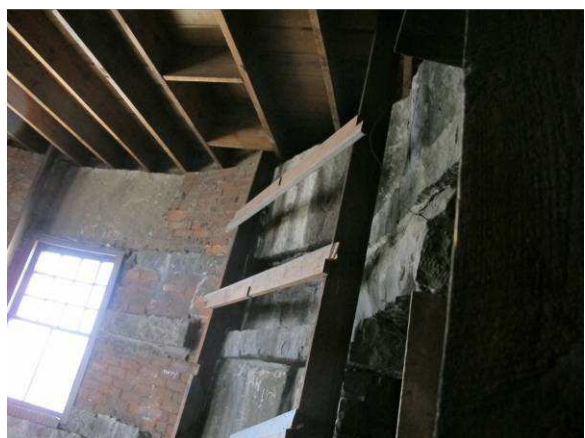
Evidence of smoke damage



Uncoursed mix of brick and stone



Uncoursed brick and stone



Brick to stone transition





Brick repairs at north end roof



Mix of brick and stone



Smoke damage evident on stone



Smoke damage on interior stone arch



APPENDIX C
- South side of building -



Failed mortar and sealant at window



Debonded mortar joint and failed mortar



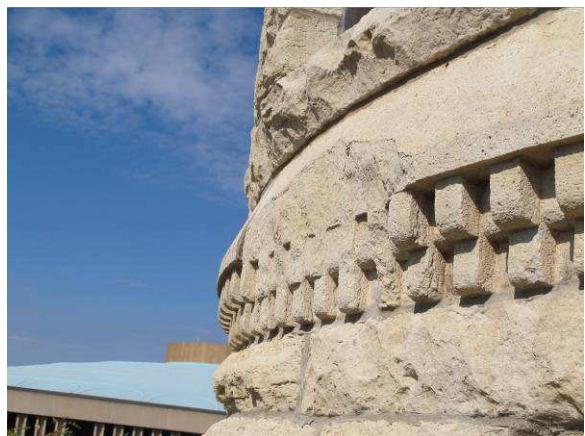
Debonded mortar



Failed joint at window



Cement board infill at windows



Loss of stone at dentil detail





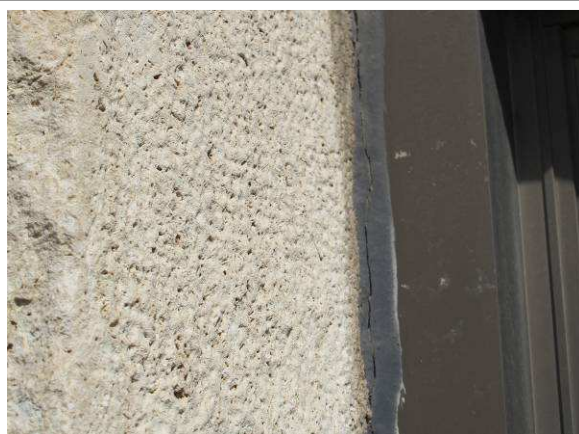
Delaminating naturally bedded stone



Exfoliating stone



Spalled stone



Failed sealant



Exfoliating stone at window ledge



Spalled stone





Stone spall



Debonded mortar joint



Missing cement board



Deteriorating limestone



Infill above glazed window



Mix of infilled and glazed windows





Deteriorating limestone



Crack in stone above window



Deteriorating stone



Exfoliating window ledge and failed repair



Missing mortar



Separated mortar





Loss of stone detail



Missing mortar



Separated and missing mortar



Separated mortar



Cracked stone at window opening



Cracked stone





Foliage close to building



Water damage on underside of window header



Damaged cement board



Cracked stone above window



APPENDIX C
- East side of building -



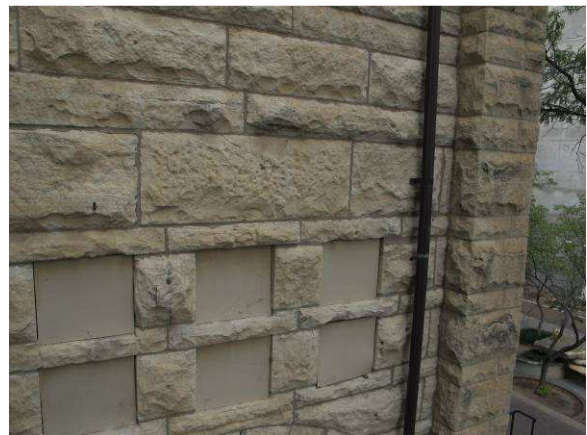
Parging on limestone



Failed parging on limestone



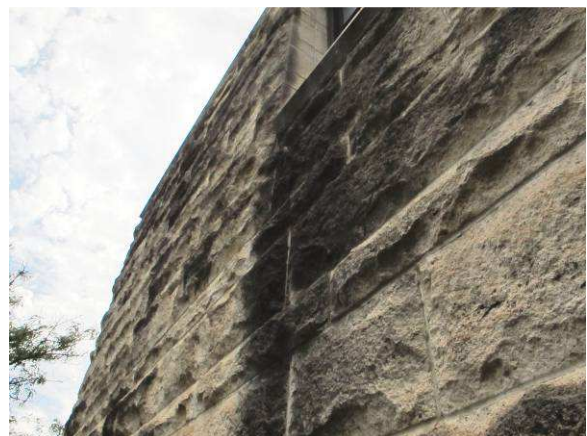
Deteriorating window ledge



Infilled windows



Spalling stone



Deposition on surface of stone





Failing mortar joints near roof sealant



Corner turret



Deteriorating wood window



Broken stone above addition



Deteriorating stone



Deteriorating wood window





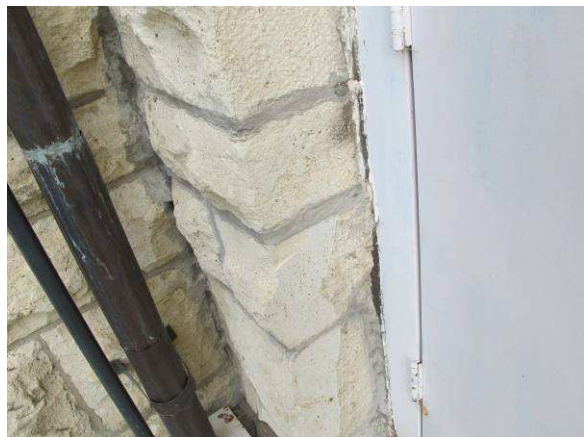
Painting failing on exterior fire escape



Deposition on limestone



Deposition on limestone



Failing mortar



APPENDIX C
- North side of building -



Beginning assessment on north side



Missing, cracked and separated mortar



Crack running through joints



Poor mortar installation at return



Cracked cement board



Poor mortar installation below spalled stone





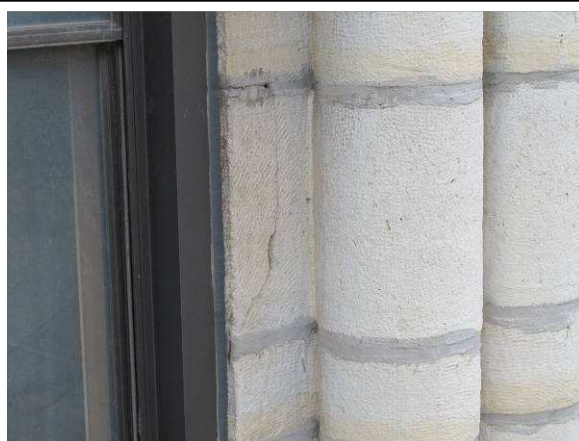
Poor mortar installation



Cracked header stone



Underside of arch



Spalled limestone



North side of bldg looking west



Spalled stone above dentil





Spalled stone above dentil



Separated mortar joints



Damaged stone column



Evidence of water damage above arch



Cracked header stone



North entry





Poor mortar installation



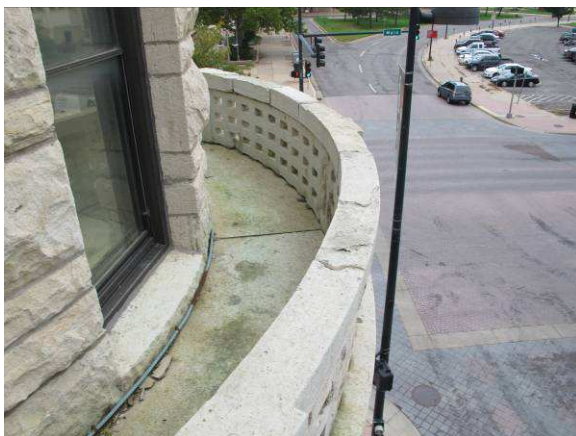
Cracked stone



Delaminating stone at grade



Cracked mortar joint

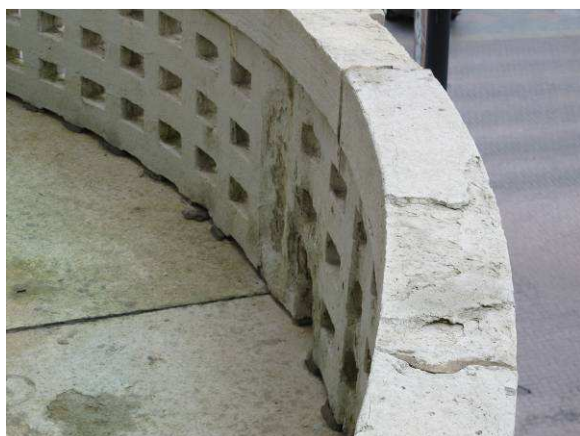


Damaged balcony railing



Failed mortar repair





Deteriorating stone



Damaged stone



Deteriorating balcony stone



Poor mortar installation



Deteriorating stone



Poor mortar installation





Deteriorating stone on underside of balcony



Deteriorating stone on underside of balcony



Deteriorated balcony rail



Deteriorated balcony rail



Deteriorated stone



Deteriorated stone



APPENDIX C
- West side of building -



West side of the building



Cracked mortar joint



Repaired cracked stone



Failed mortar joint



Exfoliating stone at arch



Spalling limestone





Failed window sealant



Poor mortar installation



Crack in limestone



Failing sealant



Failed mortar and sealant



Debonded vertical mortar joints





Cracked header stone



Cracked header stone



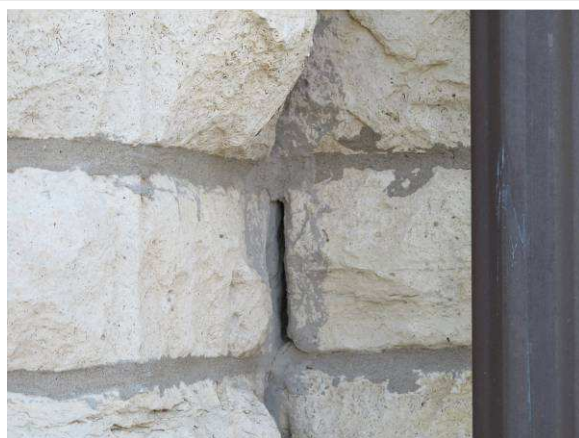
Spalling stone above entry



Spalling stone above entry



Cracked vertical mortar joints



Missing mortar





Open skyfacing joint



Missing mortar



Deteriorating stone ledge



Missing mortar



Deteriorating stone



Failed mortar joint at header





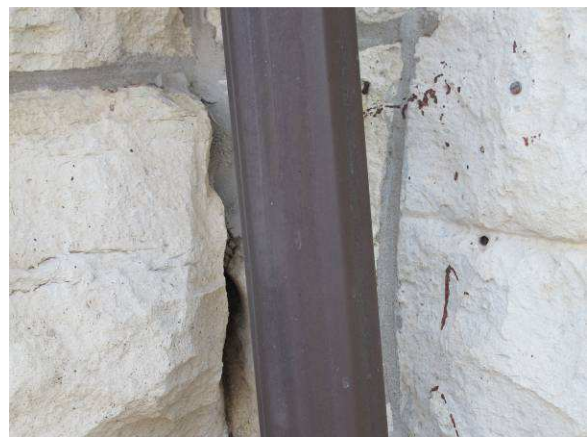
Failed mortar joint at header



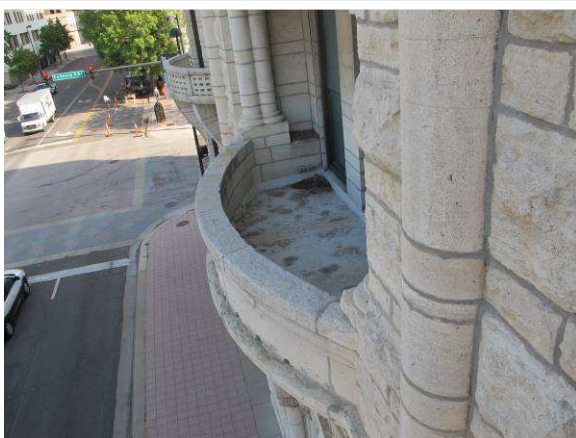
Failed repair of cracked stone



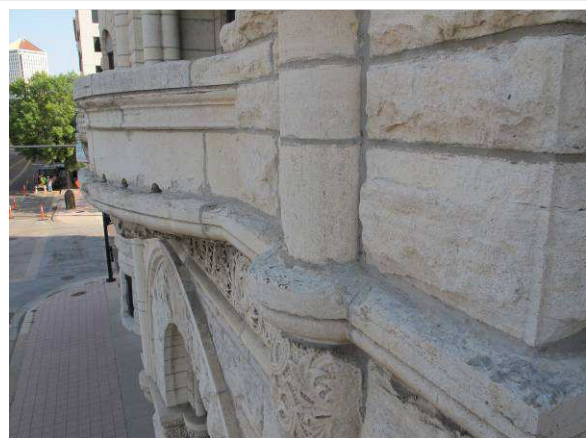
Delaminating and exfoliating stone



Missing mortar



Deteriorating stone at balcony above main entry



Deteriorating stone at balcony above main entry





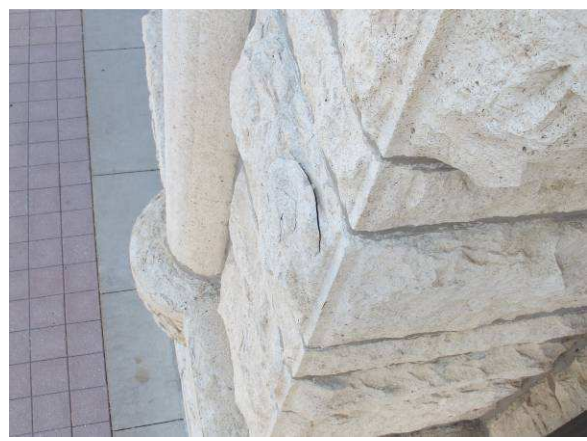
Close up of deteriorating stone



Missing mortar



Loss of stone detail above main entry



Spalling limestone



Deteriorating stone



Deteriorating stone





Damaged stone at grade



Failed sealant at window and sidewalk



Failed sealant and deteriorating stone



West side main entry



Discoloration below carving



Poor mortar installation below carving





Upper wall above main entry



Deteriorating limestone



Damaged stone detail



Delaminating stone ledge



Damaged stone



Deteriorating stone above columns





Deteriorating stone and poor mortar installation



Extensive sealant around balcony



Separated joint and deteriorated stone at balcony



Deteriorated stone at balcony

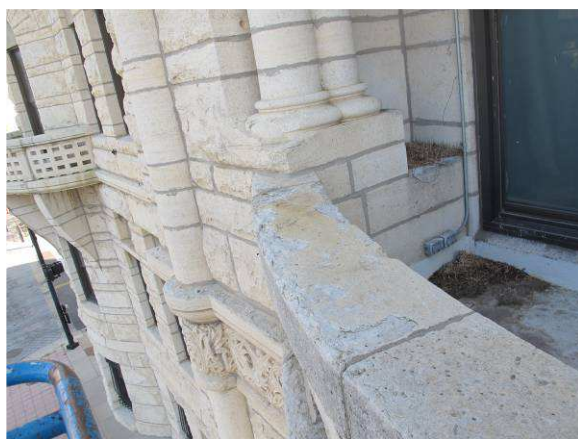


Discolored carved date of construction



Failed joint and deteriorated stone

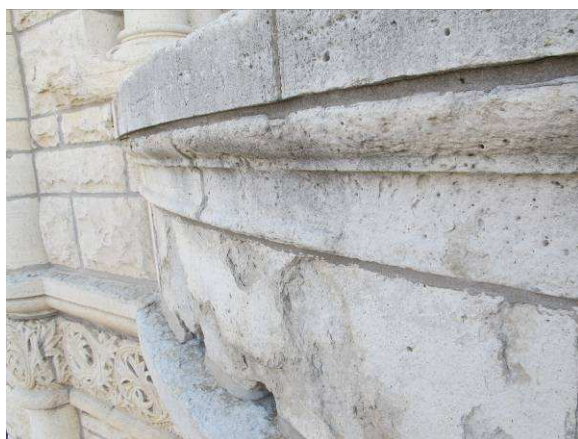




Deteriorating balcony rail



Separated joint and deteriorating mortar



Deteriorated stone at balcony face



Deteriorated stone at balcony face



Failed joint and damaged stone above support



Failed joint and damaged stone above support

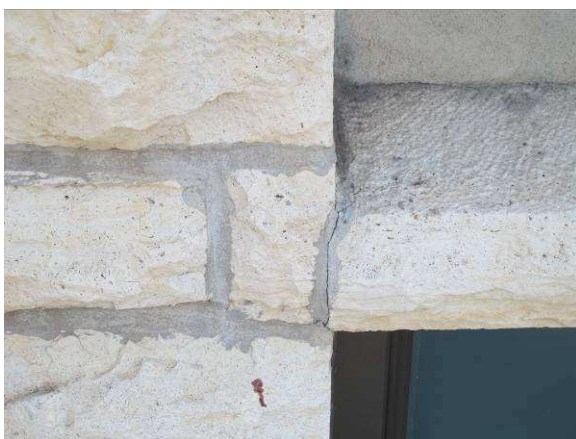




Damaged stone and open skyfacing joint



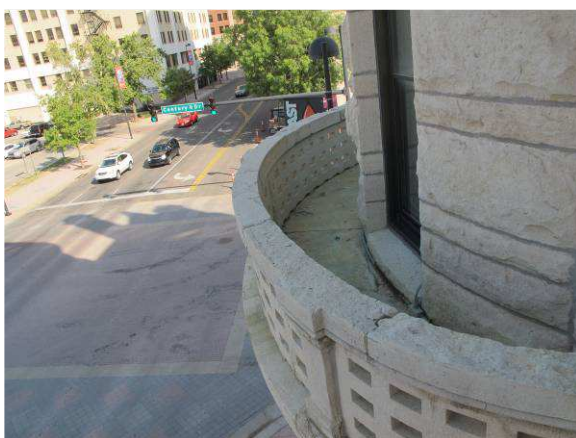
Deteriorating stone



Failed joint at header



Deteriorating stone



Damaged stone at NW corner balcony



Deteriorating mortar





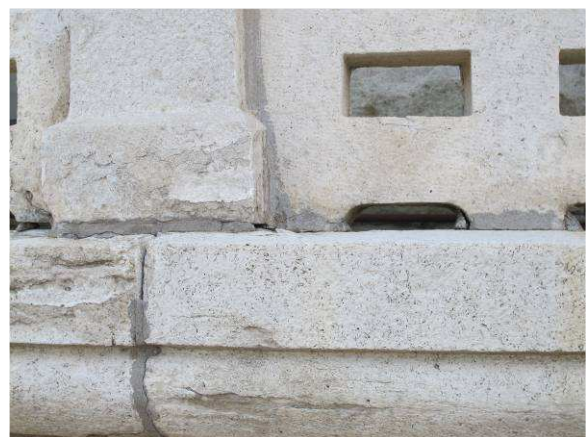
Damaged limestone



Damaged limestone



Failed mortar and deteriorating stone



Failed mortar and deteriorating stone

