



Department of Public Works

Jeffrey J. Mantes
Commissioner of Public Works

James P. Purko
Director of Operations

January 26, 2007

Honorable Robert Bauman
Alderman, 4th Aldermanic District
Room 205, City Hall

Dear Alderman Bauman:

I appreciate the sharing of comments you received and your concerns regarding the color matches of brick masonry and Terra-Cotta for the City Hall Restoration Project. We assure you that the Department of Public Works (DPW) holds in high regard the aesthetic quality of the project and views your inquiry as reasonable and relevant. We are providing the following as background information regarding this matter.

The goal of this project is to provide an exacting brick and Terra-Cotta match. The National Park Service standards for rehabilitating historic structures require materials that need replacement be replaced with like materials of the same size, shape, texture and color. Size and shape are achievable to within an industry tolerance of +/- 1/16 inch. Texture and color are the quantifiable objectives. Achieving the goal of an exact color and texture match has been found to be difficult and challenging due to limitations on available manufacturers, modern day processes and variations in the existing brick and Terra-Cotta.

Variations in the existing brick make it impossible to replicate existing conditions (photo "A"). Decades of exposure to the elements (photo "B") and previous chemical cleaning make it impossible to achieve an exact match. Simulating texture and color with modern day manufacturing standards and processes have been difficult. We believe what has been selected is a close match but not exact.

The existing Terra-Cotta and brick both originated from the same region, being made of similar clays outside of St. Louis, MO. These plants are no long in existence. The Terra-Cotta for this project is manufactured in California and the brick is manufactured in Alberta, Canada. As you are aware there were only two

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Terra-Cotta manufacturing companies large enough to handle this work. Boston Valley Terra-Cotta of New York was not selected by J.P. Cullen because it placed this manufacturer at near maximum capacity and was cost prohibitive. Gladding-McBean Terra Cotta of Lincoln, California is supplying the Terra Cotta pieces for the project.

The brick color selection process had gone through numerous mixture iterations, submittals, and rejections before a consensus was drawn as to what would be an appropriate color for this project. The first set of submittals was submitted by a large Midwest Manufacturer, Belden Brick Company of Canton, Ohio. After numerous rejections, the Belden Brick Company and J.P. Cullen conceded that they could not provide the color and texture of City Hall's pressed brick with their extruded brick product.

J.P. Cullen then researched and found two manufacturers that could supply pressed brick for the project, I-XL of Medicine Hat, Alberta, Canada and another company that became disinterested when the required quantities for the project did not warrant their expense in opening that portion (pressed brick) of their plant. I-XL became the only supplier available to provide the product. After numerous iterations of submittals, I-XL was able to provide close matching brick samples. During the manufacturing and mixing process I-XL cautioned the contractor and city against impregnating more raw materials into the clay because they were approaching the material's limits and ASTM standard for shrinking, warping and moisture absorption, compression strength, and brittleness.

A brick approval process followed using the samples provided. This process included the City and the Design Team. The Historic Preservation Commission representative expressed concern; however a consensus was reached that the match was a fit for this project. The selected color was based upon a color that would blend with the exiting brick over time. The same thought process was used in selecting the Terra-Cotta color and sandstone.

Once the new brick was placed on the building, DPW expressed concern that although the color was an acceptable match, it needed to be revisited for the south tower. The current brick selection does not have a mottled color variation like the original brick, and there is a noticeable color variance with the brick on the north elevation of the south tower which is darker and has discolored over time (photo "C"). For this reason the City has directed J.P. Cullen to have I-XL adjust the brick formula one more time in an attempt to get a close match to the

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brick on the south tower. It will take approximately 6 weeks to complete the brick manufacturing process before we will have any results. Regardless of the outcome of this latest brick sample, when viewing the building as a whole, we feel we have achieved an acceptable brick color to match City Hall's existing brick (photo "D").

We will discuss these issues with the Public Works Committee (PWC) during our next quarterly report on the City Hall Restoration Project. At your convenience, I would be pleased to meet with you to talk more about these issues prior to the PWC meeting.

Very truly yours,

A handwritten signature in black ink, appearing to read "Jeffrey J. Mantes". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Jeffrey J. Mantes
Commissioner of Public Works

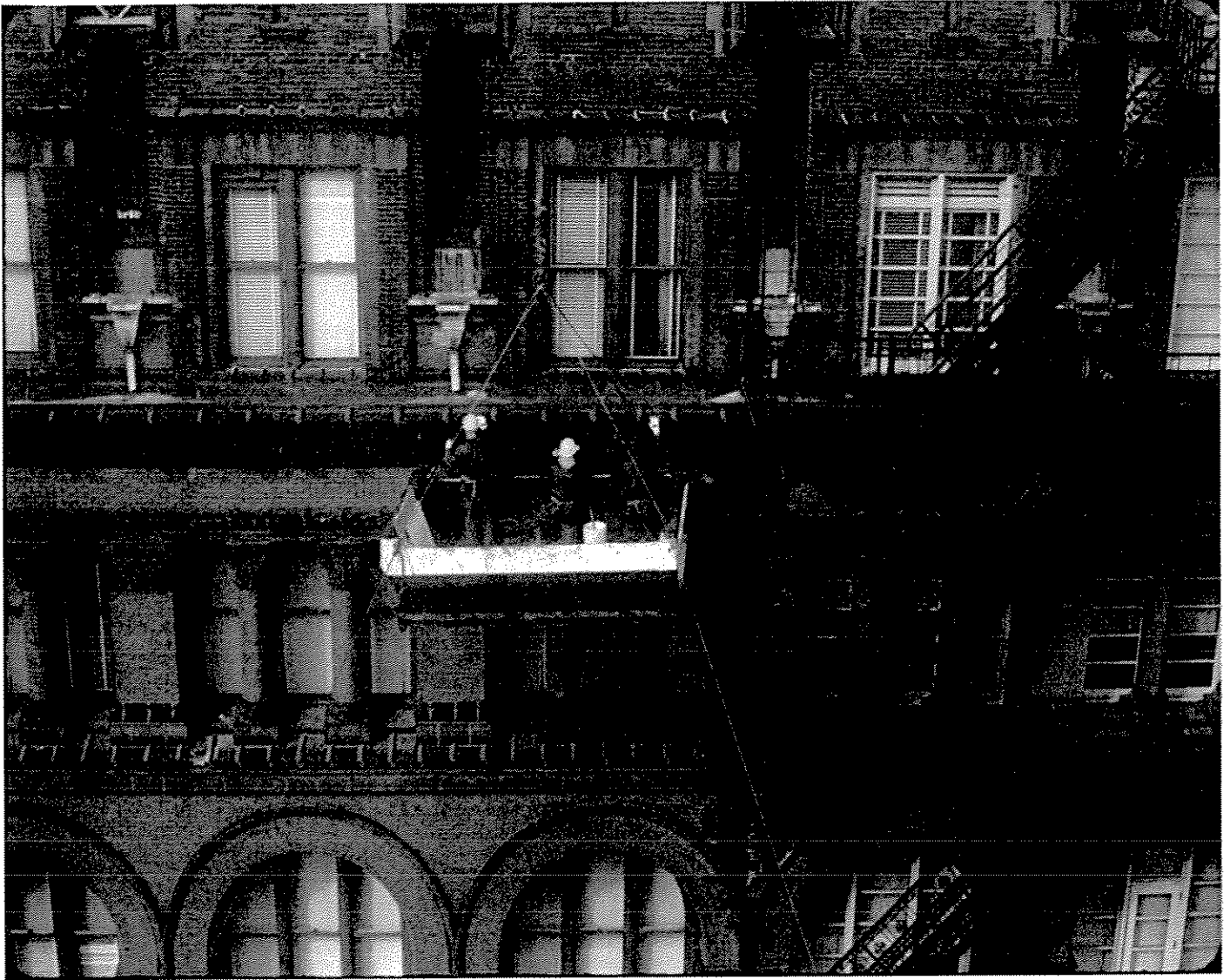
JJM:RS:ph

Attachments

c: Mayor Tom Barrett
Historic Preservation Commission

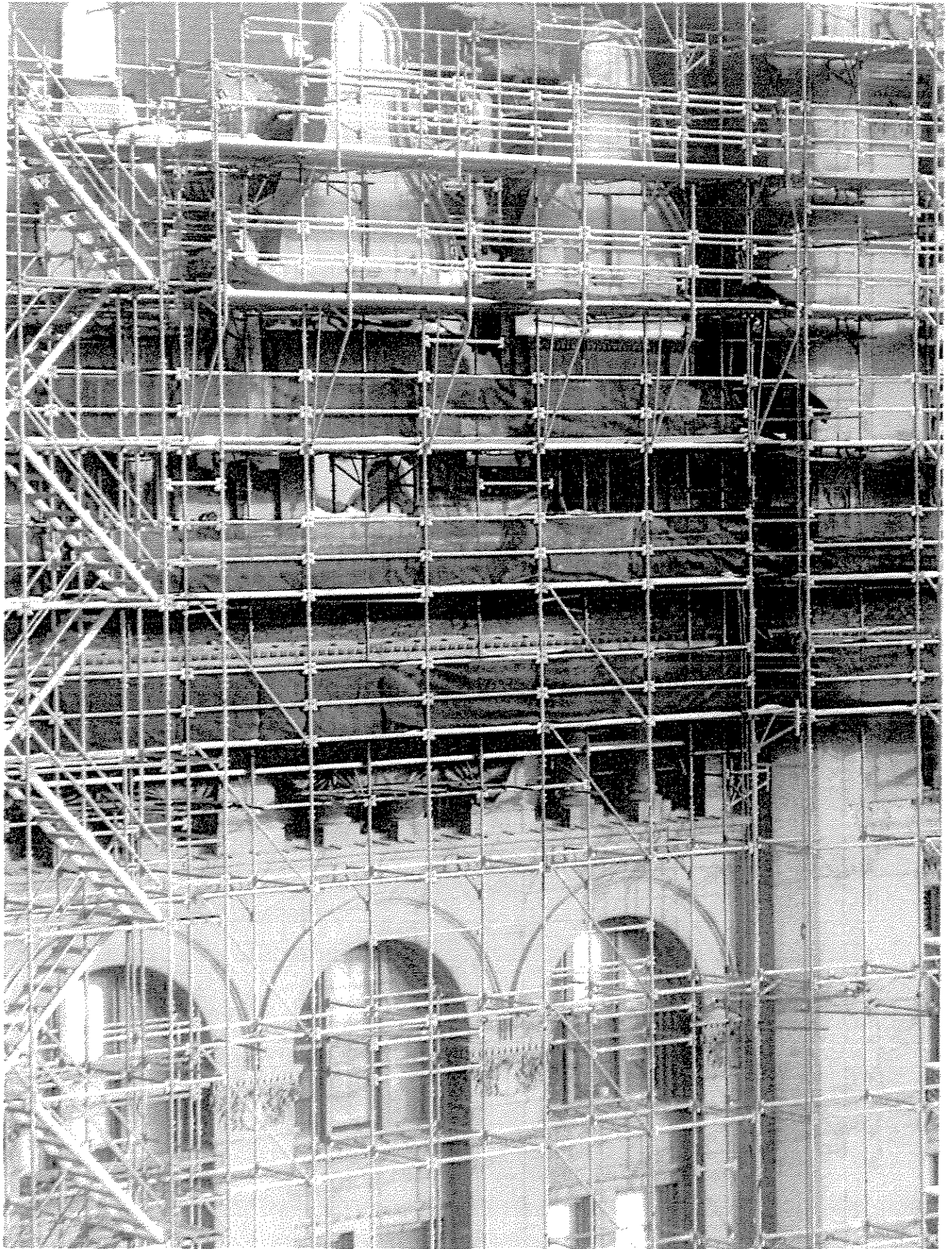


Existing brick at dormer area

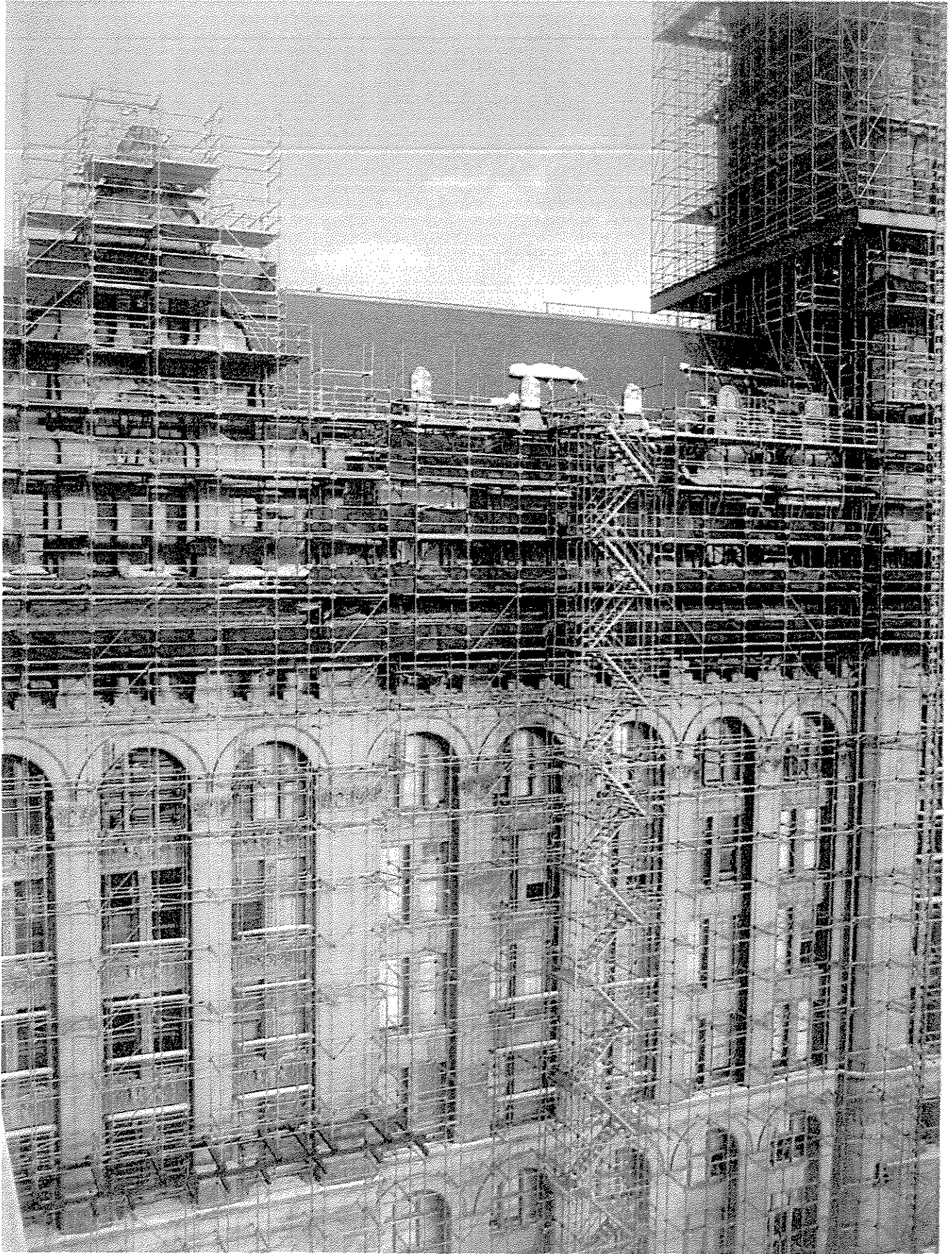


City Hall circa 1972
prior to cleaning

“B”



"C"



"D"