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July 3, 2023 (Project resubmitted from June 14, 2023)

Detroit Historic District Commission
Coleman A. Young Municipal Center
2 Woodward Ave. #808
Detroit, MI 48226

RE: 8022 Kercheval (Intandem Cafe + Bike Studio)

Subject Studio is writing on behalf of the owners of 8022 Kercheval Ave. and their contractor, Maxwell Construction, with additional information to resubmit to the Detroit Historic District Commission (HDC) regarding the renovations proposed to the building. A partial COA (#DHDC 23-8404) and partial NOD was issued for the proposed work at the meeting held on June 14, 2023. The items issued for denial included the replacement of the existing brick veneer at the front façade, and replacement of the existing windows and brickmold. As requested by the commission, we met HDC staff at the property on June 29 to assess these conditions together with Maxwell Construction to clarify our assessment of the necessity for replacement of certain elements due to the severity of deterioration, which is explained in more detail below.

I. Brick Veneer

1. Existing Conditions

The entire structure is clad in a variegated yellow/beige brick veneer composed of standard size modules (8" width, 2-1/4" height, 4" depth) set in dark lime-based mortar with ½" joints. The condition of the veneer at both side and rear facades is fair and repairable, with most bricks intact and structurally sound. These three facades will require replacement of a small number of bricks that are loose, broken, or missing; repointing of the mortar in selective areas; and a cleaning as prescribed by the Secretary of Interior Preservation Brief #1 across all faces.

The condition of the brick veneer at the front façade is poor and structurally compromised. After the porch roof above the west front porch failed and was removed (around 2014), the void that remained above the porch entry wall which protrudes beyond the second level face was not properly encapsulated to protect the structure from the elements. Over the next five years (as evidence from the Google Street View timeline included in the original submission materials), this allowed water and ice to accumulate between the brick veneer and wood wall assembly. The water infiltration caused the brick ties holding the veneer to the structure to oxidize and fail (brick ties installed in 1907 would not have been galvanized), and also severely compromised the steel lintel that was supporting the brick veneer above the west front porch. The remains of that lintel are visible from within the entryway of the western entrance which show a near complete failure due to rust, distortion, and almost complete disintegration. The exact same process is currently underway at the east front porch (albeit at a slower rate) in which openings in the porch roof have exposed the structure to water infiltration causing the lintel and brick ties to disintegrate, and the veneer to begin peeling away from the structure.

All of these factors have caused the brick veneer at the western flank of the front façade to separate from the structure completely – risking total failure and collapse of that portion of the veneer and posing a risk to public safety. These portions of the façade that were likely to crumble and fall were stabilized with temporary lumber bracing bolted through the wall assembly to the inside of the interior wall. Through this temporary remediation effort, the contractor has studied the wall system and came to the conclusion that this initial point of failure has had ripple effects through the front bay and to the opposing side of the front façade,

any structurally sound renovation will have to include removal and rebuilding of the entire brick veneer at the front façade. While portions of the façade upon cursory observation appear to be visually intact and potentially repairable, a brick veneer is a unified assembly in which every component (brick module, mortar joint, and tie) act together to give it structural integrity. If one component fails, ripple effects have the potential to compromise the entire system. Stress cracks emanating from the areas of failure have compromised the stability of the majority of the front façade that otherwise may appear to be stable on the surface. Unfortunately, the number and locations of bricks that would need to be replaced, coupled with the level of damage that has been caused by the structure being exposed to the elements for so long, has made the front façade impossible to patch and repair in a structurally sound manner.

2. New Infill Brick Specification

The front façade will need to be removed and rebuilt with either a combination of new standard size bricks (8" width, 2-1/4" height, 4" depth) and any original brick modules that can be salvaged, cleaned, and reused; or a full rebuild using all new bricks of a more commonly available modular size (7-5/8" width, 2-1/4" height, 3-5/8" depth) as a second option if standard size are not able to be obtained in the quantity required. The contractor has indicated that it will be impossible to achieve total efficiency during any effort to reclaim the existing brick for reinstallation, and that some extent of new brick will have to be used in any case.

There are two new brick options provided by Belden Brick that most closely match the original in design, color, texture, and material composition. Images of both are shown in the images of the reference document:

Brick Option #1: 470-479 Light Range. Available in modular. Potentially available in standard size depending on material availability*

Brick Option 2#: Madrid. Available in modular size. Not available in standard size*

**Belden Brick (or any other brick manufacturer) does not stock standard size bricks. This would be considered special order brick that requires 10,000 – 30,0000 minimum quantity to be ordered (we would need ~3,000 bricks to completely rebuild the front façade). In order to acquire the relatively small amount of standard size brick (if required for the project), the order would need to be coordinated and included with another larger order for a different project elsewhere in order to make the standard size feasible in either brick option.*

3. Front Façade Reconstruction Approaches

The following options reflect the possible routes that could be taken to reconstruct the front façade that weigh the forces of material availability, physical construction possibilities, and aesthetic cohesion considerations when integrating new and original brick:

Approach #1:

- Salvage and clean as many bricks as possible to integrate within the rebuilt façade
- Rebuild front façade brick veneer with a mix of salvaged and new standard size bricks*
    - Locate new bricks at the base behind the reconstructed front porch that will extend across entire façade (so they won't be visible), and at front bay*
    - Locate salvaged bricks beginning at lower side flanks by entry doors and install to underside of roof at second level.
    - All faces of front bay protrusion to be reconstructed of entirely new brick
- Infill missing or broken portions of side and rear facades with new standard size bricks* as needed or salvaged bricks if available
- The idea behind this approach is to let the old brick stand out from the new without sacrificing a cohesive façade by re-installing salvaged brick at both corner conditions where front and side facades transition, and use either all salvaged or all new brick at

each individual wall plane to avoid obvious integration and a patching effect between new and old material. Please see attached photo reference document for clarity.

Approach #2:

- Rebuild front façade entirely from either new brick option in standard size*
- Infill missing or broken portions of side and rear facades with salvaged brick as needed
- This option would work best if there are not enough brick able to be salvaged from the front façade after careful demolition; or if the original brick provides too much of an aesthetic contrast to the new brick as deemed by the HDC after cleaning.

Approach #3:

- Rebuild front façade entirely from either new brick option in modular size (Brick Option 2: Madrid is owner's preference)
- Infill missing or broken portions of side and rear facades with salvaged brick as needed

**The viability of using standard size bricks in any option is conditional and dependent upon standard size bricks becoming available from the brick manufacturer.*

PLEASE NOTE:

It has been determined through extensive analysis that there is no feasible approach that doesn't first involve removal of the existing brick veneer at the front façade to address the underlying structural issues, and we are presenting these approaches in the order in which we would like to proceed with rebuilding. Approach #1 being the most preferred option, and then moving to the Approach #2 or #3 only if made necessary by lack of new brick availability or the number of bricks able to be salvaged.

The original brick detailing would be replicated in all approaches; including edge-exposed open mortar finger joints at the intersection of the front bay faces, double protruding courses at water table delineating basement and first floor levels, mortar type/color, mortar joint dimensions and extant mortar recess pattern(s).

The preference of the owner/architect/contractor team would be to have HDC approve Approach #1 so that the owner can move forward with the purchase of standard size bricks to match the dimensions of the existing, if and when they become available (Belden cannot hold an order contingent on a larger order, and we need HDC approval for the brick spec before an order can be placed). Our team would then work with the HDC to solidify the best approach as the project progresses.

II. Windows and Brickmold

1. Existing Conditions

There are 29 total existing window openings across the North, East, and West brick-clad elevations of the building; and 27 extant windows within those openings. There is a single window at the South elevation within the wood lap-sided gable end at the attic level. The majority of the window operations are double-hung, with the exception of four combined fixed+transom window units at the center face of each bay at the North and East elevations. Note that three out of the four transom windows at the center of each bay are not original to the building, and appear to have been replaced in the last ten years. All windows are single-glazed with ¼" clear glass and no divided lites. Three panes at the first level are covered with a semi-transparent privacy film at the lower sash. The sashes are operated with ropes, pulleys, and counterweights; but these elements are missing or deteriorated at the majority of windows. Site line dimensions include the sash stiles at 1-½", top rail at 1-¾", meeting rail at 2", and bottom rail at 3". The frame face dimension is 1" at top and sides; with the sill interior face being 1-½" and exterior face being 1". The sashes and frames are plain-faced with no distinctive detailing or decorative elements that impart a defining visual character to the building. An

existing wood brickmold with several fine articulations exists on the majority of windows and visually softens the transition between window and cladding at the exterior.

All windows are in poor to fair condition throughout the building (see attached window schedule for more detail). Every window has experienced some level of water infiltration and subsequent rot to the point where one or more components are deteriorated beyond repair and would require component replacement (refer to included window schedule). In several instances, sash stiles, frame stops, and glazing are missing completely. Glazing putty is cracked, loose, or missing which has allowed water to saturate the wood through the joints. Metal sill plates have been nailed over several windows at each bay, concealing any damage from view. All windows and brickmolds have been coated with an acrylic/latex-based paint on the interior and exterior surfaces that is heavily caked and peeled. This has allowed water to permeate the wood grain and compromise the brickmold structure through freeze/thaw action. Restoration of the brickmold would be very difficult in this case, as there are many pieces where the wood fibers have deteriorated to the point where they would fall apart if attempting to refinish. The windows have no weather stripping and allow excessive air infiltration. The only option to improve energy efficiency would be to add an exterior storm window to mitigate heat loss, conduction, and condensation; as the existing glazing pocket will not accept insulated glass.

As requested by HDC staff, attempts have been made to engage historic window restoration/replication experts, contractors, and carpenters to assess the possibility of repairing the existing windows in reference to the National Park Service guidelines for restoration and replication as provided in the Repair of Historic Wood Windows Presentation NPS Brief #9. We were able to make contact with three qualified companies - Place Restoration Works (Phil Mayo), H&R Windows (Tom Rushton), and Michigan Historic Window Company (Joseph Frost). While Michigan Historic Window Company was unable to travel from their location in Bay City to perform the work, we were able to meet both others at the building to assess the window condition and potential for repair. Place Restoration Works conveyed that it may be possible to repair the windows, but many components of the frames and sashes would have to be replaced with new due to the level of damage to the point where full replication would make more sense, and such work would be 3x the cost of installing replacement windows. They have not been able to issue a specific estimate for replication to date, or a written detail of their assessment despite our request to do so. Upon reviewing the windows with H&R Windows, their opinion was much the same, and they were willing to submit the attached written opinion that the existing windows and brickmold are not feasible to repair due to the extent of damage and missing components. Please note that this review and opinion is based on over 30 years of historic wood window restoration and replication experience.

2. Proposed Replacement Windows
   Based on our analysis and the assessments we've received, it has been our determination that the only path forward would be to replace the existing windows with new units matching the characteristics of the exiting as much as possible; and fabricate and install new wood brickmold in the same profile as the existing as it is too deteriorated to refurbish. We have selected the Marvin G2 Ultimate clad wood windows as the proposed replacement after comparing the existing windows to several different contemporary models to match proportions, site line dimensions, and overall aesthetic of the window as it contributes to the building.

The above is a synopsis of the analysis we've performed and information received to date regarding these items required for HDC approval to move forward with the project. Further detail is provided in the attached drawing and photo documentation. Please contact me with any questions.

Subject Studio, LLC

Michael Sklenka

Michael Sklenka, RA