

6/12/2019

Bedrock Detroit  
Attn: Zachary Bowersox Project Manager  
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Job Name: Harvard Square  
Job Location: Detroit, MI

## **HISTORIC WINDOW SITE REVIEW:**

The following is the Historic Window Site Review as requested for the property Harvard Square in downtown Detroit, MI. This includes a review of all window openings on all elevations for this 11-story building. This review is based on site visits by BlackBerry personnel and discussions with Zachary Bowersox Project Manager with Bedrock Detroit. Our review considers the National Park Service guidelines for restoration and replication as provided in the Steel Window Preservation NPS Brief #13. Likewise, in providing our recommendation for the restoration or replacement we are adhering to the guidelines that meet NPS and SHPO standards. Please note this review is our opinion based on over 30 years of historic window restoration and replication experience; however, you must have written approval from NPS to be assured of the project's tax credit approval; as well as approval by your local HDC to proceed with construction.

**I. Existing Conditions: (220) Openings on the North, South, East and West Elevations. Cold Rolled Steel Double Hung windows approximately (7,250) sq. ft.**

These windows are in poor to fair condition throughout the building. All windows are single glazed with 1/4" clear float glass on all elevations except the east alley elevation that has 1/4" wire glass. The glazing method is glass set in a bed of glazing compound with an interior sash rail fastened to the exterior rail with machine screws. The master frame is 3/16" cold rolled steel at the head, jamb, and sill. The sashes are operated with a chain, pulley, and counterweight. The site line dimensions include the sash stiles at 1 3/4", top rail at 1 3/4", meeting rail at 1 5/8", and bottom rail at 2 1/2". The exterior master frame face dimension is 1", and the exterior sill face is 1/2". All

windows were originally painted on both the interior and exterior surfaces. The existing exterior condition is all heavily rusted, with both the original glazing compound and perimeter caulking failing or missing. Windows of this time period typically have ACM present in both these materials. This will require abatement at the time of removal. At our last walk thru, it was mentioned that original plaster has ACM. This is necessary to remove when removing the existing master frame; and likewise, requires abatement and disposal. The exterior sill rails in some cases are corroded to a point of joinery failing, as well as the exterior sills. Interior glazing beads at the sill and meeting rails on some windows are warped and bent from water penetration and freeze and thawing action. This type of window has no weather stripping and allows excessive air infiltration. Restoration is very difficult since even if the exterior rust is abated the interior side of the hollow metal frames cannot be reached and continue to rust and corrode, which is visible at all joinery locations. Likewise, to improve energy efficiency the only option is an interior storm window that will help with heat loss, conduction, and interior side condensation. The existing glazing pocket will not accept insulated glass.

**Recommendation: Full Replacement with a new Aluminum Historic Replica Single Hung Window.**

We recommend the full removal of the existing windows and the original master frame including interior metal casework. To replicate a typical cold rolled steel window for this era the entire assembly must be removed to provide a clean masonry opening. Likewise, all the surrounding plaster on the interior side must be removed adjacent to the windows to remove the master frame weight box. Existing and proposed details need to be developed; as soon as we have done so these will be provided for submission to your architect and SHPO. The proposed window would be a thermally broken aluminum single hung window; we have suggested the Quaker H503 with historic exterior panning and sill, as well as an interior trim system. The window would have insulated glass with Cardinal 272 low-e and argon fill, AAMA 2605 painted finish, standard hardware. No screens would be included since NPS does not typically approve their use. We note that we have not been provided or reviewed an environmental report; however, we would expect that ACM is present in all glazing compound and perimeter caulking and we have included abatement and disposal in our budget pricing.

**Budget Pricing \$ 991,000.00**

**II. Existing Conditions: (5) Sections of Hot Rolled Steel Fixed/Project-Out Casement window openings on the 2<sup>nd</sup> Floor Front Elevation approximately (250) sq. ft.**

These windows are original to the building. They are all hot rolled steel frames and sashes with 1/4" clear float glass. The window units are set into a cast iron ornamental frame with decorative wall plates between window sections. They all have an interior glazing bead attached with a machine screw; the glass is set in a bed of glazing

**compound. The windows are set in place and fastened to the cast iron frame surround. The windows are in fair to good condition. Much of the hardware is missing or broken.**

**Recommendation: Full restoration of existing windows and ornamental metal surrounds (300 Sq. ft.)**

**All material will be stripped of all paint and corrosion, repair or replacement will be made to any sill and frame components that require attention. All windows will be reglazed with ¼" clear tempered glass. All material will be primed and finished painted as well as all joinery caulked and sealed.**

**Budget Pricing \$54,000.00**

**Alternate: For interior storms Budget Pricing \$16,000.00**

**All Budget Pricing includes material, tax on material, labor (union labor), employment cost, insurance, staging, disposal, abatement, shop drawings, and supervision.**

**Note 1. Miscellaneous Storefront and Entrances on the front façade ground floor, as well as door openings on the alley side fire escape have not been addressed in this review.**

**Note 2. Upon creating existing and proposed details for windows these will be provided for NPS approval. At that time, we can provide more accurate final pricing. Expected Lead times:**

**Windows: Design and Shop Drawings allow 4 to 6 weeks.**

**Manufacturing Lead time 13 to 15 weeks.**

**Duration for installation 12 to 14 weeks.**

**Restoration of 2<sup>nd</sup> floor front façade windows: 5 to 7 weeks.**

**Note 3. Union labor has not been included for restoration since at this time we do not have union employee personnel, or a union subcontractor to perform this work.**

**Sincerely,**

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MKS  
Michael K. Shields  
President  
BlackBerry Systems, Inc.

4/17/2023\_\_\_\_\_  
Date