

Hardwick Historical Society c/o Ken Williams 47 Depot St. P.O. Box 177 Hardwick, VT 05843

9/22/15 - updated 9/29/16

Estimate - Reproduction of windows and transoms for the middle section of the depot

This estimate is for the reproduction of four 2/2 light double-hung windows and two transoms in the middle section of the depot building located at 47 Depot St., Hardwick, VT. The sashes and transoms were removed from these windows and the openings boarded up.

There are four window units measuring 34" x 77 1/4" and two transoms measuring 18" x 7'-8". The sashes, transoms and trim (including the parting beads and interior stops) will be reproduced to match the existing windows and trim in size, detail, and wood species.

The double-hung windows have a weight and pulley system. That will be returned to working order. The weights and pulleys on the two windows facing the Town House appear to be in tact. The weights and pulleys are mostly missing on the two windows facing the railroad track.

Pricing for two options has been requested. The first option is to build the windows historically correct with a single pane of glass in the primary sash and include a wooden storm window for energy efficiency. The sashes will be glazed with either modern glass or salvaged cylinder glass as directed by the board. The finishes will match the finishes on the existing windows unless otherwise directed by the board. This options replicates the existing window/storm window combination in rest of the train station.

The second option requested the installation of insulated glass units into the primary sashes and installing them without a wooden storm window. Creating windows based on traditional methods and styles to hold the insulate glass units requires modifications to the sashes which will limit the historical accuracy of the windows. The interior profile will be reduced, as well as the depth of the glass bead on the exterior in order to create enough room for the installation of the insulated glass unit. The insulated glass unit also

doubles the weight of the window requiring increasing the weight of the counter balance system. It can be difficult to accommodate the extra weight in the existing weight pockets. Two divided light sashes are also not cost effective for a sash built with insulated glass. Therefor a facsimile of the muntins will be glued to the interior and exterior surfaces of a single insulated glass unit in each sash. The insulated glass unit will be installed into the sashes with a glass foam tape so that it can be cut out if the insulated glass unit fails and requires replacing.

Given that these windows will installed into the existing frames, the seal created with a single-pane primary sash with a storm window will be tighter than just a seal between the sashes and the frame in the insulated glass version.

The installation of the sashes will include weather stripping the sashes with a cushion bronze weather strip that stops air filtration between the sashes and the frame.

The storm windows will be installed with a suitable weather strip that will seal the perimeter of the storm window to the frame, creating an insulated space between the storm window and the primary sash.

<u>Costs</u> – The cost for the two versions is virtually the same, so the descriptions and the pricing is for the single glazed primary window with an interior storm window. The cost would be the same for the sashes with the insulated glass units installed rather than adding a storm window to the assembly.

For the double-hung windows, reproduction of the two over two sash, interior trim and installation with weather strip and modern glass (add \$80 per unit for salvaged glass), restoration of the weight and pulley system and an interior storm window.

\$ 2,200.00/window

For all four units: \$8,800.00

For the transom lights, reproduction of eight light transoms for installation in the existing frames with weather stripping and appropriate trim with modern glass (add \$50 per unit for salvaged glass) and an interior storm window. Eight lights in the primary sash and a single pane of glass in the storm sash.

\$1,900.00

For two transoms: \$3,800.00