

May 20, 2013

Legal & Finance Committee, City Council
300 Sixth Street
Rapid City, SD 57701

Project: King Residence Retrofit Window Replacement
Home: Year built 1911
Address: 923 Fulton St.

To Whom It May Concern:

I am requesting that the city council review my previous request to the Historic Committee to replace windows in my home with a retrofit replacement window. The home has had several windows replaced as retrofit windows with no disturbance to existing frame, style and trims.

Results of Historic Committee

HPC Rapid City review majority vote was that the retrofit window would adversely affect what seemed to be a standard protocol vote per guidelines. The state review commented that the retrofit window installation practice recommended would minimize the impact as the preservation of existing frames and trims would not be affected. This issue has been presented in the past, specifically retrofit, and has been approved, therefore creating an established precedent.

Existing window conditions single pane double hung:

The existing wood windows are non-functioning as they have been nailed and screwed shut and also caulked and sealed to minimize the energy loss. The windows are a single glazed glass clear with no insulating value. Some locations have had the wood screens/storms removed and metal storms added.

Existing window conditions fixed glass

The existing fixed glass, total of (3) has had deterioration to the lead glazing details at upper half of fixed glass. The windows in question are known as leaded mullioned panes. They have been shielded with an added clear glass pane. I proposed to remove the metal framed single pane glass that has been installed over the fixed leaded glass and add an insulated pane glass with low-e coatings to protect the mullions. This effort has been approved as it has no adverse affect to any existing design only protection of fixed glass. The objectives being to retain and sustain the effect of the period while, at the same time ensure that the architectural appointments were retained. It is imperative that the effects of the timeframe be sustained. The materials used are irrelevant.

Options Considered

- 1) Repair existing wood windows to original. I have reviewed the option of restoring the wood windows and have found that the cost would be extreme with minimal gain in function and performance to standards set forth and meeting today's energy requirements and tax credits. With no gain this method would be both a financially expensive option and would have affects in today's active and embodied energy requirements. RRP contractor costs would also affect the cost of renovation. Please note, one of the windows in the kitchen has already been replaced with a wood retrofit window. The previous owner of the home had the kitchen window replaced approximately two years prior to my buying it. The window would no longer lock and could not stay open without a prop. The wooden window had lost its weather seal. The current window has not had any of the aforementioned issues since installation two years ago. Since the composite has been installed, there is no "wind" or cold air that blows into my home, as with the wood clad window. My heating bills dropped from my bedroom and kitchen window install.
- 2) Replace existing wood windows with like/in-kind wood windows. This has also been considered as an option and I have found that the costs are almost 4 times that of a retrofit/insert and again achieving minimal gain in today's energy requirements standards set forth. Full replacement would also disturb the building envelope that integrates with my existing window frames and may also need to be upgraded and is very costly. The wood window products available also have minimal warranties for the homeowner with less life expectancy and higher maintenance costs. Specifications and performance grade are also a factor in selecting this option which again can adversely affect both the active and embodied energy requirements. RRP contractor costs would also affect the cost of renovation.
- 3) Retrofit/Insert window replacement. This option was considered and reviewed with two different products available on the market that I considered for their minimal adverse affect or impact with saving the integrity and historical frame and trims of the existing windows.
 - A) Wood window inserts designed for the intent of inserting into existing frame. The selection by wood manufactures is very limited. The specifications and performance grade is borderline for today's building code requirements. The warranties are very limited of only 10 years both components and glass package and in some cases prorated even with original purchaser of products. The cost is usually twice the cost with less performance and homeowner warranty.
 - B) Vinyl composite window inserts are designed for the intent of inserting into existing frame. The selection available is much broader with the upper end vinyl composite windows. The higher end performing products on the market are also JD Powers rated. The performance grade and specifications are above standards set forth by building codes and tax credit incentive programs available. The warranties on both components and glass packages can be limited lifetime which is a homeowner value and somewhat maintenance free. PLEASE NOTE:

Vinyl does not refer to plastic, such as dishware or toys, but rather is a generic term applied to 'plastics' comprised of various polymers. In this instance, the reference is specific to a degree of sustainability and flexibility. The current retrofit inserts provide a much greater degree of ability to settle with the main structure, resulting in less warping and breach of energy efficiency.

I respectfully request that the city council allow a permit for my renovations at my residence for the following reasons.

- 1) Minimal impact both historically and energy related in both the active and embodied requirements.
- 2) Performance and financial gains for the homeowner.

Thank you for your time and consideration.



Stephanie King