

Window Retrofit: Phoenix, AZ

Builder Profile

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Project Home

 Name: Slump Block Home
 Location: Phoenix, Arizona
 Layout: 3-bdrm, 1 bath, 1 fl, 1,980 ft²

Climate: IECC 2B, hot-dry

Year Built: 1949

Retrofit Completed: July 2021

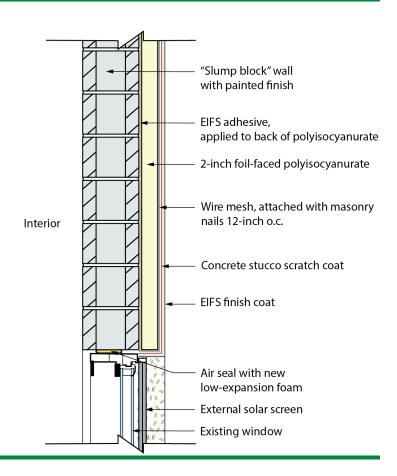
Pre-Retrofit (1949) All double pane Replaced one single-pane window. Added solar screens to all windows.

Phoenix Project	Windows
Upgrade	Add solar screens to all windows and replace one single- pane window
Number of Windows Replaced	13
Planned Material Cost	\$655
Planned Labor Cost	\$275
Total Planned Cost	\$930
Added Upgrade Material Cost	\$2,606
Added Upgrade Labor Cost	\$400
Upgrade Incremental Cost	\$3,006
Total Project Cost with Upgrades	\$3,936

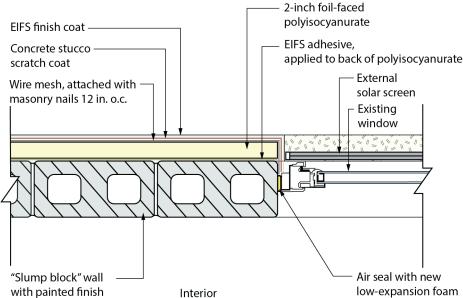


The comprehensive upgrade of this 1940's concrete block home in Phoenix, Arizona, included adding siding and upgrading windows. Rigid foam and stucco were installed over the concrete block walls. All but one of the home's 13 windows had been replaced with double-pane low-e windows. For this U.S. Department of Energy-sponsored retrofit, the one single-pane window was replaced with a double-pane low-e window. To improve the performance of the remaining 12 windows, sun-filtering solar screens were installed. The screens replace insect screens and are mounted to the existing window's framing with hook-and-loop closure tabs that keep the screens in place without magnets or brackets. The screens allow visibility out but block heat and views coming into the home.

Head Detail



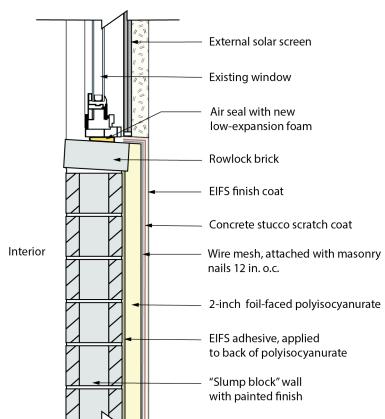
Jamb Detail





Stucco lath wraps around the windows and covers the 2 inches of foil-faced polyisocyanurate rigid foam that was installed over the original concrete block walls.

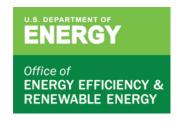
Sill Detail



For the head and sill details, the view is from the side and the interior of the home is to the left of the wall. For the jamb detail, the view is from the top and the interior of the home is below the wall.



Solar screens were attached to the exterior of the window frames with Velcrolike attachments to reduce solar heat gain and views into the home while allowing views out.



For more information, visit: Building America Solution Center basc.pnnl.gov.

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