



Building healthy community housing in Prince Albert

BASF's HP+ Wall System – XR Series build efficient and affordable units



The Prince Albert (PA) Community Housing Society Inc's mandate is to provide subsidized, affordable and transitional rental units for the Métis community. As part of their mandate, PA Housing Society constructed a 14 unit housing project. Besides the standard code requirements, the construction team made additional design and structural changes to accommodate the 1:500 flood plain on which the residence sits.

“ We wanted to build the healthiest units these people ever lived in... take sub-standard housing out of the equation and let them focus on other important things”

As Construction Manager for the project, Dan Yungwirth of Miller Construction, was involved in the project from the early stages. Besides the design, Dan outlined other considerations that were evaluated to ensure the success of the project; the building had to be easily constructed, stay within the required timelines and be economical. While the project is 14 individual, 1 bedroom units, the residence was viewed as one system to ensure aspects like good air flow, occupancy comfort and energy efficiency were examined holistically.

For this project, Dan chose BASF's HP+ Wall System – XR Series. The BASF XR wall system consists of: NEOPOR™ graphite-enhanced exterior rigid insulation; WALLTITE™ spray foam insulation that also increases the structural rigidity of the wall, and; MASTERSEAL™ NP1 sealant to keep moisture out of the wall cavities and seal up the wall.



Attached to the exterior of the framing, Neopor sheets were fastened to provide continuous insulation;



eliminating thermal bridging. Inside the wall cavity, WALLTITE was sprayed to provide additional insulation and to be the air/vapour barrier. What was the result? For this XR wall system, an RSI of 5.45 (R-value 30.9) was achieved. While based on typical 2 x 4' wood framing, there are some differences between standard building practices and assembling an XR wall; differences that improve the overall building envelope.

CODE DRIVING CHANGE

In 2019, Saskatchewan adopted Section 9.36 of the Building Code that focuses on improving the energy efficiency of buildings. Since then, there has been greater importance placed on the building envelope. One change, after the adoption of Section 9.36, has been the narrowing the cost between a house built to code and one with greater energy efficiency. Dan explained, "This all goes back to our philosophy of looking at the whole home as a system – everything has to work together. And that is related to our overall goal – building you a home that is cheaper to operate, lasts longer, and is more comfortable to live in for you and your family."

LONG-TERM VIEW

Beyond the construction phase of the project, many government housing agencies are finding a longer-term view can result in additional benefits. A tighter building envelope means less chance of mold and moisture in the walls. In addition, an energy efficient house can offer lower utility bills that translates into lower operating costs; an important factor when building affordable housing. Benefits like these, and improved comfort for the occupants, translates into an overall better environment.

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