

Grand Rapids Children's Museum: A building "without walls"

About Children's Museum

The Children's Museum's location on Sheldon Avenue once was a renovated building which had been vacant since a fire in 1980. Since the doors opened in summer 1997, the "museum without walls" has served more than 3 million guests, last year at a record 200,000. With a mission of playful learning, it's natural that Children's future draws the museum towards sustainable practices.

THE AUDIT

The Grand Rapids 2030 District's Energy Assistance Program sponsored an ASHRAE level "1.5" energy audit performed by Foresight Management. The audit discovered over \$12,000 in annual savings opportunities, and over \$8,000 in free cash money through utility rebate opportunities. The recommendations counteracted the drawbacks of the beautiful wall of windows - day light control system, updated thermostats, an economizer on the RTU, & cool rooftop. Some overlooked light bulbs were identified as opportunities. Even with the low water prices of West Michigan, upgrading the bathrooms came with an ROI under 6 years,.

**Energy Conservation Measures (ECMs) chosen
for year 1 and 2**

ECMs	Cost Savings	CO2 Savings (lbs)	Payback (years)
Furnace Filters	19%	2,173	0.3
DHW Pipe Insulations	15%	1,695	2.3
DHW Pump Timer	81%	76	1.1
Roof Replacement R-49	11.8%	21,399	42.1



BEFORE

The building being more than 100 years old, some features are timeless, and others require constant maintenance. The unshaded east and south facing windows heat the two storied play area throughout the summer, causing heavy AC dependency. The window seals were also thermal bridging, most of which were noticed in the winter months. They also were experiencing difficulties with their flat roof and moisture in the basement which paired as storage and creative space. HVAC units installed within the 3 years, and a generous donor had gifted LED bulbs and digital thermostats to children's museum as a gift which would keep giving.



AFTER

Foresight was able to save them approximately \$1,500 annually though gas procurement. Aligned with a Green Revolving Fund mechanism, savings can be invested in the next energy conservation measure. As a non-profit, funding must always be prioritized thoughtfully; this is the appeal of MiSaves and PACE financing. They take advantage of utility rebates whenever applicable.

To Put This into Perspective

At GRMC, children engage in playful learning in which they are familiarized with experiences they will be educated on later in life. Playful learning also creates character and teaches children life lessons such as how to cooperate with friends and interpret the circle of life. Staff at GRMC take great responsibility over the environment they give these children, not only in the tangible ways, but the world perspective ways. GRMC knows that caring for the earth is another way to care for their children they serve; sustainability is another way they nurture the future.

