Performance Contracting
Project: Roof Replacement

How one school district combined ESSER funding with Pennsylvania's **Guaranteed Energy Savings Act** to obtain a full roof replacement for their elementary school.

Background

Dunmore School District, located in Lackawanna County, serves approximately 1,500 K-12 students.

Prior to the COVID-19 pandemic, the school district had several capital improvement requirements, which it had been prioritizing through Pennsylvania's Guaranteed Energy Savings Act.

Then, with the onset of the pandemic, the school district further analyzed its needs to best prioritize the ESSER (Elementary and Secondary School Emergency Relief) funds from the federal government.

Several issues quickly rose to the top of the list, most notably the leaking roof in the elementary school, which was negatively impacting overall air quality and posing significant health risks to building occupants.

The school district partnered with CM3 to address the leaking roof (which qualified for ESSER funding), including the gas piping which was installed on the roof and was also in poor condition.

A typical commercial roof will last between 15 and 25 years when installed correctly.

Leaking roofs are much more than an inconvenience for facility managers

Leaking roofs cause mold to grow. Mold spores in water-damaged structures pass through the HVAC systems, leading to serious illness for people with allergies, asthma, environmental sensitivities, and compromised immune systems.

Performance Contract Benefits

- A guaranteed level of performance from the chosen partner
- Single-point accountability for the entire project
- No referendum required
- No change orders
- An accelerated timeline for facility improvements
- Minimal disruption to building schedules
- Greater oversight regarding scope of renovations
- Better control over final cost of the project
- Enhanced management of renovation timeline
- Greater flexibility on product selection

Project Summary

Dunmore Elementary School struggled for many years with malfunctioning roof drainage, shown below:

Water remained on the roof, creating several inches of standing water (or ice), as well as leaks within the building.

Dunmore's performance contract project tackled the main health risk of the leaking roof, while simultaneously increasing the R-value of the roof. It also included the relocation and addition of drains to address the drainage problems. And, the project involved the replacement of the gas piping which was in poor condition, due to the standing water, as well as age.

There are two ways to address a leaking roof. Either the contractor will do a full tear-off, or they will do a roof rehabilitation, which is the removal of the upper layer while reusing the underdecking.

Roof Replacement & Rehabilitations

A leaking roof can be addressed in two ways:

Roof Replacement:
This involves a full tear-off of the existing roof and then replacement with a new roof, including underdecking.

Roof Rehabilitation:
This involves the removal of the upper roof layer while reusing the underdecking. Various criteria must be satisfied for this to be an appropriate option.

Risks of a Leaking Roof

Mold and Mildew
Damaged Ceilings and Attics
Insulation Damage
Damaged Drywall
Energy Inefficiency
Compromised Structure

Typical Project Components

While CM3 provides both full roof replacements and rehabilitations, for Dumore School District, CM3 conducted a complete tear-off of the existing roof system, including all sheet metal flashing down to the existing deck.

- Reuse existing wood blocking to the greatest extent possible to reduce overall cost where possible.
- Add tapered insulation to improve energy efficiency.
- Add non-reinforced EPDM membrane.
- Add new blocking to edges and curbs to meet new insulation heights.
- Relocate drainage and add more drainage, as needed.
- Install new aluminum edge around the perimeter of the building.
- Supply and install new scuppers at the perimeter to aid in drainage.
- Furnish a 20-year warranty on the roof.