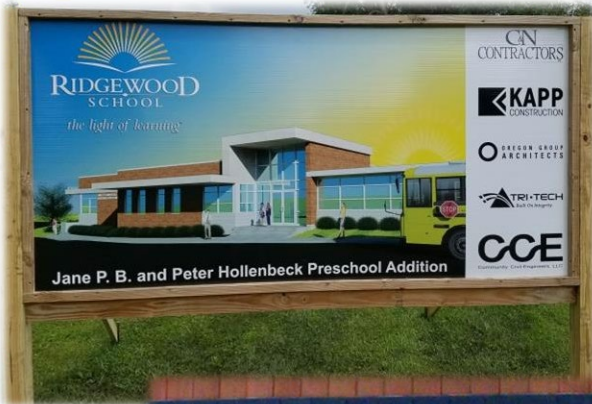


## Ridgewood School Addition and Renovation

*Springfield, OH*

**Construction Completion:** Est. 2018  
**Construction Cost:** \$1,700,000  
**Size:** 15,400 SF renovation  
 5,300 SF addition  
**Professional Services:** MEP Engineering  
 Structural Engineering



### Project Description

Ridgewood School, a private primary school in Springfield, OH, provides education for grades K-6. The aged existing school building posed problems to the administration's desire to expand to offer preschool classes. The school looked to undergo a project to renovate the existing building and add a facility to provide additional classrooms and administrative offices.

Tri-Tech provided structural, plumbing, mechanical, and electrical engineering for the project. Its structural engineering efforts included modifying existing interior CMU walls to accommodate new doors and windows in the existing facility. For the addition layout, Tri-Tech designed new CMU walls. The addition also required new foundations and roof structure support, including canopies and multiple roof levels. Tri-Tech also designed the structural connection to the existing building, including evaluating the existing building's roof to accommodate new loading from snow drift caused by the addition.

In the existing building, Tri-Tech's electrical and mechanical services involved replacing the light fixtures (with LED lighting) and aging panelboards, adding new-smart board equipment in each classroom, and adding a new computer lab. Plumbing services included renovating the existing restrooms to make them ADA accessible. Tri-Tech also modified the existing mechanical equipment and distribution serving the stage and auditorium/gymnasium to reduce sound from the equipment, facilitating better classroom and performances. Modifying the equipment decreased sound transmitted into the space along with improved the air distribution throughout the space to provide increased comfort. Tri-Tech also analyzed existing building mechanical equipment—its capacity, condition, and energy-efficiency—to evaluate if it required replacement.

The new addition required a new 400A panelboard, fed from the existing building's electrical distribution. The design used split-system heat pumps to provide the most energy-efficient system possible along with the zoning requirements for the space.