



## HOW DEMOLITION CAN BE KEY TO THE SUCCESS OF YOUR LEED PROJECT



Casey Middle School - Boulder, Colorado

**SCOPE:** Built in the early 1900s, the school was a total of 55,000 sq ft having had additions added in 1955, '72, '84, '95 and '99. The Boulder community, long known for its environmental concerns and Green Build philosophy, wanted to save the original front and side architectural facades. The goal was to meet USGBC LEED Silver designation.

**PHASING & OBSTACLES:** After removing the Library addition, and entry corridor, Hillen Corp. discovered that a main bearing wall had previously been removed and resupported with cantilevered steel beams that in turn supported the third floor and bearing walls. This also exposed the front facade and boiler room in the basement buried under the entry sidewalk. If removal had gone according to original plans it would have undermined the original facade from being saved. In order to allow the general contractor (Saunders Construction) to provide shoring and wall bracing, Hillen Corp. needed to also expose interior structural walls so that through-bolt connections could be made to interior structural steel.



The remaining additions were systematically removed to not affect the stability or the front facade and maintain the schedule. After the new wall bracing was in place, wood roof and ceiling joists were removed. Hillen Corp. then began separating the exterior walls to be saved. Retaining these key portions of the existing structure provide credits in the LEED certification process.



With the use of electric-powered remote-control hydraulic excavators, Hillen Corp. is able to increase not only its production, but efficiency and the high priority of safety necessary in large projects. This technology allows access to areas perhaps too dangerous for Hillen's crews. By using a combination of these electric excavators along with skid steer loaders, the cast in place concrete and tile floor systems, the second and third floors were removed. After removing one grid line of the structure away from the remaining facade, the demolition crew used a CAT 330 ultra-high reach in combination with a KOMATSU 400 with grapple and universal processor to demolish the remainder of the building.

Hillen Demolition is well known for its unique abilities in demolishing complex and difficult structures, as well as adhering to LEED processes. The corporation is also a member in good standing with the National Demolition Association and the Colorado AGC. ■

*Hillen Corporation was established in 1956 as a prominent masonry and demolition contractor and has since become one of Colorado's largest demolition contractors. Recent projects include the demolition of the Denver University Ice Hockey Arena, Elich Garden's, the Colorado Historic Forney Museum renovation into REI, Denver Health, multiple buildings at Colorado University, the Colorado Museum of Nature & Science, the downtown Denver Sage building renovation as well as many out of state facilities.*