

As Philadelphia teams and officials looked for additional room for parking and tailgating, they razed an old warehouse near the Phillies and Eagles stadiums to create space and at the same time looked to protect the city's aging stormwater infrastructure.

With sustainability goals in mind, officials selected precast concrete to provide a long-term solution.

In 1801, Philadelphia was the first city to treat and supply water to its citizens. Its sewer system is one of the oldest in the country and some of the original infrastructure is still operational.

In 2011, the Philadelphia Water Department kicked off a 25 year commitment to manage runoff and filter or store the first inch of rainwater. The city is converting vacant and abandoned lots to reduce stress on the system.

The stadium parking project is part of the Clean Waters program that feature large green spaces as filtration system for rainwater that is stored and slowly released.

RES designed the stormwater system with precast concrete due to site constraints and unusual soil conditions. By utilizing precast structures, a large amount of structural stability could be achieved that wouldn't be possible with plastic.

The foundation was installed at negative 1 foot above sea level. After the foundation and precast units were installed, they were still about four feet below grade which means there is nearly eight feet of soil on top of the stormwater system.

The precast units had to withstand large volume on top while also holding water. 455 Storm Trap units were custom cast by AC Miller Concrete Products. They manufactured the precast at multiple plants to ensure meeting the deadline. The precast components were shipped to the site and set into position. With their tight tolerances, the precast units were quickly installed, wrapped, sealed and buried. With the success of this project, precast will be winning more contracts in the future.

## TAKE A NEW LOOK AT PRECAST

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# PRECAST CASE STUDY

**PROJECT:**  
PHILADELPHIA STADIUMS  
STORMWATER DETENTION SYSTEM

**LOCATION:**  
PHILADELPHIA, PA

**PRECAST MANUFACTURER**  
AC MILLER PRECAST  
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