

## CASE STUDY



### PROJECT DETAILS

**Project Name:**

Purdue University  
Aerospace

**Location:**

West Lafayette, IN

**Project Owner:**

Purdue University

**General Contractor:**

F & K Construction

**Product Manufacturer:**

County Materials  
Corporation

**Date:**

2020

**Key Products:**

(16) 17'x7' precast  
box culverts

## Box Culvert Installation Aides in Purdue University Aerospace District Expansion

**Solutions:** Precast box culverts serve as mini bridge, directing creek flow to prevent washouts.

Purdue University continues to develop its Aerospace Discovery Park District near the campus in West Lafayette, IN. The district houses Purdue's internationally recognized aviation and aeronautics program, Purdue University Airport, and Maurice J. Zucrow Laboratories alongside several research and development facilities, both for the university and international companies, such as Saab Defense and Security, Rolls-Royce, and SEL Purdue. Purdue University is one of the few sites in the country to support public and private aerospace research within its facilities.

In May 2019, Purdue University's Discovery Park District announced the addition of Saab Defense to the campus, where the company's fighter jet facility will be housed. In partnership with the United States Air Force, Boeing-Saab will produce new fighter jets at the facility. Starting in 2024, the Air Force will receive upgraded jets with the full fleet being replaced by 2034.

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After announcing Saab Defense’s move to the district, design plans were drawn up, and storm and sanitary infrastructure was scheduled to be installed the following spring. It was determined that new roadways and storm and sanitary infrastructure needed to be put in place prior to fully developing the lot. F & K Construction was contracted to set concrete box culverts within the lot’s creek to ensure it would not obstruct operations.



The Flora, IN contractor relied on its valued business partner in Indiana, County Materials, to manufacture and deliver 16 box culvert sections, each measuring 17’x7’. Together, the 92-lineal-feet of box culverts divert the flow of the creek, allowing a roadway to be installed on top of them without the need for a bridge. Box culverts are an effective solution when round and elliptical concrete pipe cannot provide adequate flow capacity needed for larger water projects. Additionally, the precast concrete structures serve as a time-tested solution that will provide structural durability and strength to support the weight of large vehicles.

Construction on the Saab Defense facility will continue into 2021. With the installation of the structural box culverts and equally impressive building materials being completed, Saab’s new plant and lot will contribute to the company reaching great heights.

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