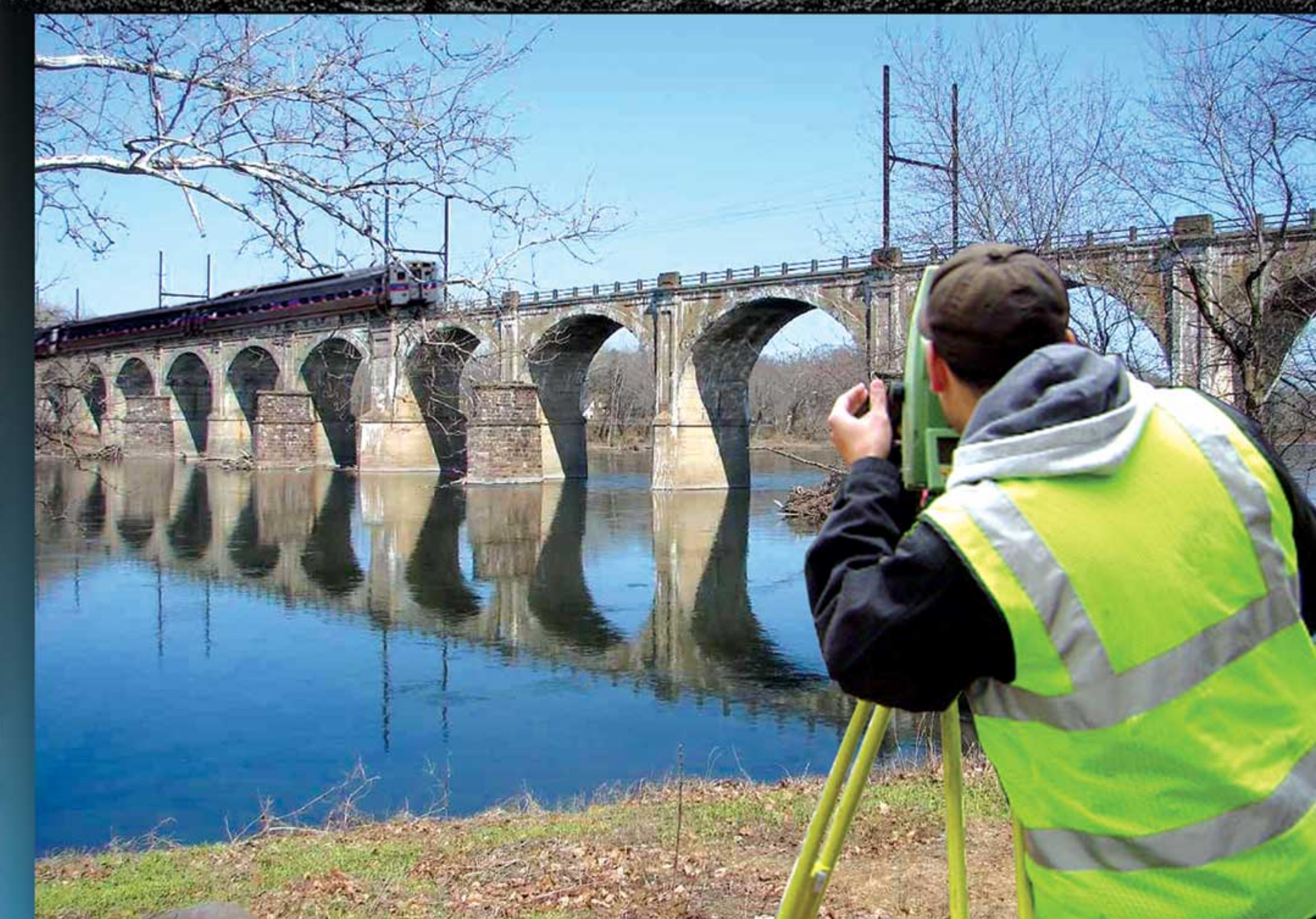


SURVEYING SEPTA *for* Collision-Free Travel

KS Engineers, P.C. (**KSE**) provided base survey control, Low and High Altitude Aerial Photogrammetric Mapping capable of providing both 1" = 20' design plans and Orthophotography of an 1,800' wide band centered along the track right-of-way, and High Definition (HD), High-Rail Laser Scanning to produce detailed LIDAR images of the tunnels. The assignment included SEPTA railroad facilities for approximately 130 right-of-way miles. Using GPS in Static mode, First Order Geodetic Monuments, and the Continuously Operating Reference Stations (CORS), the firm established a systemwide horizontal and vertical GPS control network and located approximately 430 photo picture points to control the mapping effort. Conventional horizontal and vertical control was developed through the tunnels to control the High Definition (HD), High-Rail Laser Scanning and mapping effort. This mapping base will be utilized for the design of a systemwide Positive Train Control (PTC) monitoring system which will prevent train collisions by automatically activating the trains' braking systems, thereby preventing trains from colliding.



SEPTA - Positive Train Control Base Mapping

Client:

Southeastern Pennsylvania
Transportation Authority (SEPTA)
Philadelphia, PA



SEPTA

Entrant:

KSE
KS Engineers, P.C.
Newark, NJ

ACEC New Jersey
AMERICAN COUNCIL OF ENGINEERING COMPANIES