The Big Walnut: High Tech Tunnelling in Columbus

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**Abstract:**
The Big Walnut Outfall Augmentation ewer (BWOAS) is the second stage of an ongoing sewer expansion for the City of Columbus, Ohio. The main tunnel involves 4000m (13,200 feet) of 3.66m (12 foot) ID tunnel with 6 access shafts. An open-cut connection to the nearby Rickenbacker Airport also forms part of the contract. The paper looks at the various aspects faced at award and details the high-tech approach to overcome the various challenges. Linabond corrosion protection is to be installed after the tunnel is complete. With planning for this activity still in its early stages, Linabond is not covered within this paper.

**Keywords:** glacial or post-glacial deposits; cobbles and boulders expected; cutter head; segment erector; screw conveyor; grout system; ground conditioning; guidance system; tunnel rings; slurry wall shaft; auger shafts; launch procedures; contingency measures; data acquisition.