



AUSTIN'S BOOMING GROWTH... AND WHAT IT MEANS FOR OTHER CITIES

by Pape-Dawson Engineers, Inc. JULY 2022

Municipalities across the country have glanced green-eyed with envy at Austin. By attracting Tesla, Oracle, Meta, and other signature firms, the funky city has challenged Silicon Valley as the tech place-to-be. [Elon Musk predicted](#) it would be the “biggest boomtown that America has seen in 50 years.”

This rapid growth can create challenges, however, if the city fails to plan for and construct infrastructure to accommodate the influx of residents and businesses. For example, existing traffic snarls are potentially exacerbated by growth and development.

The City of Austin and TxDOT are planning long-term projects to relieve local traffic congestion and improve public transport. How those projects evolve will serve as an example for other burgeoning cities that need sustainable infrastructure.

Designing an Interstate Under a Park

A central concern for Austinites is Interstate Highway 35 (IH 35), which bisects the city and passes by its busy downtown, the Texas Capitol, and The University of Texas campus. Recently rated the [most-congested roadway in Texas](#), plans are underway at TxDOT to fundamentally rethink the north-south artery.

Spearheaded by TxDOT, the design to improve IH 35 is known as [Capital Express Central](#). The design will reconfigure the highway, lowering the main lanes beneath existing ground. The City of Austin is further enhancing Capital Express Central by incorporating caps and stitches that could support parks, greenspace, and multi-modal east-west movement over IH 35. “It’s an approach that’s not just getting from point A to point B. It’s an approach that fits in better with the whole urban landscape,” says Scott Dukette, P.E., LGPP, Practice Leader for Pape-Dawson Engineers, Inc.

Of course, sinking the interstate 70 feet below ground will require careful sequencing, with significant design and construction of retaining walls and other structural components. Many details will be hidden from view, including the relocation of water and wastewater utilities in conflict with the proposed roadway improvements – a complex task the city assigned to Pape-Dawson. Francisco “Paco” Guerrero, P.E., Vice President for the Water Resources department at Pape-Dawson, has begun brainstorming innovative solutions to relocate water and wastewater utilities to accommodate Capital Express Central. “There are multiple utilities that will be impacted by this project, given it is a dense urban area with aging infrastructure,” he says. “This is a

generational opportunity to set the foundation for redevelopment along this important and transformational area home to downtown, Dell Medical School, the Austin Innovation District, and The University of Texas at Austin.”

Paco’s considerations when relocating water and wastewater utilities may include supplying water to parks above the highway, which will likely require irrigation, public restrooms, and food trucks—an aspect most interstates do not have. Another challenge is expanding the capacity of water and wastewater lines while simultaneously relocating them. “The challenge is how to accommodate all the utilities in a limited right-of-way,” Paco explains. “Not just water and wastewater, but electricity, gas, communications, and multi-use pathways for pedestrians and bicycles.” At this early stage, Paco is working through engineering options, including utility bridges, rerouting wastewater several blocks away from IH 35, or placing some utilities directly below multi-use pathways.

The project’s complexities require substantial stakeholder coordination because Austin is transforming every day. An [Innovation District](#), new University of Texas facilities, the [Waller Creek District](#), and nearby high-rises that replace single-family homes all contribute to a dynamic construction environment that must be considered in conjunction with Capital Express Central.

TxDOT and the City of Austin are in early planning stages—but other cities are watching to see how Austinites redesign this crucial stretch of road in a way that preserves vehicle travel, allows utilities to keep pace with downtown growth, and promotes the city life for which Austin is famous.

Project Connect — and What Other Cities Can Learn

IH 35 is not the only Austin highway with bumper-to-bumper slowdowns. To help with traffic congestion, [Project Connect](#) is a citywide effort to unite Austin through bus and light rail transit, another effort for which Pape-Dawson is lending planning and engineering expertise to relocate water and wastewater utilities. “Initially, our work with Project Connect is providing preliminary solutions for utility conflicts,” Paco says. Considering the construction of transit stations, underground and aboveground railway infrastructure, and other facilities, the conflict analysis and planning effort is considerable. The project will be years in the making, but like IH 35 Capital Express Central, Project Connect cries out for complex discussions across stakeholders to find solutions that will work for everyone.

“These are two really big, transformative projects for Austin,” concludes Scott, “but other cities across the state and country can learn from what Austin’s going through.” Indeed, San Antonio, Houston, and the DFW Metroplex have seen strong business and population growth in recent years. Austin’s innovative solutions for transforming the city’s transportation infrastructure will inform other municipalities on how to solve similar problems. By embracing daring solutions like IH 35 Capital Express Central and Project Connect, Austin hopes to solve current traffic woes while setting the foundation for future City redevelopment for generations to come.