

## Roadway Design Services

**Design Duration: 13 Months** 



IH 35W Segment 3B (TxDOT FTW) — ISE, as prime consultant, provided project management and design services for schematic refinements, drainage design, traffic control design, structural design, and ITS/Toll facilities design as part of the reconstruction of 3.5 miles of IH 35W from IH 820 to US 287/SH 81 Interchange. The project included general purpose lanes, managed lanes, 15 bridges and direct connectors, complex traffic control phasing, signing and pavement marking, signal design, high mast illumination, and public utility design and coordination. Through innovative thinking, ISE saved TxDOT about \$20M in construction costs by preserving four recently constructed bridges, frontage roads, and storm sewer systems.

Estimated Construction Cost: \$132M Year Design Completed: 2012 Current Status: Under Construction



IH 35W Segment 3C (TxDOT FTW) – ISE, as prime consultant, is tasked with project management and design services for schematic refinements, roadway design, traffic control design, structural design, and ITS/Toll facilities design as part of the reconstruction of 7.5 miles of IH 35W from US 287/SH 81 Interchange to Eagle Parkway including a multi-level interchange at SH 170. The project includes general purpose lanes, managed lanes, 33 bridges and direct connectors, complex traffic control phasing, signing and pavement marking, signal design, high mast and standard illumination, public utility design and coordination, and Toll infrastructure design. ISE prepared innovative design measures for construction cost savings that resulted in \$65M of cost and deferred savings. The results of cost saving measures are being implemented in the design phase of the project.

Estimated Construction Cost: \$230M Design Duration: 19 Months

Current Status: Design Phase



SL 360 Innovative Intersection Improvements (TxDOT AUS) – ISE, as prime consultant, provided project management, conceptual planning, traffic modeling and simulation using Synchro and VISSIM, environmental document, public meetings and workshops, schematic and PS&E design phase services for 17 intersections along 14.5 miles of SL 360 from US 290/SH 71 to US 183 in Austin. The improvements consisted of conventional improvements such as turn bays and signal timing optimization, and state-of-the-art alternative intersection improvements such as Super Street, Michigan Left, Continuous Green "T", Diverging Diamond, and Continuous Flow intersections.

The first phase of the project, which included five intersections, a modified superstreet, and four conventional intersections, is currently under final design phase and is scheduled for construction in 2015.

Estimated Construction Cost: \$19M (17 Intersections)
Estimated Construction Cost: \$4M (First 5 Intersections)
Current Status: Schematic, Environmental, and Design Phase



SH 6 Median Design from Voss Road to FM 521 (City of Sugar Land, City of Missouri City, and TxDOT HOU) – ISE prepared design plans for conversion of over 10 miles of SH 6 existing center left turn lanes to raised median and directional islands. The project included implementation of access management studies, traffic control phasing with minimal impact to the traveling public, coordination with the City of Missouri City, City of Sugar Land, and TxDOT, participation in Public Meeting; Provisions for landscaping, irrigation, and pavers; Tie-in to two adjacent segments under design; maintenance of existing number of lanes during construction/peak hours; compressed construction schedule; and TCP design to accommodate this Hurricane Evacuation Route.

Construction Cost: \$2M Current Status: Completed



US 290/IH 610 Interchange, Segment 2 (TxDOT HOU) – ISE performed roadway and traffic control design services for this \$150 million four-level, fully directional interchange in the heart of Houston. The traffic control plan consisted of five phases with several steps to construct mainlanes, direct connectors, and frontage roads while maintaining existing number of lanes at all times. The project required coordination between three segments and included mainlanes, direct connectors, ramps, and frontage roads. Through innovative thinking, ISE saved TxDOT about \$5M in construction costs by widening the recently constructed direct connectors at IH 10 interchange rather than reconstruction as per the schematic design. ISE staff evaluated major changes to the construction package after 60% plans submittal and provided design analysis and recommendations that would meet limited project budget and schedule.

Estimated Construction Cost: \$150M Current Status: Under Construction



IH 10/IH 610 Interchange\* (TxDOT HOU) – This award winning complex project was managed by Niko Mozaffar, P.E. Niko managed and led the refinement of schematic design and preparation of PS&E for this multi-level interchange that included mainlanes of IH 10, eight direct connectors, ramps, HOV/managed lanes, UPRR and N. Post Oak underpasses, and a four-phase complex traffic control plan while maintaining existing traffic of 280,000 vehicles per day. Considered the largest project in the State (\$263M) at the time of construction, the design services for this award winning project were performed in less than two years. The project was let in July 2003 and construction was completed in 2006.

Estimated Construction Cost: \$263M Current Status: Completed

\* denotes staff experience while with another firm



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