

NEXT GENERATION CONCRETE SURFACE



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Area Mayors Secure NGCS for Houston's Katy Freeway

>>> NGCS ACHIEVES QUIETER NEIGHBORHOODS

THE KATY FREEWAY is a portion of I-10 that runs from the downtown Houston area westward for approximately 23 miles to the suburb of Katy. TxDOT widened the road in 2009; it is now the widest freeway in the world and is 16 lanes wide (including service roads) along a three-to-four mile stretch where it abuts several small villages.

When the freeway reopened after construction in 2009, increased vehicle speeds and transversely tined pavement surfaces created a noise level that was unacceptable to residents of the villages. They approached their mayors to find a solution.

QUANTIFYING THE PROBLEM

Mayors from the villages, including five-time mayor of Hunters Creek Village David A. Wegner, approached TxDOT about noise abatement procedures. But TxDOT had closed out the project and had no additional funds to address noise.

Even though noise modeling conducted by Tx-

DOT during the design phase showed the road to be in compliance with federal standards, new noise tests commissioned by the mayors showed that the as-built freeway was considerably out of compliance. Meetings with the mayors' congressman and state representative followed, and TxDOT officials worked with the mayors to identify a solution. The mayors expressed interest in rubberized asphalt, but TxDOT pointed out that the material's cost, in addition to its porous, compressible nature, made it an impractical choice. The solution proposed by TxDOT was to remove transverse grooves from the roadway and replace them with the Next Generation Concrete Surface (NGCS).

FINDING THE MONEY

The cost of the project was approximately \$12.5 million, including traffic control, which comprised a significant share of the cost for a road as heavily traveled as the Katy Freeway. Because about half of the affected roadway was within village jurisdictions and half was within the jurisdiction of the City of Houston,

TxDOT proposed that the City of Houston and four of the six affected villages contribute approximately \$2 million of that total cost over a five month term with no interest.

The four villages got the money into their annual budgets, but according to Wegner the City of Houston was slowed by two concerns. The first centered on how to proportionally allocate funds across their entire road network, a common consideration for road owners. The second concern dealt with a newer type of challenge: the legalities of a city contributing local funds to a federal road. Houston's city councilman and city attorney examined this matter for some time.

Eventually, funding from TxDOT, the City of Houston and four villages was secured and in late winter of 2016, the project was let for bid. Transverse grooving was removed and NGCS installed, with construction completed by the fall of 2017. Noise improved significantly and residents, as well as their mayors, were delighted with the new surface.