

# Cost-Effective Congestion Analysis for Fort Lauderdale

## EXECUTIVE SUMMARY

- *City officials wanted to identify causes of corridor congestion.*
- *Big Data O-D analysis showed that 75% of demand was regional, not local.*
- *Insights led to regional discussions about increased network connectivity and transit service.*
- *Desktop analytics saved significant costs and time.*

Saving money over more manual methods, Kittelson identified the main source of Ft. Lauderdale's main corridor congestion.

## Mission: Identify Congestion Source

Congestion on Fort Lauderdale's 17th Street has been building for years. City officials suspected the cause was due to the corridor's several major activity centers: the convention center, a major port with cruise ships, a mall and other retail stores, an art institute and more.

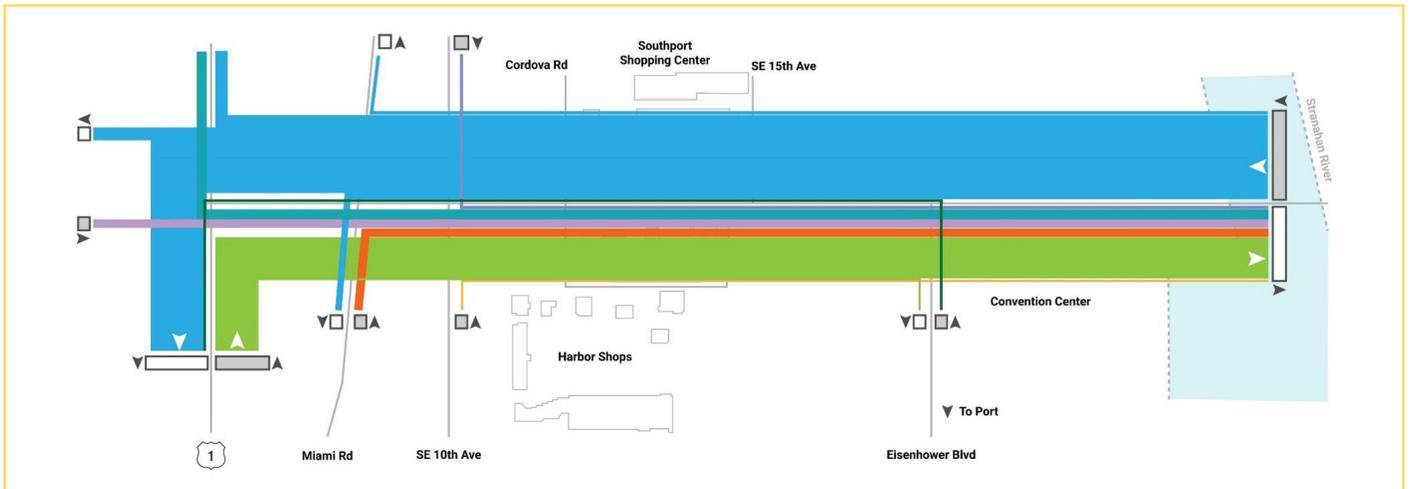
Not only that, but 17th Street connects Fort Lauderdale's mainland to its barrier islands and the world-famous beaches.

One thing that the city already knew was that there was no room to widen the corridor. Mitigation would have to include shifting some traffic to other modes or roadways.

**"We helped our client realize that we could do the O-D study on the cloud with less expensive data."**

**JORGE BARRIOS**  
Kittelson & Associates



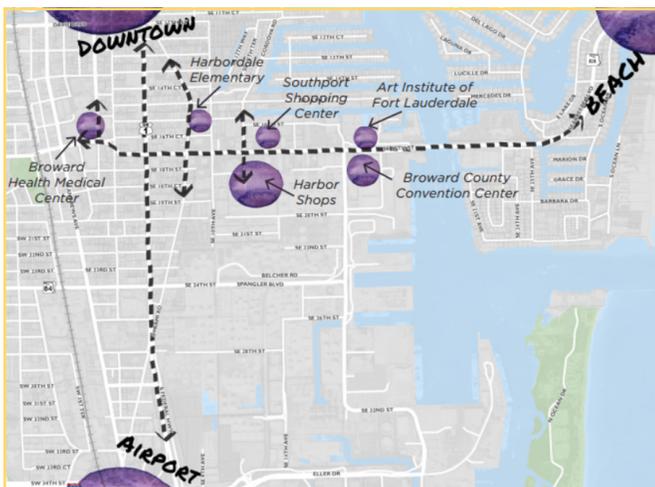


Kittelson used a bandwidth plot to show traffic traveling through the 17th Street corridor.

## Analysis: Affordable Origin-Destination Metrics

For O-D studies like this, city planners were familiar with license plate matching and Bluetooth analysis. Those studies could have cost upwards of \$100,000, along with field work. But Kittelson found another solution: Big Data.

Saving significant cost and time compared to traditional methods, Kittelson was able to run multiple O-D analyses to study the 17th Street corridor.



Insights from the analysis led planners to study transit options connecting top origins and destinations.

Kittelson first studied peak morning and afternoon travel periods, with some weekend analysis, and determined that congestion affected the corridor fairly steadily across the week. They then dove deeper into O-D metrics to identify where traffic was coming from and going to.

## Results: Congestion Cause Is Regional

Surprisingly, the analysis showed that most trips weren't visiting the busy shopping mall, or the convention center, or even the port. Instead, the main contributor to ongoing congestion was worker and tourist traffic to and from the barrier islands.

This insight shifted the city's conversation to a more regional focus. Knowing that pass-through trips made up at least 75 percent of the travel demand, Fort Lauderdale had more data for regional-level discussions about increased network connectivity and transit service.

Planners now know that Fort Lauderdale's congestion issue isn't local, it's regional. Long-distance drivers are using 17th Street to connect to the barrier islands, highlighting the importance of increased connectivity and a high-quality transit network to solve congestion issues.