Chattanooga’s Data Analytics Work During Disruptive Events

CDOT selected these 12 locations due to their locations across the City. We collected data in 3-day total volumes (Tu-W-Th) and in 7-day total volumes. We used our GridSmart video detection systems for the data collection. We were able to capture data beginning Feb. 16, 2020.
Downtown Core

The four intersections indicated in the graph represent the “Core” of the downtown grid. This area is reflective of the Corporate impacts to the community.

- 4th St and Chestnut Street: 68%
- 4th St and Market Street: 57%
- 4th St and Georgia Ave.: 61%
- Market St and MLK Blvd: 61%
The four intersections indicated in this graph represent the “Suburban” area of Chattanooga. Some are nearby the Regional Mall, others, near freight logistics organizations.

- Bailey at McCallie Ave: 50%
- Shallowford Rd at Gunbarrel Rd.: 40%
- Lee Hwy. at Little Debbie Parkway: 33%
- I-75 SB off ramp at Ringgold Rd.: 32%
Effects Seen Across Multiple Platforms.

Vision Events 2/17 to 3/30
Less Vehicle, Bike and Ped activity on MLK

PM 2.5 2/17 to 3/30
Better Air Quality

Both slides courtesy of University of Tennessee Chattanooga Center for Urban Informatics and Progress. Testbed manager Austin Harris
Crash Statistics during the first 4 months of 2017 - 2020

Slide courtesy of University of Tennessee Chattanooga Center for Urban Informatics and Progress. Peter Way

Chattanooga Department of Transportation Smart City Division
Within the Crash Statistics CUIP found an increased Entrapment rate

Slide courtesy of University of Tennessee Chattanooga Center for Urban Informatics and Progress. Peter Way
Congestion is down, Speeds and level of serious crashes are up Nationwide.

- Chicago metro-area highways speeds have increased 20%.
- By the week of March 13 to March 20, INRIX noted significant increases in traffic speeds in Chicago, Los Angeles and other major cities as more people isolated at home.
- Los Angeles drivers increased speeds up to 75% on average within a week. And congestion more or less ceased to exist across the country.
- Austin, TX’s major intersections are seeing 50% fewer cars when comparing data from March to January and February. But the overall crash rate has only decreased 20% and serious injuries have jumped to 20%.

Speeds and Red-light Running during the COVID event has increased.
Easter Sunday Tornadoes

Bones' Smokehouse in East Brainerd destroyed by tornado. (Image: WTVC)
Areas Impacted by the Tornadoes
Damage Assessments by Address
Damage Assessment by Zone
Each of the three intersections below were impacted by the Easter Sunday Tornadoes. The impacts were relatively large upticks in traffic volumes we feel are attributed to Emergency Services, Volunteers, and Sightseers.

Shallowford Rd at Gunbarrel Rd.  
Lee Hwy. at Little Debbie Parkway  
I-75 SB off ramp at Ringgold Rd.
Thank You

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