

Title: Chicago Traffic Tracker – Congestion Estimates by Traffic Segments

Description: The Chicago Traffic Tracker estimates traffic congestion on Chicago's arterial streets (non-freeway streets) in real-time by continuously monitoring and analyzing GPS traces received from Chicago Transit Authority (CTA) buses. Two types of congestion estimates are produced every ten minutes: 1) by Traffic Segments and 2) by Traffic Regions or Zones. Congestion estimate by traffic segments gives the observed speed typically for one-half mile of a street in one direction of traffic. Traffic Segment level congestion is available for about 300 miles of principal arterials. Congestion by Traffic Region gives the average traffic condition for all arterial street segments within a region. A traffic region is comprised of two or three community areas with comparable traffic patterns. 29 regions are created to cover the entire city (except O'Hare airport area).

This dataset contains the current estimated speed for about 1250 segments covering 300 miles of arterial roads.

There is much volatility in traffic segment speed. However, the congestion estimates for the traffic regions remain consistent for relatively longer period. Most volatility in arterial speed comes from the very nature of the arterials themselves. Due to a myriad of factors, including but not limited to frequent intersections, traffic signals, transit movements, availability of alternative routes, crashes, short length of the segments, etc. speed on individual arterial segments can fluctuate from heavily congested to no congestion and back in a few minutes. The segment speed and traffic region congestion estimates together may give a better understanding of the actual traffic conditions.

SEGMENTID: Unique arbitrary number to represent each segment

STREET: Street name of the traffic segment

DIRECTION: Traffic flow direction for the segment

FROM_STREET: Start street for the segment in the direction of traffic flow

TO_STREET: End street for the segment in the direction of traffic flow

LENGTH: Length of the segment in miles

STREET_HEADING: Direction of the "STREET" from the origin point (e.g., State & Madison)

START & END LONGITUDE & LATITUDE: These four points represent the start and end points of the segment in the direction of traffic flow. For two-way streets it is roughly at the middle of the half that the segment is representing. For one-way streets this is the street center line. The ending latitude and longitude for a segment will be same as the starting latitude and longitude for the segment immediately following it.

CURRENT_SPEED: Real-time estimated speed in miles per hour. For congestion advisory and traffic maps, this value is compared to a 0-9, 10-20, and 21 & over scale to display heavy, medium, and free flow conditions for the traffic segment. Except for a very few segments speed on city arterials is limited to 30 mph by ordinance. A reliable number of GPS traces are required for estimating speed for a segment. As a result, during off-peak hours (mid-day, nights, and weekends), when the number of buses

on a segment is sparse, CURRENT_SPEED is not calculated for some segments; and, hence, the CURRENT_SPEED for such segments are defaulted to -1 to reflect data unavailability. This differs from a CURRENT_SPEED of "0," which may be the result of a full or partial street closure due to an unexpected event. Note that there are a few traffic segments with no CTA bus routes and such segments will always show a CURRENT_SPEED of -1. These segments may be identified by their LAST_UPDATED time. If the LAST_UPDATED time is several days old, it can be assumed that no transit service over the segment currently. These segments are included in the Chicago Traffic Tracker dataset because they are key routes and CDOT intends to monitor traffic conditions through other means in the near future.

Additional information and the Chicago Traffic Tracker map can be accessed at:
www.ChicagoTrafficTracker.com.

This document accompanies the real-time congestion data by Traffic Segments on the City of Chicago Data Portal at <https://data.cityofchicago.org/dataset/Traffic-Segments/n4j6-wkkf>; for further assistance, contact ChicagoTrafficTracker@CityOfChicago.org.

For traffic congestion estimates by Traffic Regions, go to <https://data.cityofchicago.org/dataset/Traffic-Regions/t2qc-9pjd>.

Disclaimers: By using the Chicago Traffic Tracker data, you are accepting that any and all maps/data and information you may receive (the "data") "as is" and without any warranty or representation whatsoever, express or implied, whether for accuracy, timeliness, completeness, fitness for a particular purpose or otherwise. The data is provided here for reference purpose only. While every effort is employed to provide as much accurate information as possible, City of Chicago, any of its departments, or any of its employees cannot be held liable for the accuracy and completeness of this information. Speed and congestion estimates are probabilistic and are not actual speed. Occasionally outlier data or unexpected behavior of a probe vehicle can skew the segment speed to be higher or lower than the ground truth. Before using this data, please read the City's Terms of Use at http://www.cityofchicago.org/city/en/narr/foia/data_disclaimer.html.

Data Owner: Chicago Department of Transportation

Time Period: Real-time / reflects the last 10 minutes of traffic

Frequency: Data is updated every 5 minutes