About Toronto Transit Explorer

Toronto Transit Explorer (ToTX) is a prototype open-source map and navigation tool created by Sidewalk Labs. Unlike traditional navigation tools, which show people how to get from Point A to Point B, the Toronto Transit Explorer shows how long it takes to get from Point A to anywhere in the city using several modes of public transit (bus, streetcar, subway, and commuter rail), as well as bike-share, cycling, or walking. It also shows bike-share and transit as one integrated option and wheelchair accessibility.

How do I use it?
There are several ways to use ToTX:

Explore City Access
To start, simply select a transportation mode from the menu in the upper-left corner and drop the pin anywhere or type in an address. Toronto Transit Explorer will generate a map showing travel times from that point to other parts of the city: areas in dark blue are quickest to reach with that mode choice. As the color gets lighter, travel times increase.

To see travel times to a specific destination, simply click on the map or enter in an address. You can also hover over a destination to see estimated travel times.

Compare Modes
You can also compare modes by clicking the plus symbol in the menu and selecting a second mode. Toronto Transit Explorer then generates a comparison map showing which areas are quicker to reach using the first mode (in blue) and using the second mode (in green), with areas in white taking the same amount of time.

Compare Trips
The tool can also compare how long it takes to make the same trip using different modes. You can choose a destination by clicking on the map. Select an alternate mode and compare the travel times and routes that you could take.

FAQ

Who built this site?
The project was led by Software Engineer Samara Trilling, with contributions from Matt Breuer, Douwe Osinga, Sebastián Soto, Dan Vanderkam, and Alison Yard Medland. Members of Bike Share Toronto and accessibility advocate Igor Samardzic provided critical guidance.

What data does it use and how does it compute routes?
Toronto Transit Explorer is built on top of an open-source transportation router called R5, developed by Conveyal. Sidewalk made some changes to R5 to improve performance for this

use case, and we will be publishing our fork on Github (and updating this page with a link). We have also open-sourced the front-end visualization, which is available here.

The explorer incorporates public transit data feeds from 13 agencies across the Greater Toronto Area. Transit feeds are open data and available on transitfeeds.com. Bike-share data comes from Toronto's Open Data Catalogue. Underlying map data is from OpenStreetMap.

In addition, the tool calculates cycling times via the street grid at four different speeds (ranging from 10 to 30 kilometers per hour), and walking times via the sidewalk grid at roughly 5 kilometers per hour.

Why does the tool say my commute is faster than it actually is?
The biggest limitation of the Toronto Transit Explorer is that public transit data feeds reflect *scheduled* service, as opposed to real-time service. For example, if the subway system is experiencing a delay, or traffic is holding up a bus, the tool's travel times won't reflect those conditions. Additionally, the tool generates travel times based on a weekday service schedule, so it won't reflect any service reductions that occur on weekends or holidays. Last, public transit data feeds can occasionally reflect outdated or inconsistent information.

If you spot a problem with the tool, let us know using the "Feedback" feature!

Should I use this tool as a navigation app?
You certainly can use the Toronto Transit Explorer to get from Point A to Point B, but its primary purpose is to show access to the city from a given point to all other parts of the city via a particular transportation mode. For that reason, it's best used more as a research or analytical tool than as an everyday navigation tool.

Why does the tool say it's the same travel time to reach an entire neighborhood?
The router measures travel times to the center point of a census dissemination area. That's fine for most small neighborhoods. In larger census areas, it can generate uniform travel estimates to places that are actually far apart, such as Cherry Beach and Tommy Thompson Park in the Port Lands.

Why isn't driving a travel option?
We know that driving is often the fastest way to get around a city. But the goal of the Toronto Transit Explorer is to focus on how much of the city is accessible to people without having to own a car.

I'm a developer who loves Toronto. Can I build on this tool?
Please do! We've published the code on Github and welcome contributions, in keeping with our belief that digital infrastructure should be open and collaborative.

What data does this tool collect?

To help gauge usage, the tool records anonymous information about which pages people look at. We don't tie that information to individuals. If users submit feedback, our engineering team uses it for the limited purpose of improving the tool, and at times for responding to inquiries. Personal information collected as part of Toronto Transit Explorer is governed by the Sidewalk Toronto privacy policy. You can read the Terms of Use here.

What does this tool have to do with Sidewalk Toronto?
The Toronto Transit Explorer tool is not directly connected with the ongoing project plans for Sidewalk Toronto, but it does rely on some of the same technologies that can support a future neighbourhood. As we continue to build new prototypes, we will use them to explore the digital infrastructure needed for more substantial applications. Toronto Transit Explorer also demonstrates the creative potential for open data and open digital infrastructure.

What if I spot an error?
We're counting on you to let us know! You can use the feedback button to contact us, or reach us at totx-feedback@sidewalklabs.com or via social media.