STREETLIGHT

StreetLight InSight® Turning Movement Count Technical Document

This document provides details about the use of StreetLight InSight® to run and calculate turning movement counts (TMC). There are some limitations when running a TMC analysis in the platform so we have outlined the details in the form of an FAQ regarding the expectations around output type, day part granularity, formatting, and post-processing, so you can decide if our offering is right for your specific project.

Turning movement counts are performed regularly by traffic engineers and other transportation professionals. They are a key input to signal timing or retiming efforts, traffic impact studies, corridor studies, and more. Deriving intersection turning movements from Big Data can save your organization time and money while reducing risk of injury to staff. In addition, when turning counts are easily and readily available, they can be utilized for more studies and ultimately enable better transportation decisions.

FAQ

1. **Will I get accurate TMC results for any type of intersection?**
   - We recommend that your intersection meets the following criteria to get the most accurate results:

Criteria	Reason
Intersections with higher volumes of turning movements (arterial roads or larger)	*Larger sample size*
Intersections have simple OSM networks (e.g. minimal intersecting OSM lines, few uni-directional roads, or few prohibited turning movements)	*Less interference with transit, and there isn't the potential to pick up nearby trips*
Intersections are not directly adjacent to highways nor do they include highway ramps	*There isn't the potential to pick up nearby trips*
Intersections are not near major rail transit lines or major bus corridors	*There isn't the potential to pick up nearby trips*
Intersections do not have restricted turns or reversible lanes	*There isn't the potential to pick up circuitous trips that may enter the intersection multiple times*

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FAQ contd.

2. **How many intersections can I analyze?**
   - It depends on which subscription level you choose, however our Lite offering includes tiers of 10 zones to 500 zones (i.e. since each intersection requires 4 zones, if you chose the subscription tier for 50 zones, you could analyze ~12 intersections, etc.) We also have larger enterprise subscriptions available as well.

3. **Can I run a TMC analysis with 15-minute granularity?**
   - We currently offer time periods as granular as one hour, however we do not offer 15-min intervals. We will be adding the 15-minute data period into the platform in the upcoming months.

4. **Are the TMC results formatted similar to Universal Traffic Data Format (UTDF) reports that I am used to seeing as a transportation planner?**
   - Users are able to visualize the TMC results in our interactive visualization tool, as well as download the CSV file with the raw results. For those who wish to format their results in the standard TMC template, it will require further formatting outside of the platform. Your account representative can share the template and offer formatting guidance.

5. **Is there any post-processing needed after I run the TMC results in the platform?**
   - Besides the formatting mentioned above, post-processing is only needed if a user is utilizing turning movement ratios (instead of TMC), and wants to download the results and perform further calculations outside of the platform.

6. **Are StreetLight TMC results directly comparable to TMC results that I typically collect with temporary counters?**
   - You cannot directly compare StreetLight results to temporary counters, it is like comparing apples to oranges. StreetLight derives metrics from an average of one or more months of data, while temporary counters are only based on 1-2 days of data. Reach out to an account representative to learn more about best practices and validation.

7. **What output type can I expect for TMC results?**
   - There are different approaches for running TMCs using the StreetLight InSight® platform. Depending on the type of intersection (urban, rural, large, small, near transit, etc.), we will recommend using a specific approach. Customers can choose from the Calibrated Index output (the data is calibrated to AADT or your own user traffic counts within the platform), the StreetLight Volume output (estimated number of vehicles trips), or utilizing ratios and user traffic counts as part of post-processing outside of the platform.

8. **What kind of error rate can I expect for the TMC results?**
   - Each turning movement must be evaluated individually to determine error. However, similar to AADT, roads with smaller TMCs and lower levels of traffic will have more error (note that since we are comparing a ~three-month daily average to a one-day count, we are comparing data based on different time frames).