

Methodology: 2007 Schleppe Award

Bus routes were awarded a Schleppe if they had the worst performance for reliability in their borough, according to two of MTA New York City Transit's own measures for the first half of 2007.¹

These two performance indicators score buses on whether they arrived with big gaps in service during the day or depart significantly off schedule at night. Both statistics are "indicators that measure service performance from a customer-oriented perspective." Routes with significant gaps in service or a failure to keep to schedule frequently experience "bus bunching," where two or more buses on a route arrive at the same time.

The statistics are reported on a semi-annual basis for 42 "high-volume" bus routes. Below we describe our methodology.

Wait Assessment

The first of the two official statistics is "wait assessment." New York City Transit defines "wait assessment" as "the percentage of service intervals no more than the scheduled interval plus" either "three minutes during the peak or five minutes during the off-peak."

It is measured during the day — from 7 a.m. to 7 p.m. for buses. Under New York City Transit's standard, a bus has an acceptable wait if it arrives within three minutes of its scheduled interval during the "peak" period, 7 a.m.-9 a.m. and 4 p.m.-7 p.m.

The standard for the "off-peak" period (9 a.m.-4 p.m.) is an arrival within five minutes of a scheduled interval.

As an example, the B44 bus along Nostrand Avenue is supposed to arrive every nine minutes during the off-peak period around noon. Its arrival is rated as acceptable by transit officials if two B44 buses arrive no more than 14 minutes apart from one another. If a B44 bus arrives 20 minutes after the previous one, it would score negatively in calculating its wait assessment rating. One result of long gaps in service is that buses may also arrive in bunches, a perennial complaint of New Yorkers.

Schedule Adherence/Enroute On-Time Performance

The second official indicator is "Schedule Adherence/Enroute On-Time Performance."

It is defined as "the percentage of trips departing from all scheduled enroute time points between one minute before and five minutes after scheduled departing time." It is assessed at night, from 7 p.m. to 12 a.m. During this time period service is less frequent and customers are more likely to rely on schedules.

¹ Source, Service Quality Indicators, First Half 2007, MTA New York City Transit Committee Agenda. September. 2007. pp. 220 – 224.

As an example, let's use the B44 again and say it's scheduled to come to a time-point location at 10:09 a.m. It would be rated as off schedule at that time point location if it departed at 10:07 a.m. (two minutes early) or at 10:24 p.m. (six minutes late) – much to the frustration of riders relying on the “guide-a-ride” posted at most bus stops.

Weighting the Two Indicators

Approximately 85% of New York City bus riders use the system during peak-hours; 15% use them during the off-peak, according to MTA New York City Transit. Since 2006, the MTA has, for administrative savings, shortened off-peak hours for determining schedule adherence to between 7 p.m. and 12 a.m. from 7 p.m. to 7 a.m. We continued to give a 15% weighting to schedule adherence as the bulk of off-peak trips are taken between 7 p.m. and midnight.

Therefore, we weighted New York City's two indicators for bus service. Let's take the calculations for the B44 as an example.

New York City Transit gave the B44 a “wait assessment” rating of 77.3% for the first half of 2007, the most recent period available. That means that 22.7% of buses on the route arrived with longer gaps in service than permitted under wait assessment standards. Therefore more than one out of five buses were rated to be outside the scheduled interval during the day.

It also rated 38.8% of the B44 as not adhering to schedule at night.

We multiplied the wait assessment by 85% yielding a result of 19.30 ($22.7\% \times .85 = 19.30$).

Then we multiplied schedule adherence by 15% yielding a result of 5.82 ($38.8\% \times .15 = 5.82$).

We then added the two numbers together — $19.30 + 5.82$ — which equals 25.1% after rounding. This means that 25% of the buses on the B44 arrived with major gaps in service or departed significantly off schedule, according to MTA New York City Transit's own statistics for the first half of 2007.

An irregularity rate for one in four buses is clearly a poor level of performance, often resulting in long waits for buses. And the B44 does not even have the worst performance in Brooklyn. Therefore, it is good news that city traffic and transit officials have chosen the B44 route as one of five routes slated for “Bus Rapid Transit” treatment. BRT is a series of strategies to speed up bus service, including enforced and clearly marked bus lanes, priority traffic signals, redesigned bus stops, special signs, and pre-boarding fare payment.

A route was deemed eligible for a Schleppie if 20% of its buses arrived off scheduled interval or time point. No route in Queens performed this poorly and as a result no Queens route was awarded a Schleppie.