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Hon. Gale Brewer  
Manhattan Borough President  
Municipal Building, 19<sup>th</sup> Floor  
New York, NY 10007

A handwritten signature in blue ink that reads 'Gale'.

Dear Borough President Brewer:

With growing public concerns about the seeming increase in delays and service disruptions on New York City subways in recent weeks, you asked IBO to review the Metropolitan Transportation Authority's plans for repairing and upgrading the transit system's network of signals. You asked us to focus on the signals because of your understanding that they are a key to the transit authority's ability to minimize delays and ultimately increase system capacity. All but one of the city's 22 transit lines currently function with the block signaling system used since the subways' inception in 1904.

IBO reviewed the three most recent MTA capital plans for New York City Transit: the 2005-2009 plan; the 2010-2014 plan; and the current plan, which covers 2015-2019. Together, the three plans dedicated \$5.3 billion to signal repair and upgrades. While it is not unusual for individual projects and their related spending to stretch past a plan period, it is still possible to see if projects are meeting their expected completion dates. Of the 33 signal projects in the 2005-2009 and 2010-2014 plans (excluding one that lacks current cost and completion information), 23 have been completed. In terms of delays, 19 were completed or are currently anticipated to be completed later than originally planned—delays range from as little as two months to as much as nearly four years. One project, at Church Avenue on the Culver line, was originally scheduled for completion in August 2014 but is now targeted for 2021. Conversely, seven projects were completed on time and two projects were completed ahead of schedule, one a year ahead of plan. Another five projects have not yet been completed but are still projected to meet their original completion deadline, although all but one started later than initially planned.

Looking at the current 2015-2019 capital plan, 14 signal-related projects were scheduled to begin by the end of this year. Eight of them are now delayed. One project initially scheduled to start in 2019 is now targeted for 2018. Another six projects have start dates expected in 2018 and 2019. Only one small signal project in the current plan, on the Fulton line, is expected to be completed this year.

The share of New York City Transit capital plans devoted to spending on signal repairs and modernization has declined over the past three plans, falling from 20 percent of the 2005-2009 plan to

17 percent of the 2010-2014 plan and 14 percent of the current plan. In dollar terms, planned spending on signals increased from \$1.3 billion in New York City Transit's 2005-2009 capital plan, to \$1.9 billion in the 2010-2014 plan, and \$2.1 billion in the current plan.

Although nearly half of the signal-related spending in the current plan is for a new communications-based train control system, most of the funding is directed towards repair of the legacy signal network—a system so antiquated that NYC Transit must itself fabricate some replacement parts. Former Metropolitan Transportation Authority Chair Thomas Prendergast recently told *The New York Times* that at the current pace it would take 50 years to replace the old signal system.

Only the L line currently operates with the guidance of the modern communications-based train control system. The communications system was completed in 2009, several years after the original scheduled date, at a total cost of almost \$300 million. The last phase of the project, to retrofit cars to work with the new signal system, was included in the 2005-2009 plan; originally expected to cost about \$12 million for the retrofit, the price tag swelled to \$71.4 million.

The new signal system is now being completed on the No. 7 (Flushing) line. The MTA had initially anticipated completing the installation of the communications-based train control system on the 7 in November 2016. Although the project started about three years behind schedule, construction of the new system has proceeded fast enough to make up for much of the delay and it is now expected to be finished this year. The MTA first budgeted \$265.6 million for the communications-based network on the 7 line, but the expected cost has now escalated to \$405.7 million.

Attached to this letter is a set of spreadsheets delineating the signal-related projects in each of the three capital plans along with details on scheduling and cost. If you need additional information, feel free to contact me or Alan Treffeisen, our transit analyst, at 212-341-6052 or [alant@ibo.nyc.ny.us](mailto:alant@ibo.nyc.ny.us).

Sincerely,

A handwritten signature in cursive script that reads "Ronnie".

Ronnie Lowenstein