

East River Tunnel

Natural geography has Long Island equally convenient to Midtown and Lower Manhattan. However, built geography, specifically Pennsylvania Station, clearly favors Midtown.

LIRR passengers commute to Lower Manhattan via Pennsylvania Station or Atlantic Terminal or, in the future, via Grand Central Terminal. ([East](#))

There are proposals to provide fast, direct access between Lower Manhattan and Jamaica by extending the Atlantic branch of the LIRR either through a new tunnel or through existing subway tunnels. The former is extravagantly expensive; the latter reduces the capacity of the subway system.

A more practical approach builds a new tunnel just under the East River, connecting elements of the existing subway system in such a way as to increase its capacity, making room for service from Jamaica and from Kennedy airport.

The new tunnel connects the Court Street Station of the IND, which is used as the Transit Museum, and a bell mouth just south of the Whitehall Street Station of the BMT. ([Tunnel](#)) ([Bell Mouth](#))

At the Brooklyn end of the tunnel The Fulton Street IND is a four track line from the Hoyt-Schermerhorn Station east but only two tracks cross the East River. The new tunnel would double the useful capacity of the Fulton Street line. ([Museum](#))

At the Manhattan end of the tunnel four tracks – two in Broad and Nassau Streets (J, M & Z) and two in Whitehall Street and Trinity Place (R & W) – merge into a two track tunnel under the river. Currently many trains are reversed at the Whitehall Street Station, at the foot of Broad Street, or at the station under the Municipal Building at Chambers Street. The new tunnel would increase the useful capacity of these lines by allowing through operation. ([4 Av BMT – M, R](#))

If the new East River tunnel were combined with extending the E to Whitehall Street, the result would complete a four track line between northern Manhattan and southeastern Queens. ([8 Av / Fulton St IND – Completed](#)) ([8 Av / Fulton St IND – Service](#))

The increased capacity of the Fulton Street line would allow the Atlantic branch of the LIRR to be connected to it providing fast, direct service between Jamaica and Lower Manhattan. ([8 Av / Fulton St IND – Atlantic Av](#))

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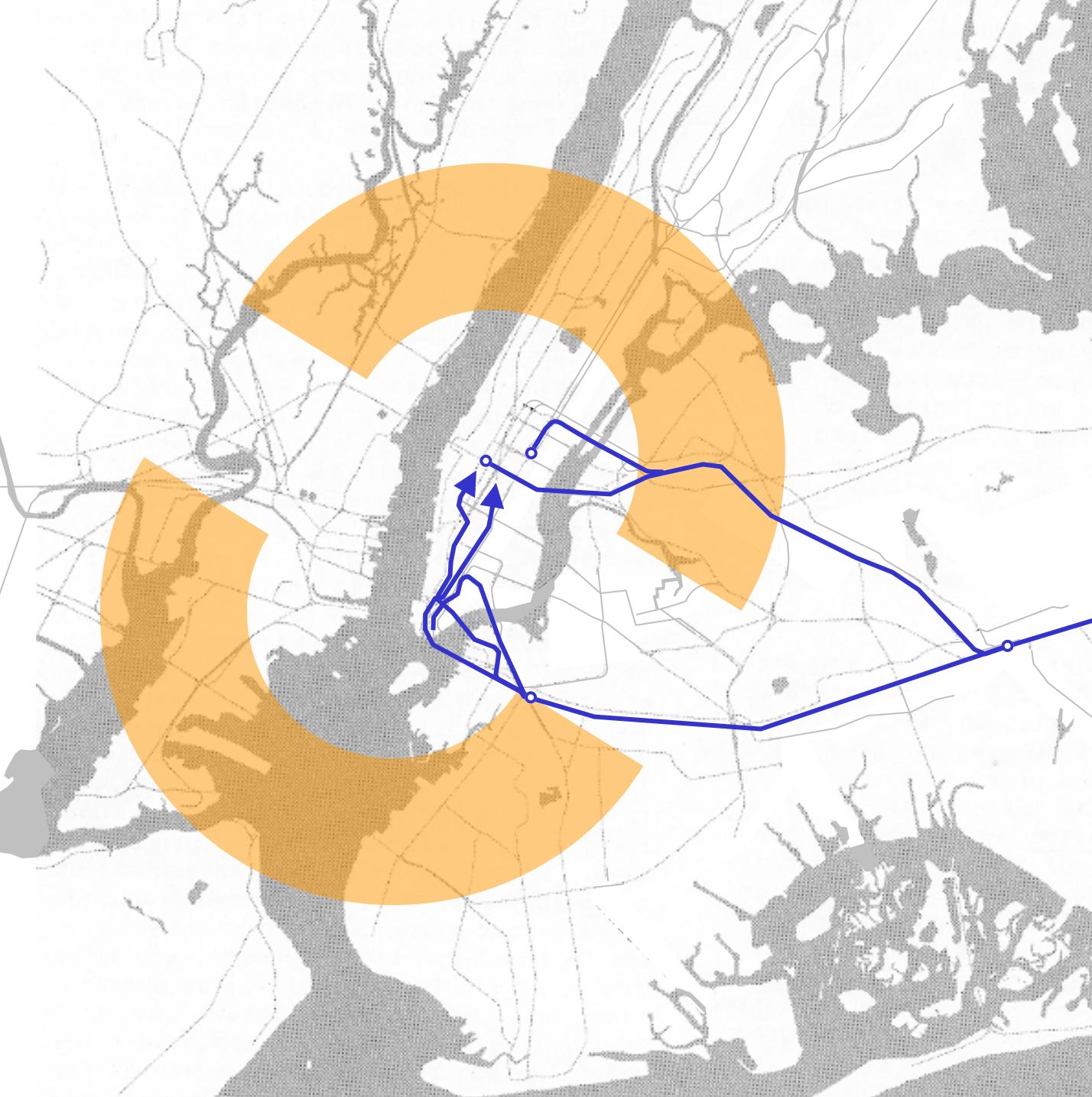
Downtown East

From the east, although Lower Manhattan and Midtown are nearly equidistant from Jamaica, the LIRR's terminal at Pennsylvania station is in Midtown, as will be its planned terminal at Grand Central, but its Atlantic Avenue terminal is in Downtown Brooklyn, across the East River from Lower Manhattan.

There have been many proposals to either extend the LIRR from Atlantic Terminal to Lower Manhattan or to extend the subway, using the Atlantic Avenue branch of the LIRR, to Jamaica .

However, there has not been agreement on what to build.

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East River Tunnels

The least expensive new transit tunnel under the East River ought to be one that involves the least construction. This can be accomplished by placing the tunnel where it uses parts of the existing subway system as approaches.

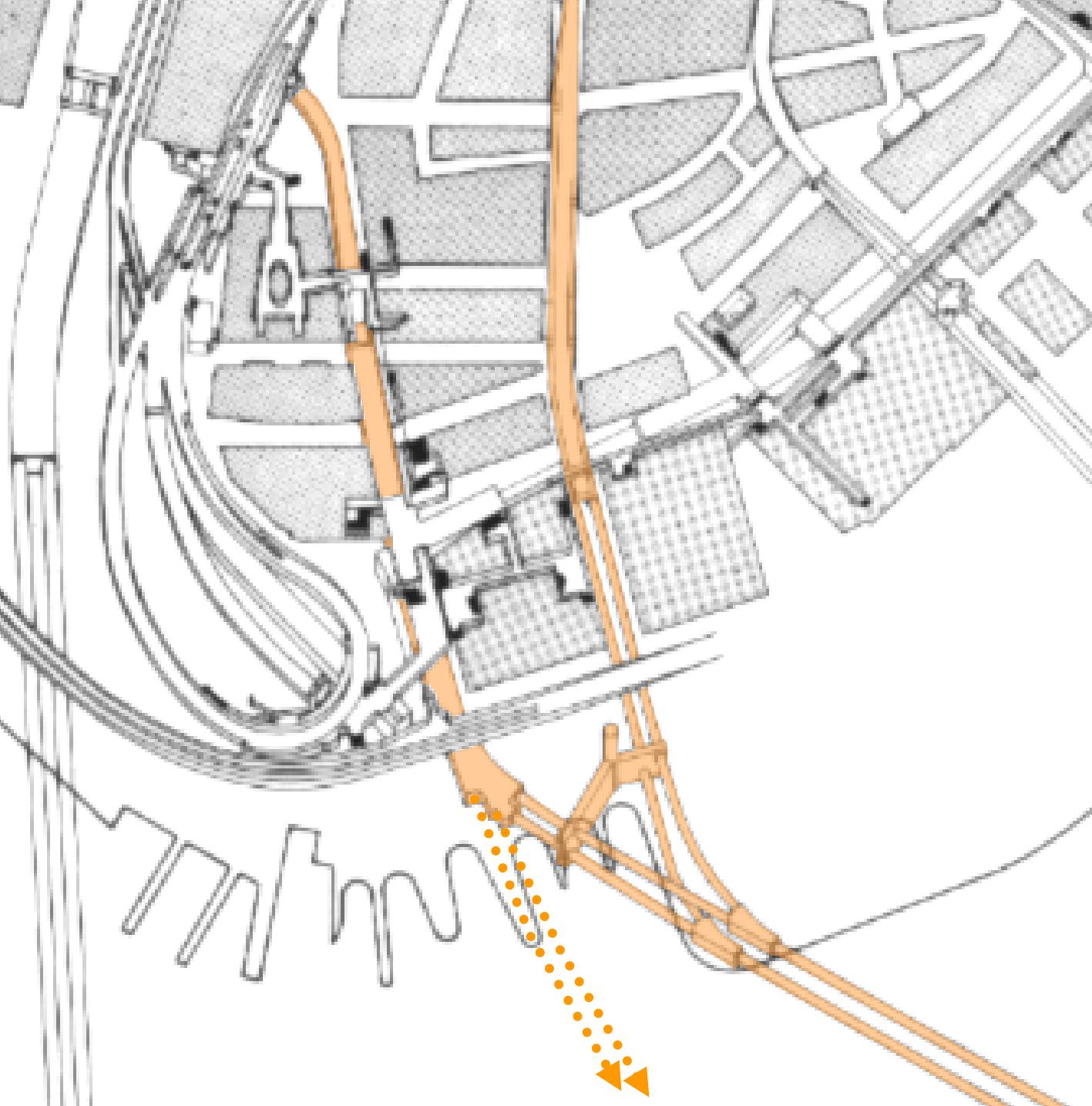
Such a tunnel would connect between the bellmouths at the south end of the Whitehall Street Station in Lower Manhattan and the Court Street Station, which is used for the transit museum in Downtown Brooklyn.

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East River

Tunnel Bell Mouth



The subway lines in Broad Street and Whitehall Street, each having two tracks, cross the East River in a single pair of one track tunnels. This halves the capacity of these lines with respect to service to and from Brooklyn. It also reduces their capacity from the north although there is a third track in the Whitehall station and a pair of tail tracks above the line in Broad Street for reversing trains.

There is evidence of plans to remove this constraint. South of the Whitehall Street station, under the ferry terminal, the subway structure incorporates a pair of bell mouths to allow attachment of a future tunnel under the East River.

Of the seven pairs of tracks that cross the East River from Downtown Brooklyn four cross to Lower Manhattan (A, C, M, R, 2, 3, 4, 5) and three pairs bypass Lower Manhattan to Midtown (B, D, F, N, Q).



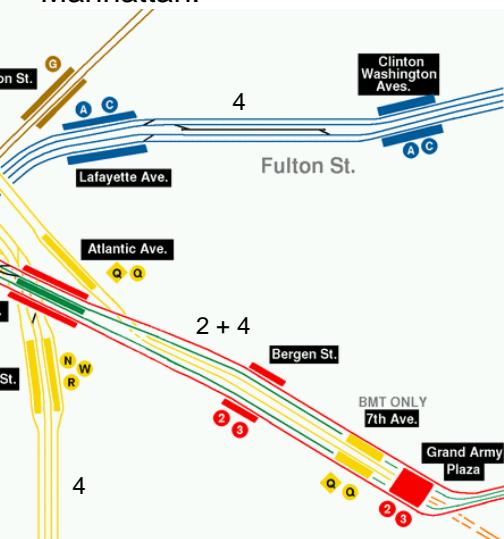
Omitting the G, nine pairs of tracks enter Downtown Brooklyn from the east and south and seven pairs cross the East River.

Of these, the IND and BMT have seven pairs of tracks from the east and south and five pairs to Manhattan. This imbalance restricts their capacity to serve Lower Manhattan. The IRT is balanced. It has two pairs of tracks from the east and two pairs to Lower Manhattan.

Brooklyn

Of the two pairs of tracks (three if the G is included) that enter the Hoyt Schermerhorn station from the east only one pair continue to Manhattan (A, C). One pair continue west to the Court Street station that is used as the Transit Museum. This effectively halves the capacity of the Fulton Street line.

Extending the pair of tracks from the Court Street Station to Lower Manhattan effectively doubles the capacity of the Fulton Street line and allows new service to Lower Manhattan.



Downtown

4 Av BMT -- M, R

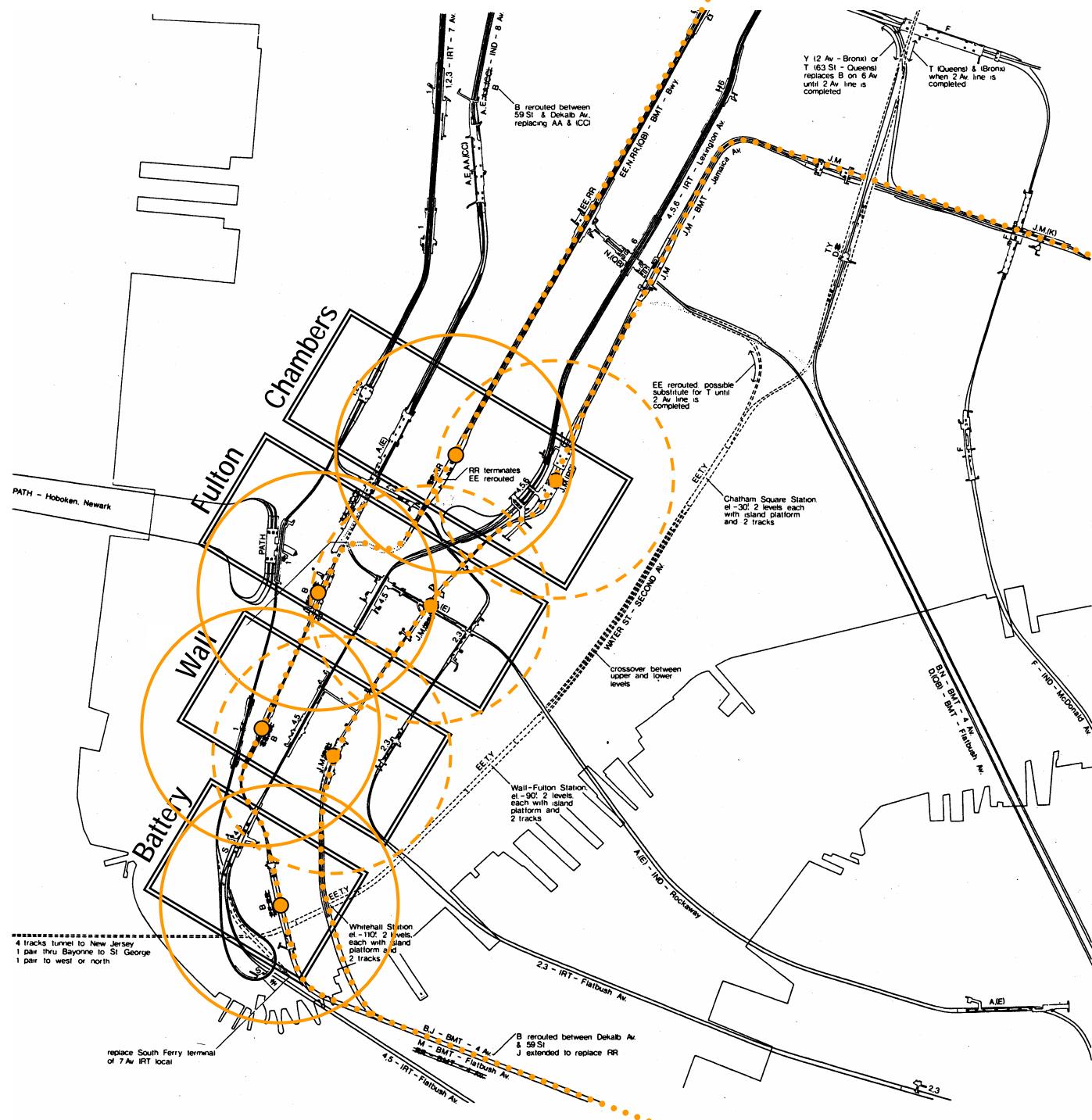
The BMT from southern Brooklyn provides convenient service to much of Lower Manhattan.

The M route serves the Wall, Fulton, and Chambers Street catchment areas but only during peak periods.

The R route serves the Battery and Wall, Fulton, and Chambers Street catchment areas.

With a possible transfer in Brooklyn one can readily reach any part of Lower Manhattan.

The pair of tracks that crosses the East River branches into two lines of two tracks each serving Lower Manhattan. Thus the river crossing halves the capacity of each of the two lines in Lower Manhattan to provide service from Brooklyn.



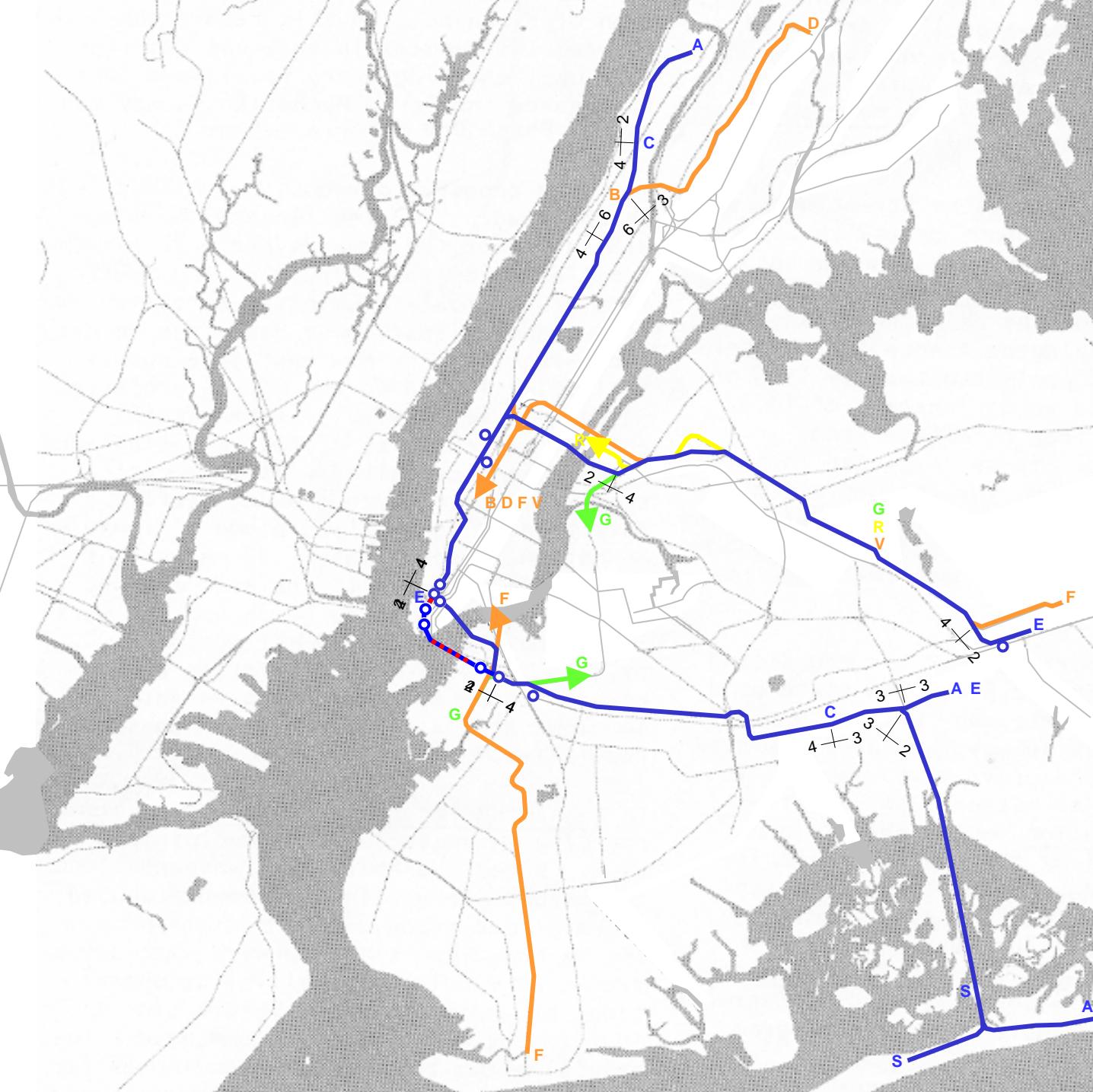
Downtown

8 Av / Fulton St IND --
A, C, E -- Completed

Extending the E from its terminus at the World Trade Center to the Hoyt Schermerhorn station in Downtown Brooklyn increases the capacity of the center of the line from two tracks to four.

Because of the track configuration at the Hoyt Schermerhorn station the E would become a local service on the Fulton Street line.

Adding the second pair of tracks between Downtown Brooklyn and Lower Manhattan eliminates the bottle neck at the center of the line and effectively doubles the capacity of the Fulton Street line. How, in addition to the extension of the E, can that additional capacity best be used?



Downtown

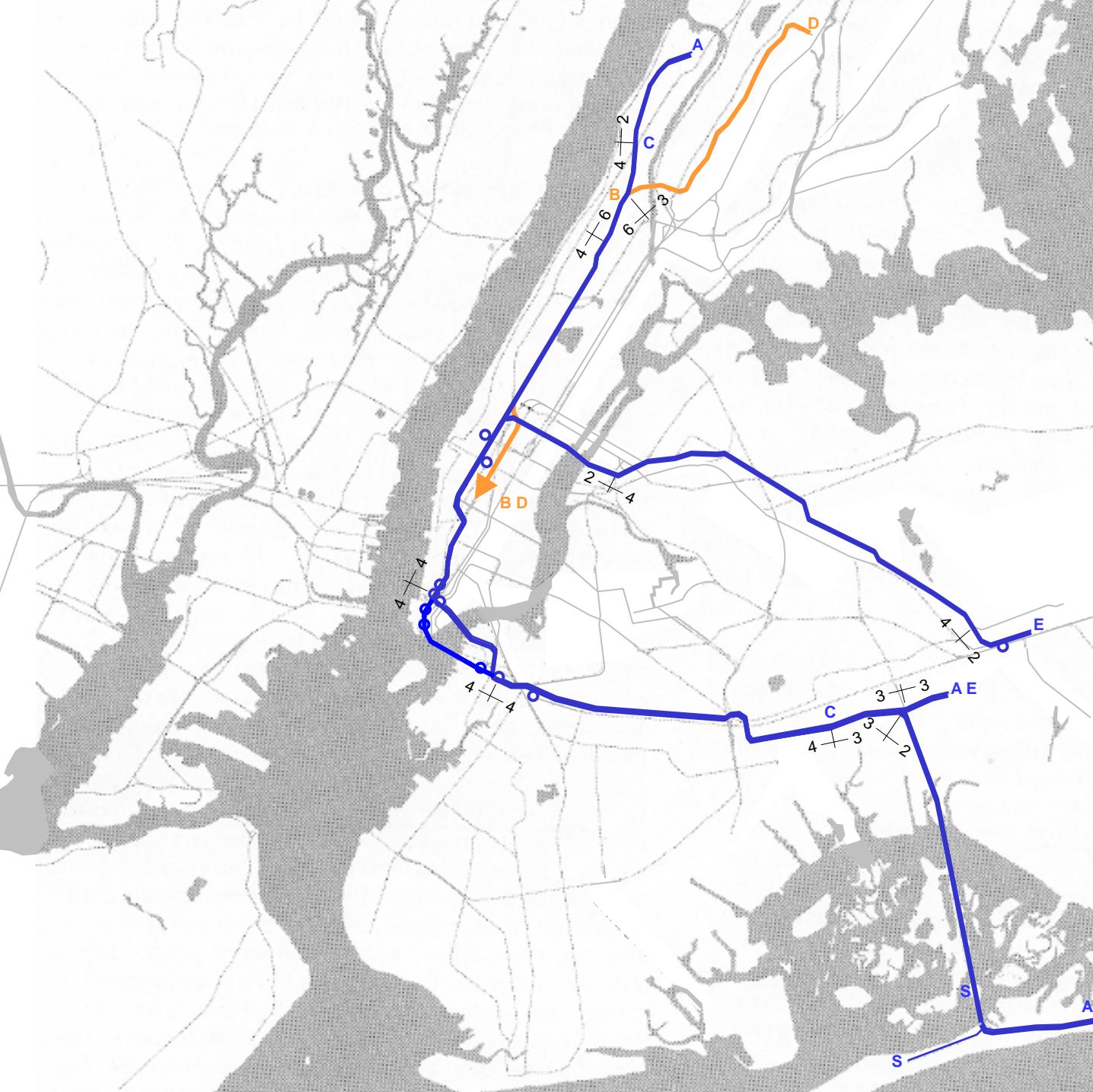
8 Av / Fulton St IND --

A, C, E -- Service

The A is the express on the 8 Avenue IND. It runs between Inwood and Far Rockaway with some trains terminating at Lefferts Boulevard. On the Upper West Side of Manhattan it shares the express tracks with the D. No change.

The C is a ~~CONTINUED~~ service. It runs between Washington Heights and Euclid Avenue. On the Upper West Side of Manhattan it shares the local tracks with the B. It would remain a local but be routed through Lower Manhattan and the new East River Tunnel.

The E is ~~CONTINUED~~ in Queens and local in Manhattan. It runs between Jamaica and the World Trade Center. It would be extended through Lower Manhattan and the new East River tunnel and continue on Fulton Street as a local to Lefferts Boulevard.



Downtown

8 Av / Fulton St IND --

A, C, E – Atlantic Av

In order to provide service between Lower Manhattan and the LIRR at Jamaica the Atlantic Av branch of the LIRR could be connected to the Fulton St IND and share the express tracks with the A.

Such a connection could be made in several locations; however, if in East New York more of the IND in Fulton St would be used and the elevated line in Atlantic Av could be abandoned.

The new service could terminate at the Chambers Street station, the trains being reversed on an existing fifth track between Chambers and Canal Streets. Passengers to the Battery and Wall Street catchment areas in Lower Manhattan would transfer across the platform to the E or C at the Hoyt Schermerhorn Station.

