TAURANAC MAPS

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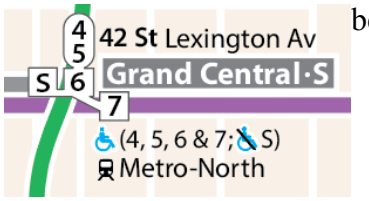
Tauranac Publishes His Newest New York City Subway Map

John Tauranac likes to believe that in terms of its didactic and aesthetic qualities, this new quasi-geographic subway map is pretty darned good.

You might well ask why Tauranac Maps would have published a new subway map when we are in the midst of the Covid-19 crisis, with subway ridership down and tourism further down and the system not even up and running its normal 24 hours a day. The answer is that people and service will be back, and when things return to normal, I believe that New Yorkers and out-of-towners deserve a better subway map.

When the system is operating normally, it operates 24 hours a day, seven days a week. Depicted on the primary map is service that operates seven days a week, from 6:30 a.m. – 12 midnight; a supplementary map on the back depicts late-night service, 12 midnight – 6:30 a.m. Between the two maps, service is depicted on a 24/7 basis.

Subway service at each station is telegraphed by having the stopping patterns right on the route lines within symbols that indicate express service (a circle or oval) and local service (a square or rectangle). The service is framed in the color of the route if there is no transfer to another trunk line.

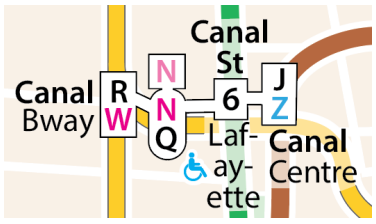


between or among trunk lines, as here at 42nd Street-Grand Central, the color of the service box is a neutral black.

The subway lines are flanked by white hairlines, and they are set against pastel-like colors for the land mass,

parks and water. Type for station information, streets and neighborhoods is all in black. The passive background colors serve as foils to the primary information at hand.

Text is in the clear whenever possible. When surprinted on routes, the intensity of the route colors under the type is reduced for legibility, and the dark gray hairline flanking the yellow line is removed entirely. At the Franklin Av-Eastern Parkway station on the 2, 3, 4 and 5 in Brooklyn, the red and green lines are entirely "whited" out for clarity.



The station names include the street of operation to answer the basic question of where to find a station. When the street of operation intersects another street or avenue that results in a break in the street pattern, such as Broadway at 72nd Street where Broadway additionally intersects Amsterdam Avenue, that intersecting street or avenue is included in the name of the station.

The Franklin Street station on the Number 1 Line is another good example, and it is also here as an illustration of geographic integrity. The station is at a gore created by the intersection of the angling Varick Street and the rectilinear West Broadway, which lines up just east of Fifth Avenue on the grid. (In the late 19th century, both "West Broadway" and "South Fifth Avenue" were used interchangeably to describe the same street.[1]) In former maps, this mapmaker has been as guilty as other mapmakers in showing the station way too far west, throwing geographical perspective completely out of whack. The station's geographical whereabouts is pretty accurate in this presentation. It is east of Sixth Avenue, which itself is on a southeasterly angle south of Houston Street, which means that things start getting pretty tight.

This is not a true geographic map – it is quasi-geographic. Nevertheless, every effort has been made to depict relationships accurately, despite the fact that the geography has been distorted to clarify the operation of the subway. Manhattan is considerably expanded on its east-west axis from about Houston Street to about 145th Street, for

[1] See "How Is This, Mr. Gilroy," *The New York Times*, May 10, 1891.

instance. Consequent-ly, the Harlem River is hardly as wide as depicted, nor is Central Park the runty rectangle. It is about 2.5 times as long as it is wide in reality.

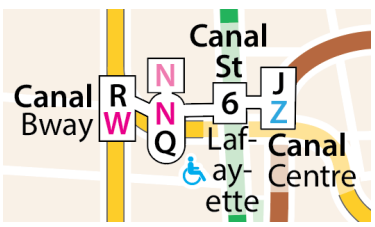
Despite the geographical distortions, every effort has been made to impart the information with accuracy. The section of the map illustrated here has been tailored to have one complex stand alone in Lower

Manhattan – the stations at Chambers Street, Park Place, the World Trade Center, and Cortlandt Street. As depicted, these passageways accurately reflect the transfer privileges. From the Chambers Street station, you may transfer either directly to the station at Park Place or to the stations at World Trade Center and Cortlandt Street. From the Park Place station, you can only go to the Chambers Street station, from which you may then go to the World Trade Center and Cortlandt Street stations, and vice versa.

You might have noticed service information in different colors, such as the red "W" above at Cortlandt Street. That red is a flag indicating that something is different about the service, and it's more than indicating full-time v. part-time service. Part-time service can be any number of times, so service is color coded, using five colors in all to indicate when a line actually serves the station.

I started noodling with the different subsets of "part-time service" in a map first published in 1991. Asterisks and daggers and all kinds of typographic gimmicks were employed to identify the differing service, but it was far too cumbersome, and hardly visually arresting. By the early 2000s, I realized that the ideal solution was to color code the service to indicate when the station is served by each line that stops there. I fiddled with different combinations over the years, and today, to ensure good registration, I use colors that are either a percentage of a pure color – of black or magenta – or 100 percent of black and magenta and of cyan.

The Canal Street complex at Broadway, Lafayette and Centre Streets is a good example of how the color-coded service looks. A black letter or number serves the station every day, 6:30 a.m. – 12 midnight



(from left to right, the R, Q, 6, J); a red letter serves the station weekdays, 6:30

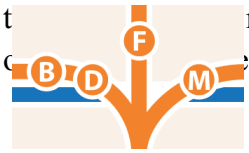
a.m.– evening hours (the W and N); a pink letter serves the station weekends, 6:30 a.m. – evening hours (another N), and; a blue letter serves the station rush hours (the Z).

This complex was chosen for another reason as well. These stations create a complex complex, and I like to think that I have succeeded at "decomplexifying" it. Three different trunk lines converge on the complex, with one of those trunk lines operating on two different sets of tracks, each with its own set of platforms. You can visualize that configuration here. And the specificity of symbols further demystifies the complex. For instance, the red N in the oval tells you not only that the N operates weekdays, but that weekdays it operates express in at least one direction from Canal Street; the pink N in the box tells you not only that the N operates weekends, but that weekends it operates local.

And there is gray. A gray letter, such as the D at 155th Street, indicates that the line, which normally stops at the station, skips the station morning rush hours to the Central Business District, from the Central

Business District evening rush hours, at which times the blue letter – in this case, the B – stops at the station. During rush hours, the D operates express between 145th Street in Manhattan and Fordham Road in The Bronx, and, to fill in for the D at the bypassed local stations, the B is extended from 145th Street in Manhattan to Bedford Park Blvd in The Bronx, and it makes all stops. (Service is explained in the guide at the top right-hand corner of the map.)

Where lines diverge from their trunk line, discs in the color of the t number or letter of the line within the disc are shown elves to reinforce that fact. A good example is on the



uptown run of the Sixth Avenue Line (the orange line) at 53rd Street, where the B and D both turn west, the F continues north on Sixth Avenue, and the M turns east on 53rd Street. This approach, I believe, leaves little doubt about which line goes where.

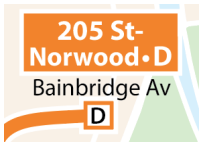
Terminals include the name of the station and the service that

terminates there, and part-time terminals are distinguished from full-time terminals. Full-time terminals are filled with the color of the line that terminates there; part-time terminals have the color of the line in outline.

Following is an example from the southern tip of Manhattan Island. The W and Number 1 Lines are full-time terminals – they always

terminate there. The Number 5 is a part-time terminal – weekdays it is extended to Brooklyn, and, to accentuate that, its route is in a dashed line.

In the naming of stations, street names are given priority over secondary names and neighborhood names, which makes especially good sense for terminals. The odds are that the average rider does not know where Norwood is in The Bronx, for instance (in fact, the borough historian of The Bronx, Lloyd Ultan, has said that "not even residents of Norwood can define its borders"). Ergo, "205 St" is put first, and Norwood second. This is especially meaningful for terminals when the street name is a number. If passengers are awaiting an uptown D train at 59th Street-8th Avenue with 170th Street as their destination, a terminal named "205 St" is meaningful when a terminal named "Norwood" is not.[2] When a terminal name is a street number, simple math and a bit of deductive reasoning are all that are required to ascertain that a train is headed in the right direction.



Supplementing the station names are symbols that reflect different aspects of each station.

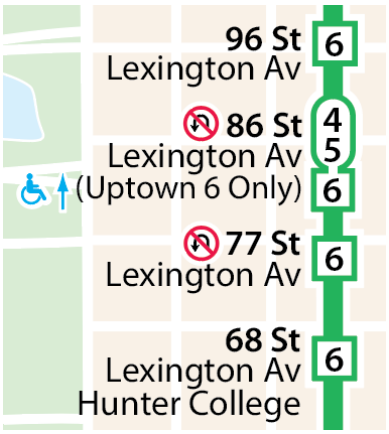
There are the wheelchair symbols for accessibility. This is a symbol that doubtless plays a higher role than anticipated by the original advocates for the handicapped – seeing the accessible symbol is important for caretakers of children in strollers, and travelers burdened with baggage, and so on, not just the handicapped.

There are "No U-Turn" symbols to flag stations where passengers cannot transfer to a train going in an opposite direction without paying another fare. The same symbol serves as a "watch-it" to warn

[2] "Norwood" has only recently been added to the 207 Street terminal name by planners at the Transit Authority, which creates an additional complication. There is already a "Norwood" station on the J and Z Lines in Brooklyn, grid co-ordinate I9.

entering passengers that entrances at stations marked with the symbol lead to service going in one direction only.

The "No U-Turn" symbol can provide crucial information.



Imagine going uptown on the Number 6 Lexington Avenue Local and failing to get off at the 68th Street station, as intended. The next station is 77th Street, but that station does not permit a free transfer to the other direction. You would have to exit the system, cross Lexington Avenue, and enter the downtown side, paying another fare. The next stop is 86th Street, an express- and local station, and you would assume that you can reverse direction at an express- and local station at no extra fare, but no again. You have to travel to 96th Street before you can reverse direction.

Of the more than 60 stations where you cannot reverse direction without paying another fare in the system, the express- and local stations at 86th Street-Lexington Avenue in Manhattan and at Nostrand Avenue-Fulton Street in Brooklyn are the only two express- and local stations that this mapmaker knows where you cannot reverse direction without paying another fare.

Subway stations that accommodate transit police stations are indicated by police badges.

Outdoor stations are indicated by a symbol for the sun. One of the most obvious facts about a station is if it is above ground, whether in an open cut or on elevated tracks. If you're going uptown on the Number 1 and you want to get off at the City College station at 137th Street, you will be alerted to the fact at 125th Street that the next station is yours if you know that the 125th Street station is outdoors. And it's not just that you can see the sun in the morning and the moon at night, the whole ambience is different. Surprisingly, considering this is the "subway," more than two-fifths of the system's stations – 194 of the 472, by my count – are above ground.[3]

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[3] The 1928 BMT map was the first New York City subway map to show outdoor service. The BMT mapmakers showed outdoor routes in red to distinguish them from true "subway" routes, which were black. This was before the Board of Transportation's 1948 Hagstrom map that accorded a separate color to each of the three divisions – the BMT, IRT, and IND – which precluded coloring a route to indicate outdoor v. underground service.

Extending the idea of showing outdoor service is the inclusion of bridges as a graphic device, which alerts you to the fact that you are not in a subaqueous tunnel on that stretch. And the views, like the views from many other outdoor stations, are worth the price of admission

And here's a question: if you are told to take the train to Zerega Avenue in The Bronx, how do you find it on a map with only that amount of information? If you start your countdown of stations in The Bronx from the top-left-hand corner, you have to go through more than 50 stations before finding it. The conclusion? Follow the examples set by the London Underground and Paris Metro maps: include an index.

The index on this map incorporates more than the expected grid coordinates – it includes the same information that you find at the stations on the map itself, including the service at the station and intermodal connections to local buses that intersect or emanate from the station, and bus terminals and railroads, and service to the airports.

Sharing the back of the map with the index are the late-night subway map, and a map that shows rail operations in the city and the subway connections serving the rail stations.

Years ago, I replaced Helvetica typeface with Myriad Pro, which is a highly legible typeface that is inherently more valuable to a mapmaker than Helvetica. Myriad Pro takes up less room horizontally than Helvetica, and, where every pica counts, that's a real blessing. Myriad Pro has the added advantage of including semibold as a choice of weight, so if you want to accentuate something without screaming, you may. Semibold Myriad Pro is used throughout for station names and service, and, in its italicized form, for park- and neighborhood names.

I like to think that the standards incorporated in this new map make eminently good sense. To ascertain whether others agreed, in the spring of 2019, I gave a presentation on the history of mapping the subway to a class of 14 adults at the Center for Living and Learning on East 68th Street. As the culmination of the class, I asked them to take a survey and answer "Yes" or "No" to some of my proposals. The idea that scored the worst was the inclusion of the symbol of the sun to indicate outdoor stations, which had ten "Yes's" and four "No's." That's still better than a two-thirds majority, or more than enough "Yes" votes to override a Senate filibuster, and not enough "No's" to dissuade me.

Here are some facts on the new map:

Size when folded, 3.5 X 8.25 inches;
Size when unfolded, 17.5 X 24 inches;
ISBN, 978-1-878892-38-6;
Price, $5.95.

The map was printed by Penmor Press in Lewiston, Maine, in 4-color process printing on 80# Anthem Plus Matte Text.

The map has an accordion fold, which I believe is the simplest. You simply open the top panel, drop down the middle and bottom panels, open at the first crease, and there is all of Manhattan and the Bronx, and sizable chunks of western Brooklyn and Queens.

The poster is 24 X 36 inches, and its price is $14.95.

The map will be available at Shakespeare & Co.'s shops on Broadway and on Lexington Avenue, at Book Culture's shops on West 112th Street and on Broadway, and at the South Street Seaport store of McNally-Jackson, etc.

How I Came to Be a Mapmaker

I sort of stumbled into map making. I was an English lit major and history minor as an undergraduate at Columbia University's School of General Studies, and I did my graduate work in American urban history at New York University.

In the early 1970s, I decided to write about undercover passageways through and under buildings in Midtown Manhattan, passageways that pedestrians could take to stay dry in the wet and warm in the cold. The story was an instant cure for insomnia, and I realized that another way of imparting the information was to chart the passageways. I had no training as a graphic designer, but I created roughs, and the editors at *New York Magazine* liked the idea. They took my roughs and handed them over to a graphic designer, who metamorphosed them into a real product.

I consequently directed lots of maps, and, thanks to computerized graphics and Adobe Illustrator, I have since designed many more, including maps for both editions of Kenneth T. Jackson's *Encyclopedia of New York City*, and maps for *Avenue Magazine*, and maps for several Business Improvement Districts, etc. Maps under the Tauranac imprint include "Manhattan: 3 Maps in 1," which has a geographic map of Manhattan's subways facing a geographic map of Manhattan's bus system, with the same base map on the back depicting places of interest, colleges and universities, hospitals, etc. They all share the same base map with the same grid coordinates, etc. And there is the 172-page *Manhattan*

Block By Block: A Street Atlas, which "offers just about all the critical information a site-seeker might need – and then some," as *The New York Times* said. The street atlas is in its sixth edition.

When not mapping, I write on New York City's social and architectural history, and I have taught the subject for over 35 years at NYU's School of Professional Studies. My most recent book is *Manhattan's Little Secrets: Uncovering Mysteries in Brick and Mortar, Glass and Stone*, which was published by Globe Pequot in 2018. My other books include the three editions of *New York from the Air* (Abrams), with photographs by the great aerial photographer, Yann Arthus-Bertrand; *The Empire State Building: The Making of a Landmark* (Scribner, reprinted by Cornell University Press); *Elegant New York: The Buildings and the Builders, 1885–1915* (Abbeville Press), and; *Essential New York* (Holt, Rinehart & Winston).

Freelance articles have run in *The New York Times*, *New York Magazine*, *New York Newsday*, *Seaport Magazine*, *Travel & Leisure*, etc. An early article on the design of transportation was "Art and the I.R.T." which dealt with the mosaics and bas reliefs on some subway station walls. It ran *Historic Preservation*, the magazine of the National Trust, in the issue of October – December, 1973.

As a freelance project for the Municipal Art Society in the early 1970s, I wrote the guidebooks for the two Culture Bus Loops that the MTA was operating. In 1974, I was asked if I would be interested in writing and editing a travel guide to New York City for the MTA.

With my interests, it seemed a natural fit, especially in terms of mapmaking. I could certainly conceive and direct the work of mapping the subway, and I wanted the MTA to change tack. *Seeing New York: The MTA Travel Guide* was published in 1976 (Popular Library), and the guidebook included a geographic map of the subway system. In the fall of 1974, I tried to have the then-existing color-coding system for the subway changed from according an individual color to each of the subsets of a trunk line to a single color for a trunk line, *a la* the London Underground system. There were something like 18 separate colors operating on a north-south basis in Midtown, throwing any approach to depicting geographical accuracy out of whack. The TA felt that to change the color-coding system systemwide for the sake of one guidebook was a case of the tail wagging the dog.

I kept trying, but to no avail, even while chairing the MTA subway map committee. We tested the prototype system map in the spring of 1978, and what we already believed was the case proved true – that the

quasi-geographic approach would be greatly appreciated, but an improved color-coding system would work wonders.

The TA was still not convinced. However, just before Labor Day weekend, 1978, Phyllis Cerf Wagner, who was serving as a dollar-a-year consultant on aesthetics, asked me how progress was coming on the map (Mrs. Wagner was the widow of Bennett Cerf and wife of former-Mayor Robert Wagner). I told her that we were dead in the water, and why. She asked to see what a new-color-coding system would look like, and the next week she looked at some different approaches.

Mrs. Wagner said that the idea made sense to her, and she called Chairman Harold Fisher. The chairman asked to see the approach, so Mrs. Wagner, Marketing Director Susan K Berman, and I went to the chairman's office. The chairman said that it made sense to him, and he called President John deRoos at the TA, and by five that afternoon it was a done deal. We could have a color-coding system based on trunk lines.

The 1979 MTA subway map earned an editorial in *The New York Times* ("The Best Subway Map in Years"), as well as a review by the *Times'* architectural critic, Paul Goldberger ("At Last, A Usable Subway Map"). The map was also awarded a Commendation for Design Excellence by the National Endowment for the Arts and the U.S. Department of Transportation.[4]

I believe that the enclosed map will manifest my continuing quest for the ultimate subway map, and I hope that you will agree that I have at least created a pretty darned good one.

If you have any questions, please don't hesitate to call me at 212-222-7731, or on my cell phone at 917-744-9047, or email me at johntauranac@gmail.com.

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[4] Recognition for my work in another realm came in 1999, when, in celebration of the creation of the five-borough City of New York in 1898, I was declared one of the Centennial Historians by the Mayor's Office, and in 2006 I was given an Award for Teaching Excellence by NYU's School of Professional Studies.