

# **BRIAN T. KETCHAM, P.E.**

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February 8, 2020

Neighbors United Below Canal  
P.O. Box 130034  
6 Doyers Street  
New York, NY 10013

RE: Manhattan Detention Center at 124-125 White Street

Neighbors United Below Canal:

I have spent 50 years as a design engineer, an environmental engineer and a transportation engineer. I received my mechanical engineering degree from Case Institute of Technology and a master's degree in mechanical engineering from the Massachusetts Institute of Technology. During my career, I have been involved in the analysis of transportation and mobile source emissions at both the federal and state levels, and have provided engineering services on the environmental impacts of many projects, including the ill-considered and ultimately defeated West Side Highway Project (Westway) and, more recently, the Willets Point Development Project in Queens.

This letter is based on my review of Chapters 4, 7 and 10, and Appendices J and F of the Final Environmental Impact Statement ("FEIS") for the new Manhattan Detention Center proposed at 124-125 White Street ("MDC"), the CEQR Technical Memorandum dated October 11, 2019, a number of studies prepared by the New York Metropolitan Transportation Council<sup>1</sup>, as well as other materials that have been generated by the public since the project was proposed.

## **WALKER STREET REPORT POINTS AND FEIS LACK OF RESPONSE**

The most important paper I have reviewed for my reaction to the MDC is the "Analysis of effects of projected demolition and construction of the new jail facility at 124-125 White Street" (the "Walker Street Report") prepared for the Walker Street Block Association by a contractor, an architect and a structural

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<sup>1</sup> A list of the NYMTC studies that I consulted in connection with my review of the FEIS is attached to this letter.

engineer, all of whom have done work in close proximity to the proposed MDC site. This report is attached as Exhibit M to NUBC's comments on the DEIS, submitted by Helen Mauch and Danial Richmond on July 22, 2019, and was responded to in the FEIS with non-answers. It appears it has not been given the full attention it deserves. I want to start with the Conclusions section of the Walker Street Report.

The Walker Street Report states that "from a constructability stand point this proposal represents the worst of all possible attributes. It is in an urban environment, in the very heart of the city center of the largest US city. NYC is one of the most expensive construction environments in the world, and the most expensive environment in the US. It is a logistically challenging location, with narrow streets and high pedestrian and vehicular traffic. It is surrounded by residences, retail stores and parks with little to no buffer between. It is proposed for a site which is already occupied by two exceptionally large structures which were originally carefully designed and constructed with the express purpose of being difficult to deconstruct. The proposed new structure is twice the height of any prison ever constructed anywhere." The MDC has since been reduced to 295 feet plus 40 feet of support structures which probably makes it still uniquely high.

The Walker Street Report also notes the following about the project:

"It is located directly adjacent to a senior citizens housing facility, which makes demolition and construction at best invasive and disturbing, and at worst destabilizing. There are 8 occupied tenement buildings directly across the street which are even more vulnerable due to their structural weaknesses. Assuming the senior housing facility building and its neighbors survives the 6 plus year ordeal unscathed, the inhabitant's lives will be miserable, and constantly at risk during the process."

"Due to numerous technical misrepresentations, misleading characterizations, retractions and contradictions of their prior statements, it is difficult to trust the competence, planning or honesty of the agencies proposing to undertake this construction. The plan feels in flux and lacks cogency."

"The height, and location of the proposed structure, coupled with its design mission as a detention facility would make it an expensive, inefficient exercise in engineering excess, which present genuine risks to stability of adjacent structures. It is difficult to believe there are not better options."

Many of the points in this report, which are reflected in the “Richmond” comments in Chapter 10 of the FEIS (see, for example, comments 2-2, 2-12, 2-13, 2-14, 3-1, 3-8 and 5-12), have been ignored in the FEIS Response to Comments Section:

- The DEIS is incomplete, missing supporting information critical to a full public review and understanding of the MDC project. A number of FOIL requests have been ignored. P.1.
- Demolition of the MDC is a huge challenge. The DEIS is missing critical information for a full understanding of these challenges and the resulting impact on the Chinatown community. P.2.
- All surrounding buildings will experience significant and prolonged effects from proximity to the construction site. P.2.
- It is estimated that it will take in excess of 2 years to remove the existing structures to grade level and more time to remove sublevel structures. P.3.
- The current state of the art for demolition from a technological point of view can best be considered primitive. It is by its nature a noisy and dirty job. P.3.
- Dust and air borne particulate from demolition are toxic. The most common component during concrete and masonry demolition will be silica. Silica is linked to lung cancer and silicosis. P.4. Without encapsulation resident exposure to these pollutants will be intense. Encapsulation is costly. P.4.
- 124 White Street likely contains lead and asbestos that could take an additional year for removal. P.4.
- Table 7-4 presents typical construction equipment noise levels many of which produce noise levels above permanent hearing damage. P.6. The least noisy versions of any of these tools are really, really loud. P.7.
- “The characterization of intermittent (noise and vibration levels) is misleading. If “intermittent” means 10 hours a day, 5-6 days a week, for several years it would be an accurate statement....The author of the DEIS assessment has either no practical connection to or understanding of what happens on a large-scale demolition and construction site, or they are untruthful.” P.7.
- It has been estimated that it would take 2,440 trucks to clear debris from the site prior to commencement of construction—all based on limited information. It could be more. P.8.

- It is reported that debris would be carted to New Jersey to waste transfer stations presumably using Canal Street and the Holland Tunnel. Up until recently the Port Authority has not permitted heavy trucks to use the Holland Tunnel. DOC must provide more details and routes necessary to remove debris. P.9.
- The question has been raised about the impact on infrastructure; for example, whether or not local infrastructure can support water demand for the MDC. P.10.
- The question of alternative pile driving devices being considered for the MDC and if so the White Street analysis reports that vibratory pile drivers are just as noisy as standard pile drivers. P.10.
- Another pile driving system – drilling – is reportedly just as noisy as other means of installing piles. P.11.
- The effects of preparing the MDC site for drilling will likely exacerbate existing soil conditions and could directly affect the structure of Chung Pak. P.12. Plus, buildings along 124-125 White Street are equally vulnerable to these procedures. P.12.
- The Walker Street Report recommends monitoring all potential fragile sites using current technical procedures for vibration impacts. P.13. It may be necessary that the building of the MDC will require underpinning the foundation of Chung Pak due to the adjacent structure foundation going deeper. The report underscores the poor soil condition that the existing jail facilities were constructed on. P.14.
- The FEIS contains little compelling evidence that DOC understands the complications of building on the proposed site and questions the credibility and trust in the assurances contained in the FEIS. Also questioned is “which infallible super competent engineering firm was DDC and Perkins-Eastman hoping to hire so that the new jail doesn’t sink into the ground the 5th time?”
- “The new facility will likely be steel reinforced cast concrete...only larger...requiring 3-4 times as much concrete...There will be upwards of 17 concrete trucks on the site simultaneously on concrete pour days...most trucks come via (the) Manhattan Bridge...” P.15.
- “Logistically for the over all structure construction there will need to be no less than about 15,400 trucks coming to the site and leaving...” P.16.

- This proposed jail facility represents several egregious attributes of inefficiency.” P.17 lists many.
- “Prison and detention facilities in general are historically located in rural, remote areas, or islands for several reasons.” P.17.
- “It has been projected that this project will cost in excess of 11 billion collectively and paid for in bonds over 30 years, costing ultimately closer to 30 billion. There has been no break out of how much the new MDC will represent of that number.” P.18.

### **EXTERNALITY COSTS OF THE PROJECT**

Externality costs are those costs associated with the increase in traffic both by an increase in auto traffic but more importantly by heavy trucks moving equipment into place, removing concrete debris from the site and delivering rebar and concrete and other materials required for construction including community noise levels, increased traffic congestion, road hazards, damage to the roads by increased heavy truck traffic and so on. All of this damage would affect Chinatown residents and businesses for 6 and perhaps 7 years without letup. All would be costly to the Chinatown community.

The air quality and noise impacts of heavy diesel-powered trucks and construction equipment are of considerable consequence. Diesel exhaust has been demonstrated to contain cancer-causing materials including particulates with cancer-causing agents attached to very fine inhalable particles. Plus, the emissions from deconstruction debris (dust containing asbestos and silicates among other health hazards) would be of considerable concern to local Chinatown inhabitants. There is little evidence that all of these contaminants can be contained over the construction period to protect Chinatown within a half mile radius from the project.

Then there is the impact of heavy truck traffic along Canal Street, Baxter Street, the Manhattan Bridge and Downtown Brooklyn roads connecting with cement factories in Gowanus and the disposal of demolition debris, likely in New Jersey. There is no discussion of these impacts. Over three years and tens of thousands of heavy truck trips, they would be significant. An 80,000-pound truck produces 10,000 times the road damage that a single car produces. A 120,000-pound truck produces twice this damage or 20,000 times what a single car produces.

## FEIS TRANSPORTATION ASSUMPTIONS

Appendix F of the FEIS provides the assumptions used in estimating the impact for the four assumed sites in The Bronx, Queens, Brooklyn and Manhattan. And, while existing parking conditions are provided for each project site, *Appendix F is missing intersection level of service conditions for roads surrounding the Manhattan Detention Center.* All of the other jail sites include these results for existing conditions, for conditions in the future without the project (no action), conditions for with the project (what they call “With Action”) and conditions during construction. Service levels for The Bronx, Queens and Brooklyn sites with construction and once the projects are completed suggest severe traffic conditions at many locations with and without the projects and during construction.

*However, results for the roads surrounding the Manhattan site are missing entirely.* It seems possible that in the rush to get the project approved, and due to late decision to switch the MDC location, the City was not able to undertake and traffic counts (under the CEQR Technical Manual, traffic counts cannot be conducted from mid-November through mid-January or from the last week in June through mid-September, nor can traffic counts be conducted in bad weather, or when extensive construction alters traffic patterns – CEQR Technical Manual at 16-23). Instead, the City appears to have winged it and included two nearby minor intersections (Centre St. at Walker St. and Walker St. at Baxter St.) with relatively little traffic, thinking no one would notice, and ignored the surrounding impacted road networks from the Holland Tunnel along Canal Street over the Manhattan Bridge and along local Brooklyn roads to Gowanus.

Before any action can be taken this missing traffic data and level of service calculations for the proposed MDC must be provided, so the projected traffic conditions on the relevant area can be evaluated and, if necessary, mitigated. However, since during deconstruction of the MDC heavy trucks may be using Canal Street to access the Holland Tunnel for a year or more and since Canal Street is already heavily congested these service level results must be provided for the same time periods and surrounding roads as for the other three analysis sites (Brooklyn, Queens, The Bronx) for the length of Canal Street as well as for Brooklyn travel routes.<sup>2</sup>

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<sup>2</sup> I report that these trucks may be using Canal Street to access the Holland Tunnel because the Holland Tunnel limits trucks to 3 axles and a total of 50,000 gross weight (about 35,000 pounds of concrete debris). On the other hand, the Lincoln permits 80,000 pound trucks (about 60,000 pounds of debris) but this requires a special permit, an extra 6 miles of travel (to and from) and extra tunnel fees plus additional travel on Manhattan local streets..

The FEIS failed to investigate the real traffic impacts of the MDC for the entire traffic area as was done for The Bronx, Brooklyn and Queens. Models exist that account for traffic impacts for the entirety of the Chinatown project area and should be used to report full traffic impacts during both deconstruction (Canal Street westbound) and construction (Canal Street/Manhattan Bridge westbound).

In addition, the FEIS should have included details of where waste will be disposed of and by what route. The FEIS reports disposing of waste in New Jersey and assumes heavy trucks will use Canal Street to access the Holland Tunnel. At most times of day Canal Street is at capacity now and will become worse as new development is added to the surrounding area as well as in Downtown Brooklyn. Moreover, heavy trucks have been prohibited from using the Holland Tunnel since 9/11. The FEIS mentions getting concrete from somewhere in Gowanus using Canal Street and the Manhattan Bridge. Possible travel routes, see attached maps, would be using the Brooklyn-Queens Expressway near Brooklyn Heights connecting with Hamilton Avenue and Smith Street (no exact location in Gowanus is given for the location of a concrete plant but one exists at this location).

The problem is that the BQE along the Brooklyn Heights Promenade is in terrible shape and discussions are underway to cut traffic along the BQE by 25,000 vehicles a day (down from 150,000 a day) plus prohibit heavy trucks until the BQE is repaired or replaced. Since discussions have been underway for more than three decades about what to do with this section of the BQE with no decision in sight this closure may last for the entire time the MDC is under deconstruction and replacement. There is an alternative route to Gowanus that bypasses the Brooklyn Heights section of the BQE. Travel time for this route would be longer but more importantly the route passes through Downtown Brooklyn and along Atlantic Avenue which is already heavily crowded and will likely be more so with the replacement of the Brooklyn detention center exacerbating the externality costs to Downtown Brooklyn and the communities that surround Downtown Brooklyn.

A supplemental EIS must address all of these problems and provide details about routes planned to be used for concrete supply and the disposal of demolition debris.



## **ALTERNATIVES ANALYSIS**

The Manhattan “No Action” alternative as amended is assumed to continue operations as it does today. It has been reported that the current facility provides 898 beds and that the revised proposed new structure would accommodate 880 beds – a reduction of 18. Thus, while the number of occupants would essentially be retained in the existing facility what would be lost are the first-floor amenities that would help to make life easier and more productive for prison occupants.

It would seem that, for Manhattan at least, a reconditioning of the existing facility would be far more cost efficient, less time consuming and impose on Chinatown far less if direct and indirect externality costs that would occur for the build alternatives but are ignored in the FEIS.

The FEIS Alternatives Analysis does not evaluate the possibility of the rehabilitation of the existing MDC to accommodate some of the amenities the



DOC envisions and still keep the existing structure claiming the MDC facility including the South Tower does not meet the requirements for a modern detention facility as proposed by the proposed project” (FEIS page 7-19). This statement in the FEIS appears to be based on accommodating 1,150 beds not the 880 beds now committed to.

It is not disclosed why DOC cannot move administrative uses to off-site locations in order to generate sufficient floor area. This statement was made before the reduction from 1,150 beds to 880 beds. DOC must clarify why in light of the bed reduction that administrative work cannot be relocated especially in light of fast computer connections and interactive work sheets permitting staff to be spread out.

So, the Alternatives Analysis really does not include all possible alternatives for the MDC. The DOC should go back to the drawing board and consider a refurbishment alternative for the near term (taking a year at most and costing a fraction of the assumed cost for the proposed facility – reportedly about \$6.3 billion).

#### **FEIS RESPONSE TO COMMENTS RE TRANSPORTATION**

Most traffic comments for all four sites claim heavy congestion and severe impacts on on-street parking. Most DOC responses were “Comment Noted”. Clearly they are just going through the motions of responding. Plus the comments are disorganized (list comments by number, mixing locations from one comment to the next and many comments do not recognize the location being commented upon).

There are some good points raised by the community regarding the MDC but most responses are “Comment Noted” or “issues are beyond the scope of this EIS analysis”. Still, these comments are important and deserve more than a “comment noted” which means ignored.

In regards to concerns raised about MTC on traffic Response 9-49 reports “The EIS provides detailed analyses of the transportation effects of the proposed action to determine if (it) would have the potential to result in significant adverse impacts and what measures could mitigate, minimize, or avoid such impacts.” As discussed above, these analyses for the Manhattan Detention Center are missing from the Transportation Chapter of the FEIS, while the three other jail locations in Brooklyn, the Bronx and Queens are analyzed in considerable detail and demonstrate severe traffic impacts during and after construction. The same is

likely true for MDC traffic along Canal Street and on Downtown Brooklyn roads accessing Gowanus.

Sincerely,

A handwritten signature in black ink that reads "B Ketcham". The signature is written in a cursive, slightly stylized font.

Brian Ketcham

## **NYMTC (New York Metropolitan Transportation Council) Sources**

Chinatown Final Report\_2004-12-13

Hub-Bound Study

CATS II – Final Report rev. 12-30-2010

CATS Presentation

Development of Canal Street VISSIM Model

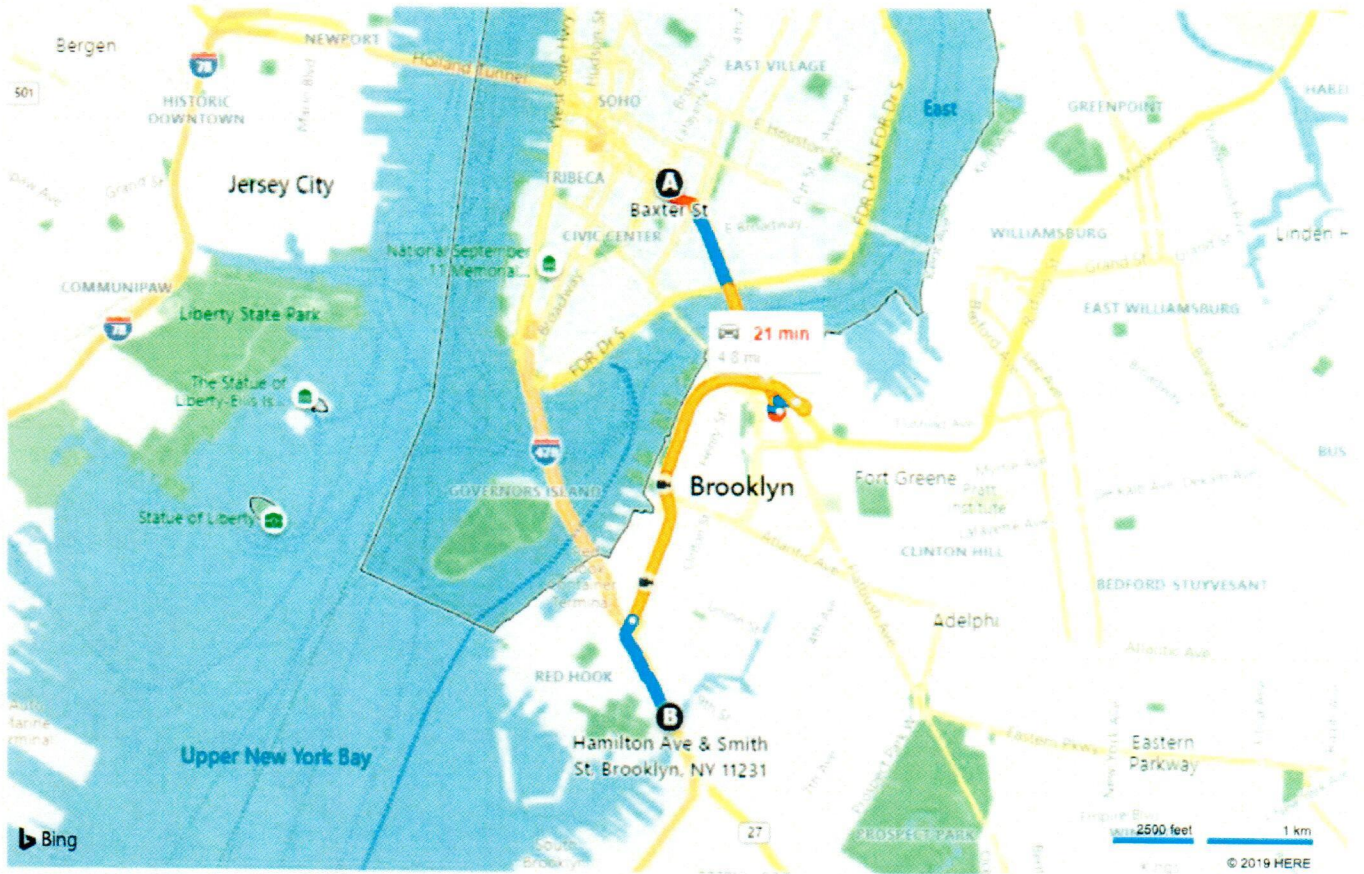
NYC-Bridge-Traffic-Report – 2016

Origin-Destination-Survey Overview – Feb. 2006

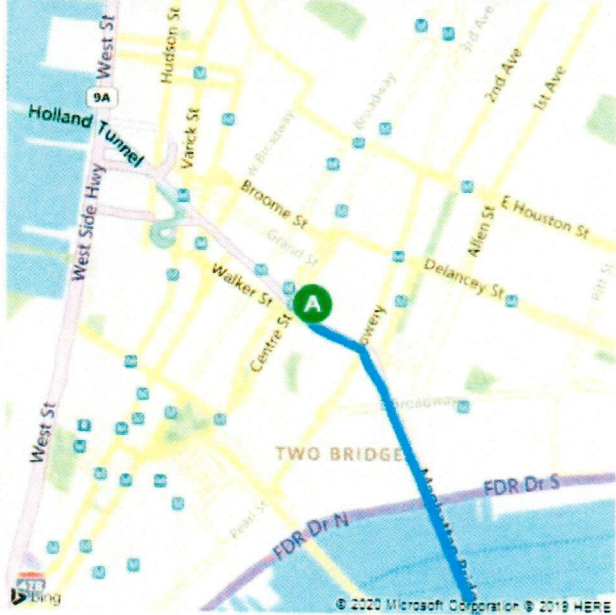
Regional Transportation Statistics, 2016

Travel Patterns 2018

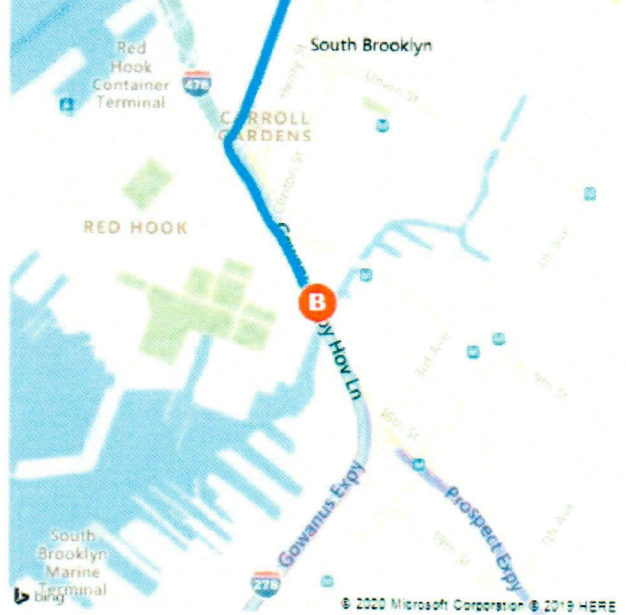
Port Authority, Safety and Traffic Restrictions, Vehicle and Truck Restrictions



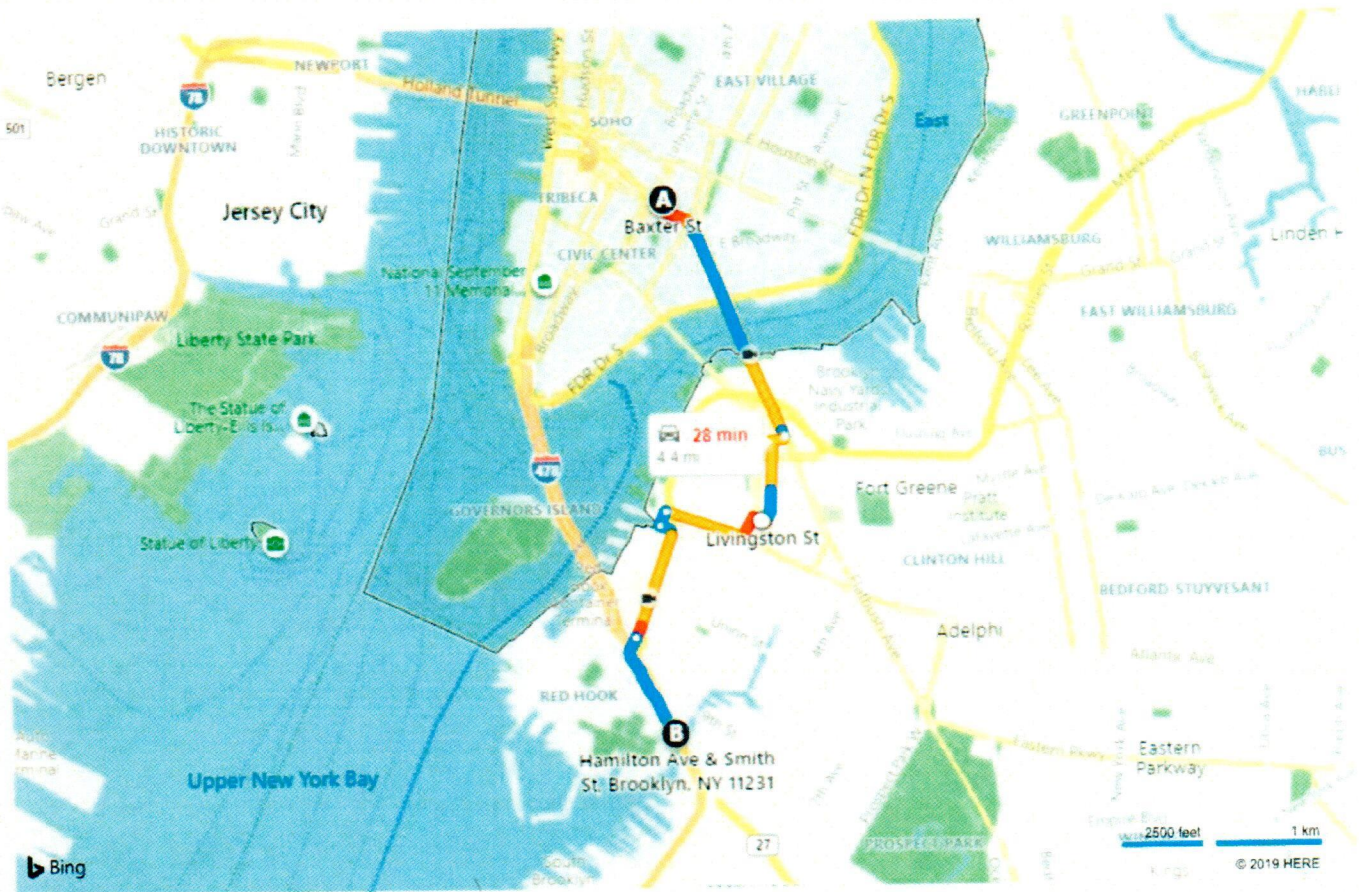
**A** Baxter St, 126 Baxter St, New York, NY 10...



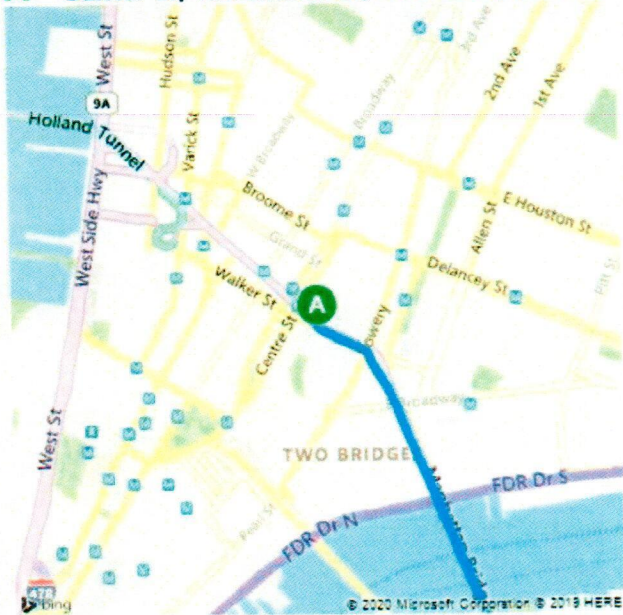
**B** Hamilton Ave & Smith St, Brooklyn, NY 1...



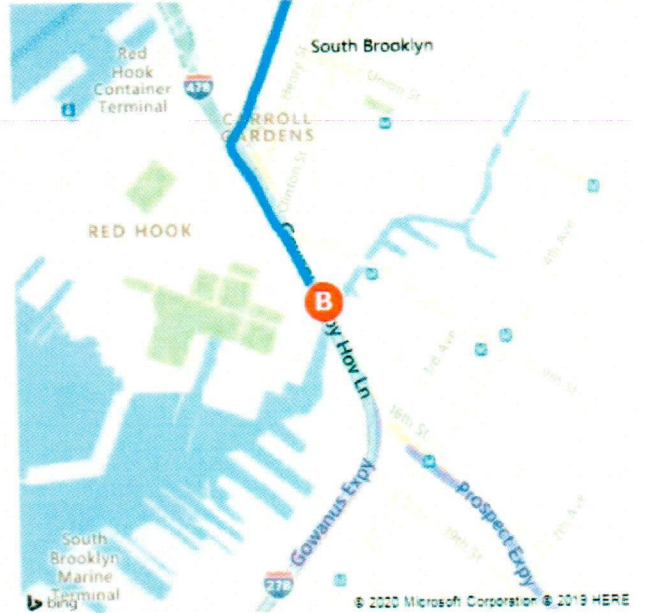
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**A** Baxter St, 126 Baxter St, New York, NY 10...



**B** Hamilton Ave & Smith St, Brooklyn, NY 1...



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