**Chapter π - Transportation**

**Current Conditions**

The area around 370 Jay Street is currently serviced by a number of transportation options.

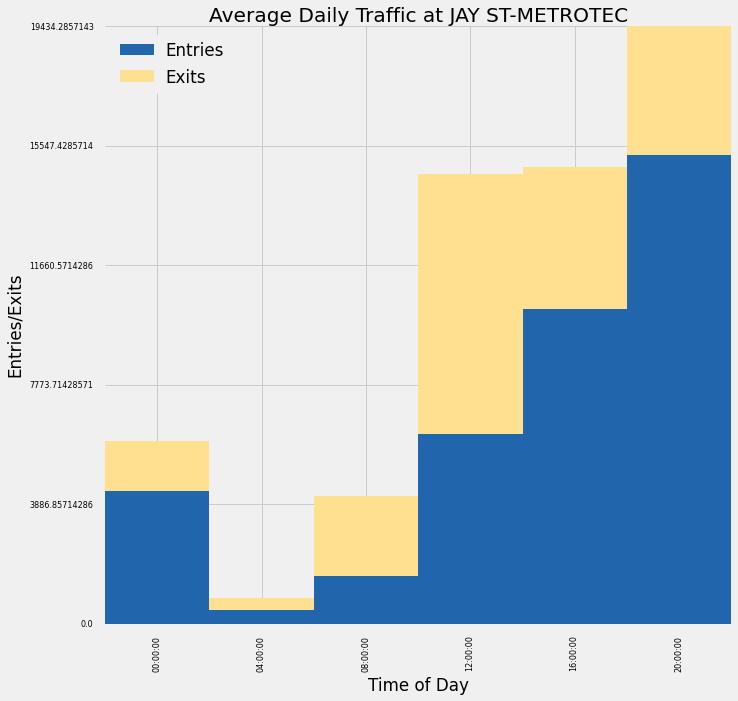
**Subway**

For subway trips, there are 13 different lines which go through the area and a number of stations. Table 1 lists the closest stations which encompass all of the lines which stop in the area. For example, Hoyt St along the Eastern Parkway Line is not included because the Borough Hall stop along the same line is closer so the new trips coming from the further stop will be negligible.

Table 1

|  |  |  |  |
| --- | --- | --- | --- |
| Station | Subway Lines | Average Daily Traffic | Walking Distance |
| Jay St Metrotech | NYCS-bull-trans-A.svgNYCS-bull-trans-C.svgNYCS-bull-trans-F.svgNYCS-bull-trans-R.svg | 59862 | 1 minute |
| Borough Hall | NYCS-bull-trans-2.svgNYCS-bull-trans-3.svgNYCS-bull-trans-4.svgNYCS-bull-trans-5.svg | 54622 | 4 minutes |
| Hoyt Schermerhorn | NYCS-bull-trans-A.svgNYCS-bull-trans-C.svgNYCS-bull-trans-G.svg | 16331 | 8 minutes |
| Dekalb Avenue | NYCS-bull-trans-B.svgNYCS-bull-trans-Q.svgNYCS-bull-trans-R.svg | 39138 | 7 minutes |
| Atlantic Av-Barclays Center | NYCS-bull-trans-B.svgNYCS-bull-trans-Q.svgNYCS-bull-trans-2.svgNYCS-bull-trans-3.svgNYCS-bull-trans-4.svgNYCS-bull-trans-5.svgNYCS-bull-trans-D.svgNYCS-bull-trans-N.svgNYCS-bull-trans-R.svg | 78121 | 16 minutes |

Average daily traffic is the average combination of the total number of people entering and leaving a station. This number does not account for any traffic that doesn’t enter or leave, such as transfers. Walking distance is the time in minutes it would take to walk to 370 Jay Street from that station according to Google Maps walking directions.

We analyzed current usage of these stations by using the MTA turnstile data for a week in October 2015. The turnstile data published by the MTA has counts of entries and exits through each turnstile in a station combined into four hour blocks – 12AM, 4AM, 8AM, 12PM, 4PM and 8PM. The count at 12PM, for example, is the number of entries and exits through the turnstile between 8AM and 12PM. To illustrate the data, the average number of daily entries and exits throughout the day at the Jay St Metrotech station are shown below. Due to granularity of the data, we can’t precisely assess current traffic during either AM or PM rush hours.

**Bus**

There are 13 bus lines which service the area:

Table 2

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Bus Line | Average Weekday Ridership[[1]](#endnote-1) [[2]](#endnote-2) | Peak Hour Buses per Hour[[3]](#endnote-3) | Estimated AM Rides | Estimated PM Rides |
| B25 | 10603 | 6 | 12 | 18 |
| B26 | 10290 | 11 | 12 | 18 |
| B38 | 20222 | 13 | 23 | 35 |
| B41 | 30701 |  | 35 | 53 |
| B45 | 6745 |  | 8 | 12 |
| B52 | 12523 |  | 14 | 22 |
| B54 | 11501 |  | 13 | 20 |
| B57 | 7054 |  | 8 | 12 |
| B61 | 10433 |  | 12 | 18 |
| B62 | 9587 |  | 11 | 17 |
| B63 | 12187 |  | 14 | 21 |
| B67 | 4554 |  | 5 | 8 |
| B103 | 13788 |  | 16 | 24 |

Average Weekday ridership is taken from the MTA’s 2014 statistics. Estimated AM and PM rides are the estimated additional rides during peak AM and PM hours, discussed in the impact analysis section.

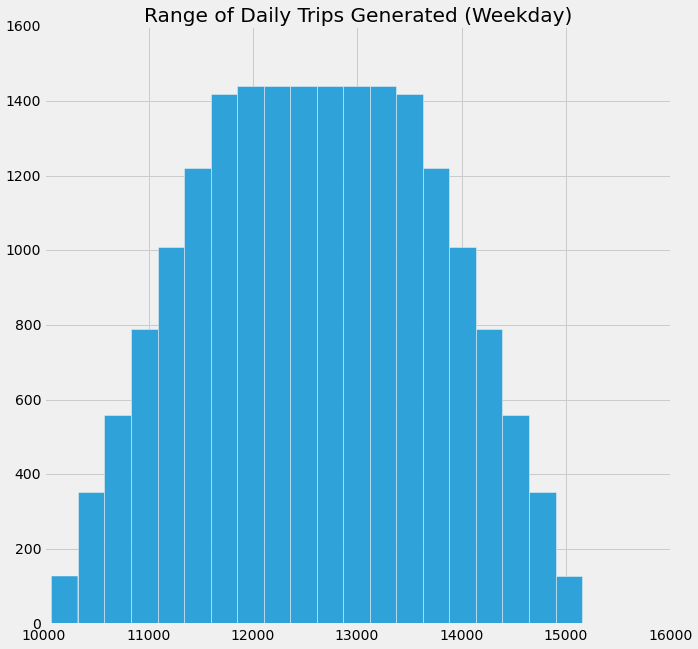
**Other**

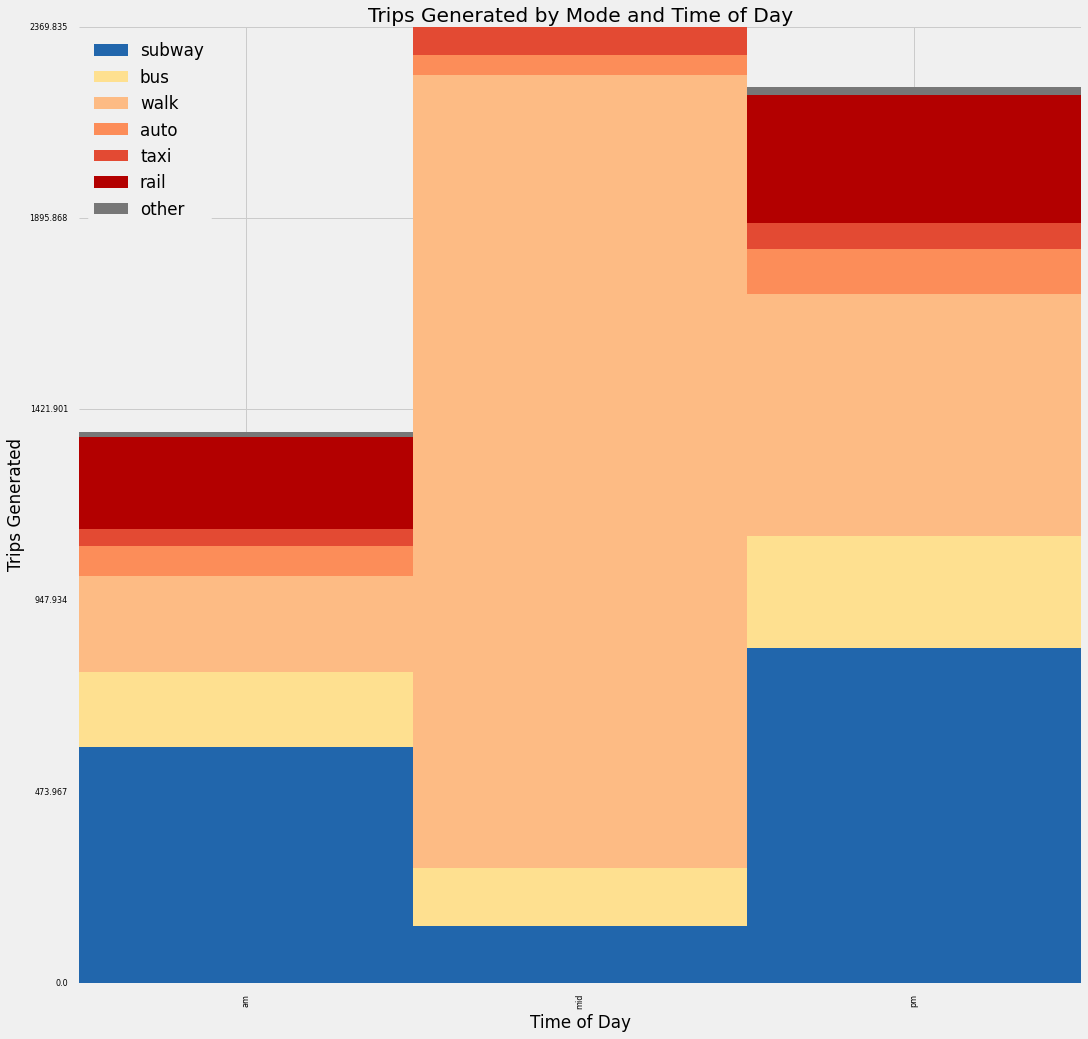
Other options include the Atlantic Branch of the Long Island Railroad (LIRR), which terminates at Atlantic Terminal; and biking, including Citibike which has one station around the corner from 370 Jay and another 3 stations within a couple of blocks.

**Impact Analysis**

The work at 370 Jay will include 450,000 square feet of new space – including 27,000 sqft of ground floor retail, 150,000 sqft of space for CUSP, 40,000 sqft of incubator space, and the rest mixed use by NYU[[4]](#endnote-4). To calculate trips generated and types of trips, Table 16-2 was used from the CEQR manual[[5]](#endnote-5), and Table 12-6 from the East Midtown environmental review[[6]](#endnote-6). Where statistics for academic settings were not available, office space was used as a proxy.

Without being sure of the exact makeup of the usage for the space, we generated a range of daily trips for different usage. We varied the retail space from all local retail to all destination retail, and the upper floors from all office to all academic, and all combinations of the two at 1% increments for a total of 10,000 building configurations. Below is a histogram of the results, showing the expected daily trips generated range from a low of about 10,000 to a high of 15,000 with an average of 12,500.



To get a better sense of the traffic, the next chart breaks down the average trips generated at the peak hours (AM rush hour, lunch time and PM rush hour) and mode of transportation. 

As shown, we expect there to be about 1400 new trips during AM rush hour, 2200 during PM rush hour and 2300 during midday. The large amount of foot traffic during midday is mostly caused by the foot traffic to retail. The biggest impacts during AM and PM rush hours are to the subways. We expect that the automobile, taxi and railroad estimates are all over estimates due to using the modal splits of office space where academic modal splits were unavailable. Thus based on the CEQR requirements of 200 peak hour pedestrian or transit trips a level 2 assessment would be required. Fortunately for this author and the reader, a level 2 assessment is outside of the scope and budget of this environmental review.

**New Methods**

The current method for doing transportation impact analysis is quite crude – it involves using static tables of questionable applicability to calculate how many people will frequent a new building and how they might commute. We first need to get a sense of how people in the immediate area commute – this would require fine grained data from transportation providers such as the MTA and citibike, but that would still miss how people move about in person vehicles, while walking or before and after using public transportation options. To better model movement dynamics data such as cell tower or wifi access point pings would be useful. With a model of how people currently commute to a location, we could then simulate the addition of new people into the area and see whether any modes, streets, intersections, etc. are stressed too far by the additional load.

1. http://web.mta.info/nyct/facts/ridership/ridership\_busMTA.htm [↑](#endnote-ref-1)
2. http://web.mta.info/nyct/facts/ridership/ridership\_bus.htm [↑](#endnote-ref-2)
3. Counted from MTA bus timetables [↑](#endnote-ref-3)
4. https://www.nyu.edu/content/dam/nyu/govCommunAffairs/documents/nyu-in-nyc/brooklyn/2014-07-29-370-Jay-St-Presentation-Downloadable.pdf [↑](#endnote-ref-4)
5. http://www.nyc.gov/html/oec/downloads/pdf/2014\_ceqr\_tm/16\_Transportation\_2014.pdf [↑](#endnote-ref-5)
6. http://www.nyc.gov/html/dcp/pdf/env\_review/east\_midtown/12\_feis.pdf [↑](#endnote-ref-6)