

Testimony at 11/21/13 Public Hearing for Stop & Shop Project by Daniel Greenbaum

I am Dan Greenbaum, an engineer with many years of experience in evaluating traffic impacts. Among the projects that I was in charge of were traffic studies for New York's Battery Park City, a development including several million feet of commercial space, as well as for the new Yankee Stadium.

I would like to briefly comment first on the estimated impacts of this project, and then discuss the likely mitigation of these impacts that might be available with a police officer.

I am not an expert at traffic modeling. My role use to be reviewing the output of these models to see if they made sense. They often didn't. Traffic models can be very useful. However, if they cannot realistically replicate existing conditions, they cannot be expected to accurately project future conditions. We all know that Five Corners is unique and the models have found that out, as they have problems in replicating the current conditions. As a result, lots of numbers have been produced, many of them conflicting. There is no single number that represents the impact of the project.

The impacts vary greatly depending on the existing backups at Five Corners. If there is no backup, the impacts of the project are relatively small, with additional delays of less than a minute. When there are existing queues, the project impacts can be much higher, up to eight, ten or twelve minutes of additional delay for all vehicles, depending on the size and duration of the existing queues. While we do not know with a high degree of accuracy how often these extreme conditions occur, the MVC staff has made some observations which provide a good indication of the existence and duration of the queues.

However, even without detailed data we all know that the delays of four, five, six, or seven minutes are commonplace. We do not have to have specific numbers to know that the project traffic impacts will be significant.

The important focus now is to determine which mitigation measures might relieve these impacts.

The main mitigating measure proposed is the expanded use of police directing traffic at Five Corners. Again, the models have real problems replicating the traffic conditions with an officer directing the flow. We can, however, get some indication of the effectiveness of more police presence by looking at ways that an officer controls traffic.

First, an experienced officer can reduce some of the delays by minimizing the number of stops and starts. They do this by allowing one movement to continue flowing for a period without interruptions from other movements or pedestrians. They then do the same for other movements with the result that there is a reduction in the frequency of stops and starts with a resulting decrease in delays

Second, at standard intersections the officer can see when one movement is backed up more than others, and can then favor that movement to reduce the waiting time. At Five Corners, however, this does not work as the officer cannot see the end of the queue on Beach Road once it goes around the curve. The backup might go the just around the curve, or it might go

back to the drawbridge. The same problem exists for traffic backed up to State Road. The end of the queue might go only to just beyond Main Street, or it might go to the Edgartown Road or far beyond. Therefore, without very sophisticated monitoring systems, the officers cannot be very effective in minimizing the longest queues.

The third action of an officer to improve conditions is unique to Five Corners. That is the existing process of clearing long backups from Water St. when a ferry is unloading. The Stop & Shop consultant has correctly pointed out that this action is taken at the expense of all other movements through Five Corners, and is one of the causes of the intersection problems. However, this action is essential and cannot be eliminated because, without preferential treatment for traffic coming out of Water St., the backups will seriously delay the unloading of the ferries, potentially affecting their schedules. It will also keep the buses, which serve several different routes, from exiting Water St. which can affect the entire Transit System because of their close and interlocking scheduling. Angie (Grant) can address that issue more effectively than I can. Finally, a backed-up Water St. will block vehicles from leaving the parking areas, affecting Stop & Shop and Main St. shoppers. If this happens very often, these shoppers may well decide to take their business elsewhere.

The project actually will increase the need for an officer to clear out Water St. as it will add some 55 to 60 trips an hour to the exiting Water St. flow, according to the numbers just provided by the Stop & Shop consultant. This is an increase of more than 10% over the existing traffic level, and is more than equivalent to the impact of an additional unloading ferry. To avoid Water St. backups due to this added project traffic, obviously more time will have to be taken from the other Five Corners roadways, increasing the congestion on them.

Any advantages gained by an officer moving traffic more efficiently will be hard pressed to make up for the need to give more time to Water St. exiting traffic required by the added traffic from the project. The net impact of the presence of police control, therefore, is extremely unlikely to mitigate the project impacts on Five Corners.

If the project traffic impacts are to be minimized, additional and more effective mitigation will be required, perhaps along the line just outlined by Henry (Stephenson), reviewing and implementing area-wide traffic flow and roadway configurations.