Name of Committee: **OSC Demographics Subcommittee**

Meeting Date: April 30, 2014 Time: 4:30 pm

Meeting Location: Town Hall – Room 310

Members Present: Alberto Chang; Sergio Modigliani; Ann Connolly Tolkoff (chair); Lee Lee Selwyn (by phone); Cameron Hosmer, MIT Operations Lab Team ("MIT Team"); Karl Kulling (MIT Team); Harrison Scott Bromley (MIT Team)

Others Present: Linda Pehlke; Peter Rowe; Mark Gray; Cliff Brown (OSC); Dick Benka (OSC Co-Chair); Alan Morse

Topic: Approval of Meeting Minutes

The Demographics Subcommittee (except for Lee who abstained) approved meeting minutes from April 16, 2014. Alberto Chang distributed (by email) draft meeting minutes for March 19th, April 2nd and April 23rd for review and approval next week.

Topic: Next Meeting MIT Presentation

Lee Selwyn will ask Dick Benka and Susan Wolf Ditkoff to ensure MIT starts at 6:00 pm promptly given there is an Advisory Committee meeting at 7:00 pm

Topic: MIT Operations Lab Update

Cameron Hosmer provided a summary of the presentation draft while data is still being analyzed. With respect to other models, Karl Kulling mentioned that a recent Boston Globe article on enrollment growth in the North Shore communities. All other models are essentially a simple linear regression based on birth rate 5 years prior adjusted by a capture rate (under one).

The first metric examined by the MIT Team, Brookline live births, is strongly correlated to the enrollment. The data presented is not in a time series but in a scatterplot.

While the second attributed examined, population, has a strong correlation, the MIT Team is leaning towards not using this figure given the lack of yearly data available. Lee Selwyn suggested plotting population in a time series rather than a scatter plot. Scott Bromley mentioned that the data is already in a time series. The issue with this data is for all years with the missing data, a linear interpolation was used.

Scott Bromley mentioned that condo unit is a good measure to use for enrollment growth given the growth in the past 10 years. Condos may serve as a more affordable option in setting up a house for a future family. This is a strong correlation to the number of young children entering the school system. The strength of the correlation is high. Cliff asked if there is a net change in condo unit. Ann asks if condo conversions are actually adding new bedrooms. Linda mentioned that condo conversion appealed to different types of occupants. Dick asked if total housing units

are correlated to total number of students. Scott mentioned that there is no advance notice with condo (i.e., 5 year lag). Sergio mentioned that condo conversions can take up to one year or longer.

With respect to median household income, it appears that this is significant in predicting enrollment. Cameron Hosmer mentioned this is a work in progress and will put into model in real dollars and inflation adjusted. This is a strong indicated given that wealth is a good indicator for a household to be in a position to start a family. Linda commented that the income is based on the state and not on Brookline. Cliff Brown asked the impact of the recession (2008-2013) and if we should see a drop. Linda Pehlke agreed income should be a factor. Dick suggested looking at the ACS data for Brookline specific income data.

Using the four factors, the model has a correlation coefficient of 91% with an average error is around 3.6% per year. The model started in 2003 because of the limited condo conversion data available. In 3 years with larger errors, the error was limited to 2 classroom sizes.

Sergio Modigliani asked if each of the factors is weighed evenly. The MIT Team responded that it was indeed weighted evenly. Dick asked to explain how variables are intuitive. Linda asked to do scenario/sensitivity analysis. Alan Morse asked to isolate the factors in the sensitivity analysis. Cliff Brown asked if these variables correlated with each other. Cameron Hosmer responded affirmatively.

Sergio Modigliani mentioned that projecting out four to five years would be reasonable given that it is useful for capital decisions.

Karl Kulling discussed that there are 1,100 new parcels ID between 2003 and 2013. However, more work has to be done to determine the residential versus commercial breakdown.

Cameron Hosmer mentioned they need to identify which schools where driving enrollment in 2007 and 2010 and confirmed they haven't had time to talk to principal.

Alan Morse asked if the MIT Team factored any influx due to calamity in a foreign country.

Cliff Brown mentioned the slide with home sales in 2008 is interesting and may be relevant.

With respect to next steps, the MIT Team would like to discuss with principals on Friday afternoon (Peter Rowe will set up call/meetings with 4 principals to address MIT team questions for Friday, if possible) and will distribute a new version to the entire Subcommittee for a final review before Wednesday's meeting on Monday.

Topic: Implications from Changes in Buffer Zone

Sergio Modigliani mentioned that prior to buffer change in July 2012, 16% lived in buffer and 34% lived in buffer after the change. Sergio Modigliani also mentioned that BSPACE and the school committee may have made their decisions without understanding the impact of buffer zone change. Sergio Modigliani asked if it is possible to address classroom size given buffer zone change. Sergio also mentioned only a fraction of the incoming students are in the kindergarten class and given the large number of incoming students at all levels, the school department may have more flexibility in assigning schools. Peter Rowe suggested speaking to

Bill Lupini and Janice McHugh who are responsible for the school assignment. Peter Rowe noted that about 180 non-Kindergarten kids were on summer registration list (last summer).

The meeting was adjourned at 6:15 p.m.