FROM ACCESSIBLE TO AFFORDABLE HOUSING?
Examining how the amenities affecting housing price in Cambridge, MA

INTRODUCTION

Housing value is determined by a variety of factors, including the structural features of the building and the quality of neighborhood environment, which can affect the decision-making of potential buyers. In general, the high-quality amenities can increase the market price.

This project aims to evaluate how well the public facilities available within walking distance affects housing prices in the city of Cambridge, MA, by analyzing the accessibility of four key facilities: public transportsations, schools, health centers, and open spaces. By measuring the walkable service areas for housing units located in residential districts, we can identify which group of people afford the range of housing price have the most accessibility to these services and facilities, and anticipate future development in areas with compared few accesses to these services and facilities.

METHODS

To evaluate the walkability of facilities affecting housing price, I proceeded the data by joining the sale price to residential parcels, including single-family, multi-family and condominium from Cambridge open data in FY2016. I removed missing data or prices below US $10,000 which are far behind the real market price, and classified the rest of parcel into four quartile price groups shown on MAP1.

As for spatial analysis, I conducted network analysis to define the 200, 400, and 800 meters networks of MBTA stations, bus stops, public and private schools, health clinics, and hospitals on MAP2. I then separated calculated how many parcels in each network, by using field calculator and summa-

CONCLUSION

To my surprise, the results of analysis showed that the GROUP A, B and C generally have 2 facilities serving in the neighborhoods, which meant that the accessibility of these facilities have less influence on housing prices in Cambridge. The houses more than US $900,000 are mostly located in the surrounding of the Fresh Pond and Assembly Square. For people affording such luxury housing do not take accessibility into account.

Moreover, each group appeared to have either 2 or 0 accesses to the facilities. In addition, 15 parcels in GROUP C are covered by 4 walkable facilities, which meant that GROUP C is more accessible than other groups. When looking into each category of facilities, I found that GROUP B has the most accessible to MBTA stations; on the other hand, GROUP D has the highest accessibility to hospitals. From above I safely concluded that each group still has its own preference for different uses of facilities.

REFERENCES