

# PLACEMAKING *for* SPATIAL JUSTICE

## Suitability Analysis for Future Placemaking Along Columbia Road

### Introduction

This analysis uses The Design Studio for Social Intervention's (DS4SI) definition of placemaking as, "grounded in having communities imagine their uses of places in ways that build on their site specificity."<sup>1</sup> DS4SI believes that is important to think about placemaking initiatives in context of spatial justice. The intention when thinking of the two in tandem is to engage communities in deeper conversations about belonging, community, authority, dignity, and joy.

The spatial justice goals of these placemaking initiatives align with Massachusetts Executive Office of Energy and Environmental Affairs (EOEEA) definition of environmental justice (EJ), as "the equal protection and meaningful involvement of all people with respect to the development" and devoted to "enabling everyone to live in and enjoy a clean and healthful environment."<sup>2</sup>

This analysis overlaps placemaking and environmental justice by block groups to examine gaps in spatial justice, which can be filled through future placemaking initiatives.

DS4SI believes it is important to think of placemaking in the context of spatial justice, and therefore uses their placemaking efforts to engage the community in deeper conversations about belonging and community. These engagements are important to the context of Columbia Road. The Columbia Road study area (identified below) falls within block groups where 25% or more residents identify as a race other than white, block groups where the annual median household income equal to or less than 65% of the statewide median (\$62,072 in 2010), and block groups where 25% or more residents are in linguistic isolation - an indicator of limited English language.<sup>3</sup>

DS4SI's placemaking interventions include interactive public art installations, public interventions, and outdoor markets, all centered around community-driven needs. These activities have primarily centered around the Fairmount Indigo Line, half a mile of which intersects with Columbia Road. The Placemaking Vicinity Map (Figure 2), identifies the proximity of these placemaking initiatives to Columbia Road – all within 1/4 mile radius of Fairmount stations.

### Methodology

This analysis was intended for decision-making, and as a result used block groups for an appropriate geographic scale. As a measure of accessibility to placemaking initiatives, the study area for this analysis is defined as block groups within 1/4-mile proximity of Columbia Road. By this definition, Columbia Road study area consists of 44 census block groups.

Independent data collection consisted of internet research for list of placemaking initiatives by DS4SI. Lori Lobenstine, Program Design Lead at DS4SI, provided general street locations for these initiatives. A data set for the placemaking initiatives was created from scratch as a result. The dataset for the placemaking initiatives was projected in StatePlane NAD 83 projection. Point density tool was used to create a density raster, 1/4 mile proximity of placemaking initiatives. Next, zonal statistics as table tool was used to get this data into census block groups. The table was joined into census block groups using join attributes from table. This data is identified in Figure 3: Placemaking by Block Group, showing block groups where there has been accessibility to placemaking.

A spatial query was performed to identify Environmental Justice by Block Groups, also 1/4-mile proximity of Columbia Road. These block groups were then symbolized by three criteria: 1 criterion as low priority, 2 criteria medium priority, and all 3 criteria as high priority (Figure 4: Environmental Justice by Block Groups). Block groups with medium and high priority were then exported as a data layer and overlapped with placemaking block groups. The union tool was used to overlap Placemaking block groups with the new EJ block groups (high and medium priority). All values with -1 showed gaps in the combined data set.

### Results

Figure 5: The Suitability Analysis for Future Placemaking Map, shows areas with priority EJ where placemaking has occurred vs priority EJ areas where placemaking has not occurred, but can in the future. These are suitable areas for future placemaking. This data can also be used as tool for enhancing placemaking initiatives. For e.g. a high suitability area with high linguistic isolation could consider language translation in its placemaking interventions.

Clustering of accessible placemaking initiatives can be observed around the Four Corners/Geneva and Uphams Corner Stations. It can therefore be argued that proceeding with the unbuilt Columbia Road station could instigate placemaking initiatives around the station, an area that is mapped as high priority EJ through this analysis.

### Conclusion

This analysis is limited to EOEEA's definition of Environmental Justice to analyze placemaking within the context of spatial justice. EOEEA defines EJ populations as neighborhoods that meet one of more of the following criteria:<sup>4</sup>

- Median annual household income is at or below 65% of the statewide median income
- 25% or more of the residents are a minority
- 25% or more of the residents are lacking English language proficiency

Several other criteria, that were not assessed in this analysis, can be subject to social and economic inequalities. These include rate of disability, brownfields, flood prone areas, areas with poor air quality, communities with public health issues such as asthma etc.

Because the data set for placemaking was created from scratch and did not have a geolocation (latitude and longitude), the projected data could be off by location. There is also chance of error in placemaking data from simply not being documented online.

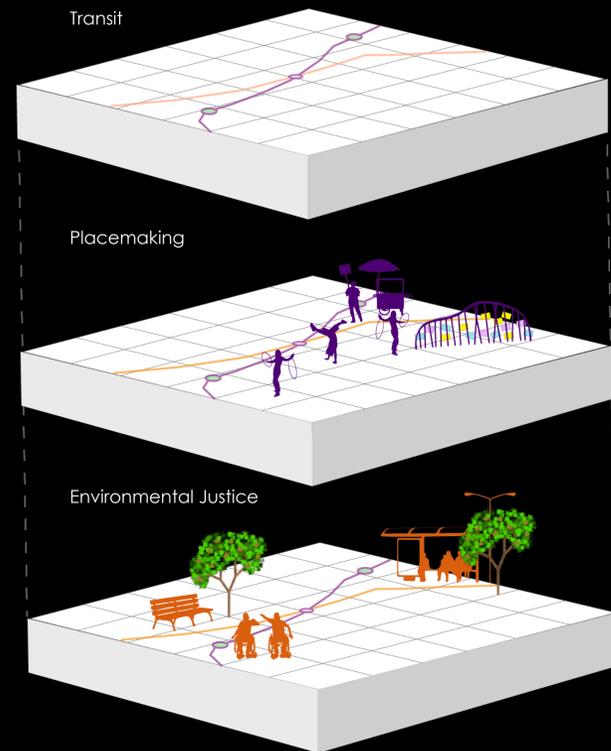


Figure 1: Data Layers  
Transit, Placemaking, & Environmental Justice

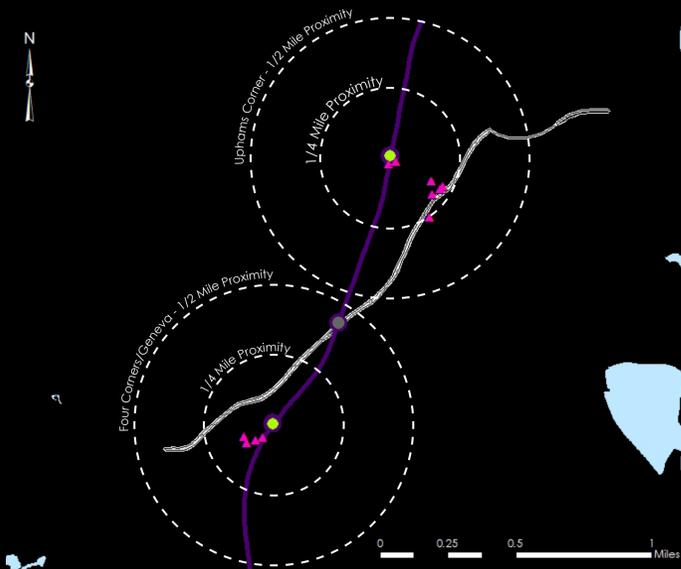


Figure 2: Placemaking Vicinity Map  
1/4 Mile Proximity of Active Stations



Figure 3: Placemaking by Block Group  
1/4-Mile Proximity of Columbia Road



Figure 4: Environmental Justice by Block Group  
1/4-Mile Proximity of Columbia Road

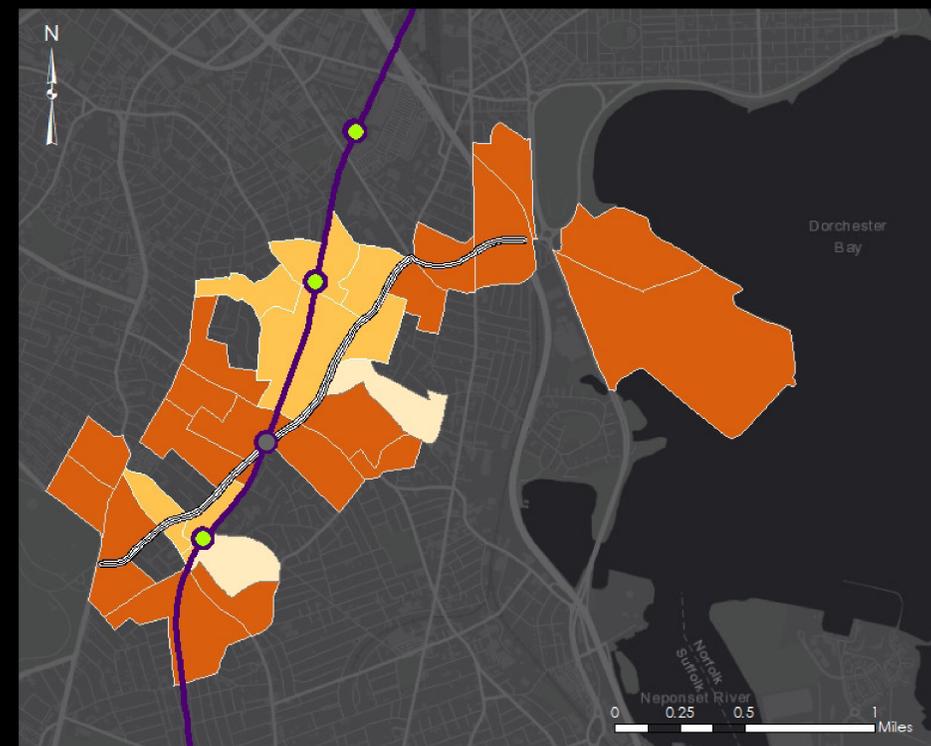


Figure 5: Suitability Analysis for Future Placemaking  
1/4-Mile Proximity of Columbia Road



Data & Online Sources:  
 MassGIS, MBTA Rapid Transit (2018)  
 MassGIS, MassDOT Roads (2018)  
 MassGIS, 2010 U.S. Census Block Groups (2012)  
 MassGIS, EOEEA, 2010 U.S. Census Environmental Justice Populations (2018)  
 DS4SI, Placemaking Initiatives, Lobenstine, Lori. Interview (April 11, 2019)

Coordinate System: StatePlane Massachusetts Mainland  
 Projection: Lambert Conformal Conic

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 UEP 232, May 2019

1 "Placemaking," ds4si.org, accessed April 30, 2019  
 2 O.A US EPA, "Environmental Justice," Collections and Lists, US EPA, accessed April 29, 2019  
 3 "2010 U.S Census Environmental Justice Populations," Mass.gov, accessed April 29, 2019  
 4 "Environmental Justice Communities in Massachusetts," Mass.gov, accessed April 30, 2019