

MAPC’s 3A Analytical Toolbox: District Suitability

Analysis Explainer

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The MBTA Communities Multifamily Zoning Requirement, or Section 3A of the Zoning Act, is a new law requiring each municipality in the MBTA service district -- 177 in total -- to zone for by-right multifamily housing. The Metropolitan Area Planning Council’s (MAPC) MBTA Communities Multifamily District Suitability Analysis is a decision-support tool that uses data to help MBTA municipalities within MAPC to identify locations for compliant multifamily zoning districts that advance regional goals. The tool evaluates locations based on a set of criteria related to transportation, accessibility, development feasibility, residential capacity, and climate vulnerability, scoring each land parcel from 0 (least suitable) to 100 (most suitable). Clusters of parcels/sites with higher scores are potentially strong candidates for 3A zoning districts.

The District Suitability Tool is intended to [complement](#) stakeholder-driven processes to plan for more housing through new 3A zoning districts. The tool can be referenced at different points in the planning process to help facilitate conversations around areas suitable for new housing production.

Why a district suitability analysis?

Good district siting is paramount to positive outcomes from multifamily rezoning, and the MBTA Communities Act Guidelines provide considerable flexibility on location. For many communities, more than half of the district can be located outside the half-mile buffer surrounding a transit station; there are no parameters on where districts can be placed within the station area. A district suitability analysis highlights areas where increased housing density will best advance equity and sustainability. For more information about what a suitability analysis is, see [Appendix A: What is a Suitability Analysis?](#) .

Criteria

Six criteria were selected to evaluate parcel suitability for multifamily districts in MBTA Communities. Criteria are defined below.

Criteria	Definition
In Station Area	Locations are within the half-mile radius around a transit station. <i>Note: this criterion only applies to municipalities that have a requirement to have a defined portion of their district within the transit station area.</i>
Transit Accessibility	Locations have greater transit options, so current and/or future residents could rely less on personal vehicles.
Local Accessibility	Locations are in denser, more pedestrian-friendly areas, so current and/or future residents would require fewer trips in personal vehicles.
Flood Risk	Locations are less exposed to flood risk, so current and/or future residents would be less vulnerable.

Development Feasibility	Locations have fewer barriers to develop or redevelop as housing, so would be more likely to see actual housing construction.
Net Residential Capacity	Locations would yield more housing units if developed or redeveloped as housing.

Excluded Parcels

In the MBTA Communities Multifamily District Suitability Analysis, all parcels smaller than 0.125 acres in size or with developable area less than 0.125 acres in size are excluded from the analysis. Developable area on each parcel was calculated by subtracting the Executive Office of Housing and Livable Community’s (EOHLC) Excluded Land layer, which represents areas on which “it is not possible or practical to construct multi-family housing.” This includes undevelopable public land, education or institutional land, hydrography, additional wetlands, Title V and Surface Water Protection Zone A, and Wellhead Zone 1. This definition of excluded land is from the Section 3A District Compliance Guidelines.

Indicators and Weighting

Once criteria were defined, indicators were selected to represent each criterion. Indicators are introduced below, along with their weight within their criteria. Data sources and more detailed methodology can be found in [Appendix B – Technical Documentation](#).

Criteria 1: Transit Station Area		
Indicator	Relationship to district suitability	Weight
Within half-mile radius of transit stations	In municipalities where EOHLC has defined Transit Station Area requirements for districts, parcels within the transit station area are more suitable.	100%
Criteria 2: Transit Accessibility		
Indicator	Relationship to district suitability	Weight
Distance from transit stations, up to 1 mile	Parcels closer to transit stations or bus stops are more suitable than those further away (up to 1 mile).	14%
Half mile walkshed from commuter rail stations	Being within a half-mile walkshed of a commuter rail station indicates higher district suitability.	14%
Number of jobs within 45 minutes by transit	Parcels located in census blocks with more jobs within 45 minutes by transit are more suitable.	29%
Share of non-auto commuters	Being located within census tracts with a higher share of non-auto commuters suggests an existing population without reliance on vehicles. Parcels in these locations have higher suitability.	14%
Criteria 3: Local Accessibility		
Indicator	Relationship to district suitability	Weight
School walkshed scores	Walkable access to schools reduces reliance on motor vehicles. Parcels with higher school walkshed scores are more suitable.	20%
Walk Score	High Walk Scores indicate walkable access to nearby amenities and are therefore indicate suitable locations.	40%
Distance to nearest town center (MAPC)	Living within or near town centers indicates less need for reliance on motor vehicles. Parcels in these locations have higher suitability.	20%
Criteria 4: Development Feasibility		

Indicator	Relationship to district suitability	Weight
Improvement to land ratio	Parcels are considered more suitable if they have a low ratio of building value to land value, as this suggests they may be underbuilt relative to their land value.	14%
Retail strip (MAPC)	A 2022 analysis of retail strips in Metro Boston identified strip malls with greater potential for retrofit. Parcels that score in the top 25% of sites in that analysis have greater district suitability.	14%
Historic sites	Parcels are considered more suitable if they do not contain a location with a legal historic designation applied under local, state, or federal law.	14%
Building value per square foot	Parcels are considered more suitable if they have a low building value per square foot, as this suggests they have more capacity for redevelopment or expansion.	14%
Build year	Parcels are considered more suitable if they contain structures built before 2000. Structures built later than that indicate newer construction that would be less likely for retrofits or new development.	14%
Condominiums	Parcels with condominiums have multiple owners, creating logistical challenges to increasing capacity. Parcels with the land use of "Condominium" are less suitable.	14%
Vacant land	Unrestricted parcels with no buildings located on them are more suitable for development.	14%

Criteria 5: Net Residential Capacity

Indicator	Relationship to district suitability	Weight
Existing floor area ratio (FAR)	Low existing Floor Area Ratios indicate opportunities for increasing density. Parcels with lower FAR have higher suitability.	33.3%
Existing DU per acre	Low existing development units per acre signifies potential for increasing density. Parcels with lower DU per acre have higher suitability.	33.3%
Unconstrained land area	Unconstrained land area represents a parcel's total land area, with excluded land area (described above in "Excluded Parcels") subtracted. Parcels with higher unconstrained land area have more available land for development and therefore receive higher suitability scores.	33.3%

Criteria 6: Flood Risk

Indicator	Relationship to district suitability	Weight
FEMA Flood zones	Parcels are suitable if they have less than 10% overlap with FEMA 1% and 0.2% flood zones are considered suitable.	50%
MA Coastal Flood Risk Model (MC-FRM)	Parcels are suitable if they have less than 10% overlap with MCFRM inundation extent (1% storm, 2.4ft sea level rise scenario)	50%

Absent Criteria

With respect to diverse, local contexts, multifamily zoning districts should be sited with consideration to more than just the above criteria. Environmental Justice criteria like race, income, age, language, and heat exposure were withheld from this analysis as there was no clear or consistent directionality across the whole region. Beyond site selection, multi-family housing development relies on equity-centered planning practices.

Interpreting Results

The results of the 3A District Site Suitability Analysis have been published to an [online, interactive map](#). Under the Legend heading, “Explore Layers,” users can view Final Scores and Criteria Scores for each parcel in MBTA District. Parcels have been symbolized such that those in dark blue have been determined to be most suitable for inclusion in a multifamily district, while those in light yellow have been determined to be least suitable for inclusion in a multifamily district. Viewers may click on a parcel to see detailed information about the parcel’s overall suitability, criteria scores, and sub-scores. Note that all scoring is done within a municipality, so results should not be compared across municipal boundaries.

Metadata for all fields is provided at the project’s [GitHub repository](#). The outputs of the criteria scores and final suitability scores are discussed in greater detail below. Methodology for the suitability analysis and guidance for interpreting indicator scores is detailed in the [Technical Appendix](#).

Criteria Scores

Parcels receive a score for each of the five criteria. The score represents the *percentile rank* for the weighted average of all the indicator scores within that criterion, compared to all other parcels in the municipality. For example, a “Transit Accessibility” criteria score of 0.74 indicates that the parcel has a weighted average that is higher than 74% of all other parcels in the municipality for that criterion. In other words, that parcel is in the top 26% of favorable parcels in the municipality for that criterion.

Score	Interpretation
0 - 0.2	Lowest favorability
0.2 - 0.4	Moderately low favorability
0.4 - 0.6	Moderate favorability
0.6 - 0.8	Moderately high favorability
0.8 - 1	Highest favorability

Final Suitability Score

Based on the *weighted averages* of each criterion, parcels receive a final suitability score. The score ranks the parcel’s weighted average compared to that of all other parcels in the municipality. Final scores closer to 1 indicate highest suitability according to the criteria, indicators, and weights chosen for this analysis. Final scores closer to 0 indicate lower overall suitability.

Score	Interpretation
0 - 20	Lowest suitability
20 - 40	Moderately low suitability
40 - 60	Moderate suitability
60 - 80	Moderately high suitability
80 - 100	Highest suitability