



TECHNICAL MEMORANDUM

TO: Andrew McNichol
Town of Reading, Massachusetts

DATE: December 15, 2022

SUBJECT: MBTA Early Adopters Program – Process and Findings Memorandum

INTRODUCTION

On behalf of Mass Housing Partnership (MHP) and the consulting team, we would like to thank you for taking part in this round of early adopter technical assistance. As was discussed at the beginning, the MHP team hoped to gain insights and lessons learned from this engagement to refine all aspects of the compliance process with a particular emphasis on refining the land database and the compliance model. As a partner in this engagement, the MHP team had the goal of providing you with constructive feedback on your potential districts and zoning and how those elements may help advance your future application as a 3A compliant community. We hope the information and feedback in this brief memorandum will assist you as you move forward with your application process.

PROCESS AND ENGAGEMENT

To evaluate your proposed district(s) and zoning, the MHP team required the following information to test for both district compliance and unit capacity:

- Geographic boundaries of each proposed district which were digitized into a GIS Shapefile format (*if not already provided to MHP in that format*).
- A copy of the most recent zoning bylaw/ordinance along with any tables or exhibits not directly included in the bylaw/ordinance.
- A copy of any proposed zoning changes to base districts, new districts, or proposed overlay districts to be tested in the model.
- Any special considerations that may be unique to your community not apparent in the zoning bylaw/ordinance.
- Any documentation indicating the ability to override excluded land in the model (*i.e., disposition agreement for publicly owned land*).

The purpose of collecting the information on the geographic boundaries of the district(s) was to test compliance with the minimum land area requirements and the percentage of the district(s) to be located in a station area. If any of the proposed districts were not compliant with these initial geographic requirements, those were flagged by MHP staff for follow up.



The purpose of collecting the existing zoning bylaw/ordinance was to look for any unique requirements in the zoning that our zoning checklist and/or compliance model had not yet accounted for, particularly if we are testing existing zoning for compliance. The review of existing zoning also allowed us to check for any missing information in the checklist or conflicts with any proposed zoning for the district(s).

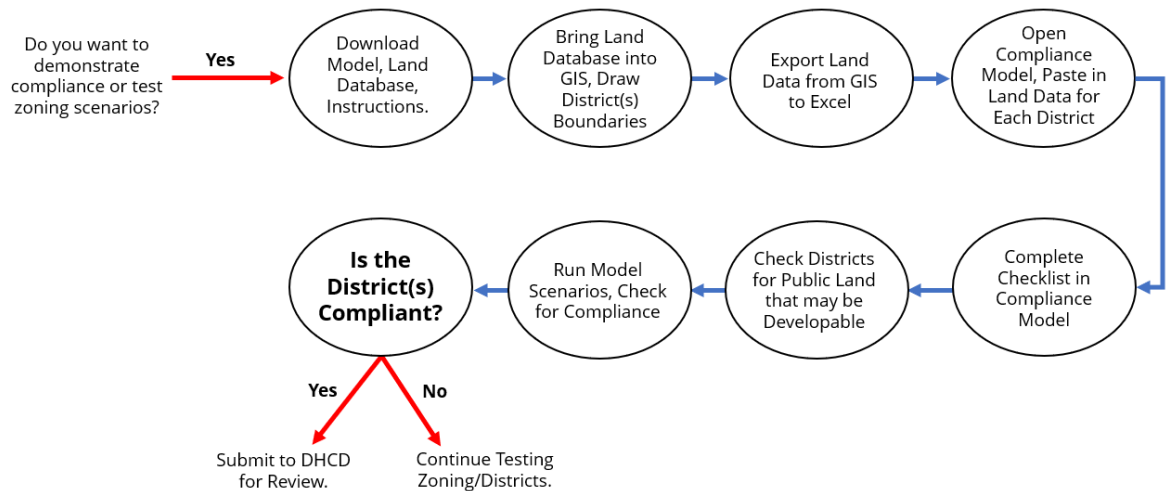
Category	Guideline Requirements
Community:	Reading
Community Category:	Commuter Rail
2020 Housing Units (Census PL-94):	9,952
Minimum Multi-family Unit Capacity:	1,493
Minimum Land Area:	43
Developable station area:	343
% Unit Capacity within Transit Station Areas:	40%
% Land Area Located in Transit Station Areas:	40%

Lastly, the purpose of collecting the proposed changes to existing zoning, proposed new base districts, or proposed overlay districts is to serve as inputs into the compliance model's zoning checklist. From there, select requirements from the existing or proposed zoning feed directly into the compliance model to calculate unit capacity on a parcel-by-parcel basis. It is the zoning requirements applied to each district that serve as the drivers of unit capacity alongside district size and the amount of excluded land.

The following diagram illustrates the process the MHP team went through with the information provided to us by your community.

COMPLIANCE MODEL

Flow: Compliance Test Process Diagram



The following page shows the inputs to the compliance model pulled from the model's zoning checklist. The checklist reflects the zoning your community provided to the MHP team and applied to the appropriate district(s). These are the key inputs that drive the parcel-based unit capacity calculations in the compliance model.



ZONING INPUTS - DISTRICT 1 **Apartment 40**

Model Inputs for Calculating Unit Yield	Input
Minimum Lot Size	40,000
Additional Lot Square Feet per Dwelling Unit	0
Open Space %	25%
Excluded Land Counted Toward Open Space	Y
Parking Spaces per Dwelling Unit	1.50
Building Height	4
Maximum Lot Coverage %	25%
Floor Area Ratio	0.40
Zoning Restrictions that Cap Unit Counts	
Lot Area per Dwelling Unit	0
Maximum Dwelling Units per Acre	0.00
Cap on Maximum Dwelling Units per District	0.00

ZONING INPUTS - DISTRICT 2 **Apartment 80**

Model Inputs for Calculating Unit Yield	Input
Minimum Lot Size	80,000
Additional Lot Square Feet per Dwelling Unit	0
Open Space %	35%
Excluded Land Counted Toward Open Space	Y
Parking Spaces per Dwelling Unit	1.50
Building Height	6
Maximum Lot Coverage %	13%
Floor Area Ratio	1.00
Zoning Restrictions that Cap Unit Counts	
Lot Area per Dwelling Unit	0
Maximum Dwelling Units per Acre	0.00
Cap on Maximum Dwelling Units per District	0.00



ZONING INPUTS - DISTRICT 3

Business A

Model Inputs for Calculating Unit Yield	Input
Minimum Lot Size	40,000
Additional Lot Square Feet per Dwelling Unit	0
Open Space %	25%
Excluded Land Counted Toward Open Space	Y
Parking Spaces per Dwelling Unit	1.50
Building Height	4
Maximum Lot Coverage %	25%
Floor Area Ratio	0.40
Zoning Restrictions that Cap Unit Counts	
Lot Area per Dwelling Unit	0
Maximum Dwelling Units per Acre	0.00
Cap on Maximum Dwelling Units per District	0.00

ZONING INPUTS - DISTRICT 4

Business B (40R)

Model Inputs for Calculating Unit Yield	Input
Minimum Lot Size	6,000
Additional Lot Square Feet per Dwelling Unit	0
Open Space %	0%
Excluded Land Counted Toward Open Space	Y
Parking Spaces per Dwelling Unit	1.50
Building Height	3
Maximum Lot Coverage %	0%
Floor Area Ratio	2.40
Zoning Restrictions that Cap Unit Counts	
Lot Area per Dwelling Unit	0
Maximum Dwelling Units per Acre	20.00
Cap on Maximum Dwelling Units per District	0.00



READING'S HOUSING OBJECTIVE

The Town of Reading is required to achieve the following minimum housing objectives to satisfy the requirements of 3A compliance:

Reading is categorized as a Commuter Rail community with 9,952 existing housing units per the 2020 Census. In accordance with the Guidelines, the minimum multifamily unit capacity is 1,493 units, and the minimum district size is 43 acres. The Guidelines also state 40% of the district must be located within the stations area.

FINDINGS AND SUGGESTIONS

The Town of Reading requested the MHP team test four existing zoning districts which included an existing Business B 40R District, and three additional underlying base zoning districts (Apartment 40, Apartment 80, and Business A). The Town was interested in testing these four existing districts to see if any or a combination of districts would meet or exceed the requirements in the Guidelines, and if not, what changes could be made to achieve compliance. In testing the existing zoning districts, the MHP team notes the following positive attributes and potential drawbacks with the zoning and the overall district approach:

- **Apartment 40 District**
 - **Positive Attributes**
 - The district has an open space requirement of 25% which is the same as the default value in the Compliance Model, therefore Reading's 25% open space is not a deterrent to maximizing the building footprint on a parcel of land.
 - The building height of four stories provides for added unit capacity.
 - **Potential Drawbacks**
 - The minimum lot size of 40,000 SF creates 58 non-conforming parcels which is over 98% of the parcels in the district. Lowering the minimum lot size would bring more parcels into conformance with the overlay district and increase potential unit capacity in the district. **Lowering the minimum lot size below 8,000 SF would bring far more parcels into compliance and allow for greater unit capacity.**
 - The Town restricts development volume by requiring that gross floor area be no more than a percentage of lot size. This is a proxy for Floor Area Ratio (FAR), which is the ratio of gross floor area to lot size. For the Apartment 40 district, gross floor area is limited to 40% of the lot area, resulting in an FAR of 0.4. This restriction is very limiting in the district. If the FAR limitation was raised alongside a decrease in minimum lot size, unit capacity would increase considerably in this district.



- The parking ratio of 1.5 spaces per unit creates the need for larger areas on the parcel to accommodate surface parking. If the parking ratio were lowered, less land would need to be set aside for parking.
- **Conclusion**
 - Overall, the Apartment 40 district zoning provided by the town is very restrictive and produces a small number of units largely due to the minimum lot size requirement of 40,000 square feet. When we modeled the district, it does not appear to exceed the unit capacity threshold of 1,493 or the density metric of 15 DU/AC.
- **Apartment 80 District**
 - **Positive Attributes**
 - The large parcel sizes of the two parcels comprising this district help to generate high unit capacity numbers.
 - The building height of six stories helps to maximize unit capacity.
 - **Potential Drawbacks**
 - The primary restriction on unit capacity in this district is the very limited maximum lot coverage percentage of 13%. **Although the parcels are large, this is a very low percentage and doubling it to 25% nearly doubles the unit capacity.**
 - Alongside the maximum lot coverage restriction, the FAR limitation of 1.0 (see above) also constrains the potential unit capacity of the district. Moving to an FAR of 2.0 with the increase in maximum lot coverage could produce upwards of 900+ units in this district instead of 480 as modeled currently.
 - The 35% open space requirement is higher than the default of 25% in the Compliance Model. This will result in less space available for building footprints and constrain unit capacity.
 - The 60' setbacks would likely be flagged by DHCD review staff as potentially limiting to multifamily capacity.
 - The parking ratio of 1.5 spaces per unit creates the need for larger areas on the parcel to accommodate surface parking. If the parking ratio were lowered, less land would need to be set aside for parking.
 - **Conclusion**
 - Overall, the Apartment 80 district zoning provided by the town is restrictive and produces a smaller number of units largely due to the FAR and maximum lot coverage restrictions. When we modeled the district, it does not appear to exceed the unit capacity threshold of 1,493 but it does exceed the density metric of 15 DU/AC.



- **Business A District**
 - **Positive Attributes**
 - The district has an open space requirement of 25% which is the same as the default value in the Compliance Model, therefore Reading's 25% open space is not a deterrent to maximizing the building footprint on a parcel of land.
 - The building height of four stories allows added unit capacity.
 - **Potential Drawbacks**
 - The minimum lot size of 40,000 SF creates 57 non-conforming parcels which is 85% of the parcels in the district. Lowering the minimum lot size would bring more parcels into conformance with the overlay district and increase potential unit capacity in the district. **Lowering the minimum lot size below 8,000 SF would nearly double the unit capacity in this district.**
 - The FAR limitation of 0.4 (see above) is very limiting in the district. **If the FAR limitation was raised to 0.8 alongside a decrease to 8,000 SF minimum lot size, unit capacity would increase to nearly 1,200 in this district alone.**
 - The 25% maximum lot coverage in the district is also limiting capacity.
 - The parking ratio of 1.5 spaces per unit creates the need for larger areas on the parcel to accommodate surface parking. If the parking ratio were lowered, less land would need to be set aside for parking.
 - **Conclusion**
 - Overall, the Business A district zoning provided by the town is restrictive and produces a smaller number of units largely due to the minimum lot size requirement, FAR and maximum lot coverage restrictions. When we modeled the district, it does not appear to exceed the unit capacity threshold of 1,493 or the density metric of 15 DU/AC.

- **Business B (40R) District**
 - **Positive Attributes**
 - This district has much more flexible zoning to encourage multifamily development proximate to Reading's Commuter Rail station.
 - The district does not have an open space requirement which helps to maximize the amount of land available for the building footprint. Excluded land within the district can also be counted toward open space requirements.



- The zoning does not restrict lot coverage which produces very limited restrictions on the building footprint as it relates to lot coverage.
- The zoning includes a floor area ratio of 2.4 which is helpful for maximizing unit capacity on the smaller parcels of land in the district.
- This district places all units within the transit area which exceeds the town's requirements of 40% per the 3A Guidelines.
- **Potential Drawbacks**
 - Although the 6,000 SF minimum lot size is lower than the other three districts we tested, it still results in 68 non-conforming parcels or nearly 47% of all parcels in this district. **Reducing that minimum lot size to 4,000 SF limits non-conforming parcels to 32 or 22% of all parcels in the district.**
 - Due to the small parcels in the district, a major limiting factor is the 20 Dwelling Units per Acre restriction. When applied to small parcels in the district this limitation yields a unit capacity below 3, meaning the parcels cannot be modeled for unit capacity because a number below 3 is not in compliance with the definition of multifamily in Section 3A. Increasing the dwelling units per acre metric to 30 could add another 400 units to the modeled capacity of the district. That change alongside a decrease in minimum lot size could increase the unit capacity of the district from 464 to 817.
 - The building height of three stories is limiting unit capacity. The town may want to consider going to 45' as of right in the district to help increase unit capacity.
 - The district currently requires 1.5 parking spaces per unit per the zoning bylaw which limits the amount of land available for unit capacity.
- **Conclusion**
 - Overall, the Business B district zoning provided by the town is much more flexible than the other existing districts tested and with some changes could produce more units than what is currently being modeled. The small parcel sizes in this district are what restricts unit capacity, so any changes to bring more parcels into conformity and maximize building area would be helpful. When we modeled the district, it does not appear to exceed the unit capacity threshold of 1,493 or the density metric of 15 DU/AC.

Overall, it appears the Town of Reading would need to make changes to individual districts and look to combine several districts to reach both the unit capacity requirement and the density requirement of 15 DU/AC. The existing 40R district provides a good starting point but still needs some adjustments to the existing zoning to increase unit capacity.



Upon further review of the 40R district zoning, the MHP team notes that the 40R requires Plan Approval and that density waivers and development standards are part of the Plan Approval process. The Town should discuss this approval process with DHCD to get a determination as to whether this is an actual by-right approval or not.

Eligible household is defined as at or below 80% AMI. Applicants may, but are not required to, have age-restricted housing units and mixed-use development. The requirement for affordable units applies to projects of more than eight units. The requirements are for 20% of the units in an ownership project and 25% of units in a rental project.

Paragraph 4a of the Compliance Guidelines discusses the allowable affordability requirements. DHCD will consider an affordability requirement consistent with as of right use if not more than 10% of the units are affordable and the cap on income is not less than 80% AMI. Both requirements are lower than the Town's and thus the Town's current provisions appear to be in excess of those within the Compliance Guidelines.

However, DHCD has two further options that relax that standard: the first relates to a 40R district, which is applicable to this test. If the affordability requirements are reviewed and approved by DHCD under Chapter 40R, then the limit can be increased.

The second is that if the affordability requirements are supported by an economic feasibility analysis, then DHCD may allow a different standard, but cannot require more than 20% of units (in a non-40R district) be affordable. In a 40R district, the maximum percentage is 25%, if the district was approved and adopted prior to the issuance of the guidelines. The previously approved district may be expanded or amended to comply with the Compliance Guidelines and retain the 25% affordability.

The Town should review their 40R district with DHCD to ensure that it complies with the Compliance Guidelines for the as of right use and affordability requirements.



Unit Capacity Model Summary Table by District and Totals

Unit Capacity per District Table

Data Metric	District 1	District 2	District 3	District 4	District 5	Totals
District Name	Apartment 40	Apartment 80	Business A	Business B (40R)		
Modeled Unit Capacity	63	959	807	940	0	2,769
Dwelling Units per Acre Limit				686		686
District Unit Cap Limit						0
Max Lot Coverage Limit	587	461	1,709			2,757
Lot Area per Dwelling Unit Limit						0
Max Units per Lot Limit	63	959	807	940	0	2,769
FAR Limit	235	615	683	3,586		5,119
Final Unit Capacity per District	21	461	301	464	0	1,247

Summary Table

Data Metric	District 1	District 2	District 3	District 4	District 5	Totals
District Name	Apartment 40	Apartment 80	Business A	Business B (40R)		
District Acreage (see note)	17.2	14.1	42.4	47.1	0.0	120.9
District Density Denominator (see note)	17.2	14.1	42.4	47.1	0.0	120.9
Final Unit Capacity per District	21	461	301	464	0	1,247
DU/AC	1.2	32.7	7.1	9.8	0.0	10.3
Parcel Acreage	13.5	14.1	39.2	34.3	0.0	101.1
Total Built Square Feet	63,908	959,797	812,225	974,226	0	2,810,156
Total Units in Station Area	0	0	44	444	0	488
Non-Conforming Parcels	58	0	57	68	0	183
Total Excluded Land (sf)	46,654	3	249,244	231,917	0	527,817
Total Open Space (sf)	181,617	215,339	576,399	484,342	0	1,457,696
Total Parking Area (sf)	23,966	239,949	304,584	487,113	0	1,055,612
Units Forgone due to Unit Cap in Zoning	0.00	0.00	0.00	0.00	0.00	0

**Disclaimer: The results of the unit capacity model shown in the Summary Table above should not be considered final or endorsed by DHCD, MHP, or the Consultant Team. These are preliminary results based on the information provided by the Town of Reading.*



Mapped Districts Showing Unit Capacity on a Parcel Basis

