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# TECHNICAL MEMORANDUM

TO: Christopher J. Ryan, AICP
Planning Director
Town of Duxbury

FROM: Laura Smead, AICP, Senior Community Planner, JM Goldson

DATE: May 19, 2023

SUBJECT: MBTA Zoning Compliance Technical Assistance ("3A TA") – Process and Findings Memorandum

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## INTRODUCTION

On behalf of the Mass Housing Partnership (MHP) and the consulting team, we thank you for participating in this technical assistance round. As a partner in this technical assistance, the consultant team aimed to provide 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. In the conclusions section below we outline three possible options for becoming a 3A compliance community. The Town can consider these three options, weighing the advantages and disadvantages to determine the preferred approach. We hope the information and feedback in this brief memorandum will assist you as you move forward with your application process.

## DUXBURY'S HOUSING OBJECTIVE

The Town of Duxbury is required to achieve the following minimum housing objectives to satisfy the requirements of 3A compliance: *Duxbury is categorized as an Adjacent Community with 6,274 existing housing units per the 2020 Census. Per the Guidelines, the minimum multifamily capacity is 750 units, and the minimum district size is 50 acres.*

### *Town of Duxbury Minimum Housing Objectives*

| | |
|---|---|
| Community: | Duxbury |
| Community Category: | Adjacent community |
| 2020 Housing Units (Census PL-94): | 6,274 |
| Minimum Multi-family Unit Capacity: | 750 |
| Minimum Land Area | 50 |
| Developable Station Area | - |
| Percent of District to be in Station Area | 0% |

## FINDINGS

Out of ten possible districts discussed, the Town requested the consultant team test zoning compliance with the following five areas:

*Town of Duxbury Districts to Test*

| No. | Site Description | Site Address |
|---|---|---|
| 1 | Island Creek Residential Complex | Multiple Parcels |
| 2 | Summer-Dogwood Site | 0 Dogwood Drive<br>0 Congress Street |
| 3 | Tremont Street Site | 0 Tremont Street |
| 4 | Kingston Way Site | Kingston Town Way<br>and Autumn Avenue |
| 5 | Hall's Corner | Multiple Streets |

### Scenario 1

As proposed, the five districts in total were found to have more acreage, density, and capacity than necessary. The proposed districts are all quite large (between 17 and 33 acres) with little loss of acreage to excluded land (except the Summer-Dogwood site).

*Scenario 1 Comparison Table of Requirements and Modeled Results*

| Category | Guideline Requirements | Modeled Results |
|---|---|---|
| Community: | Duxbury | Duxbury |
| Community Category: | Adjacent community | Adjacent community |
| 2020 Housing Units (Census PL-94): | 6,274 | 6,274 |
| Minimum Multi-family Unit Capacity: | 750 | 1,971 |
| Minimum Land Area: | 50 | 118.3 |

*While Scenario 1 and 2 had the same compliance model zoning inputs and site descriptions, they included slightly different parcel selections for the Island Creek Residential Complex and Hall's Corner area.*

### Scenario 2

The revised subdistricts districts were still found to have more acreage, density, and capacity than necessary.

## CONCLUSIONS

Below we outline three possible options for becoming a 3A compliance community. The Town can consider these three options, weighing the advantages and disadvantages to determine the preferred approach.

Option 1: In testing the proposed subdistricts of only Island Creek, Summer Dogwood, and Tremont Street, this approach had more acreage, density, and capacity than necessary to meet compliance. Selecting fewer districts would have the benefit of allowing the Town to have a longer strategic planning and zoning process for the areas of Kingstown Way and Hall's Corner.

### *Option 1 Comparison Table of Requirements and Modeled Results*

| Category | Guideline Requirements | Modeled Unit Capacity Results *(Island Creek, Summer Dogwood, and Tremont Street)* |
|---|---|---|
| Minimum Multi-family Unit Capacity: | 750 | 1,351 |
| Minimum Land Area: | 50 | 79.5 |

Option 2: The Town could also meet compliance with only the Island Creek and Summer-Dogwood subdistricts. See Appendix *Scenario 2 Summary Table*. This has the same benefit as Option 1, with less acreage and capacity.

### *Option 2 Comparison Table of Requirements and Modeled Results*

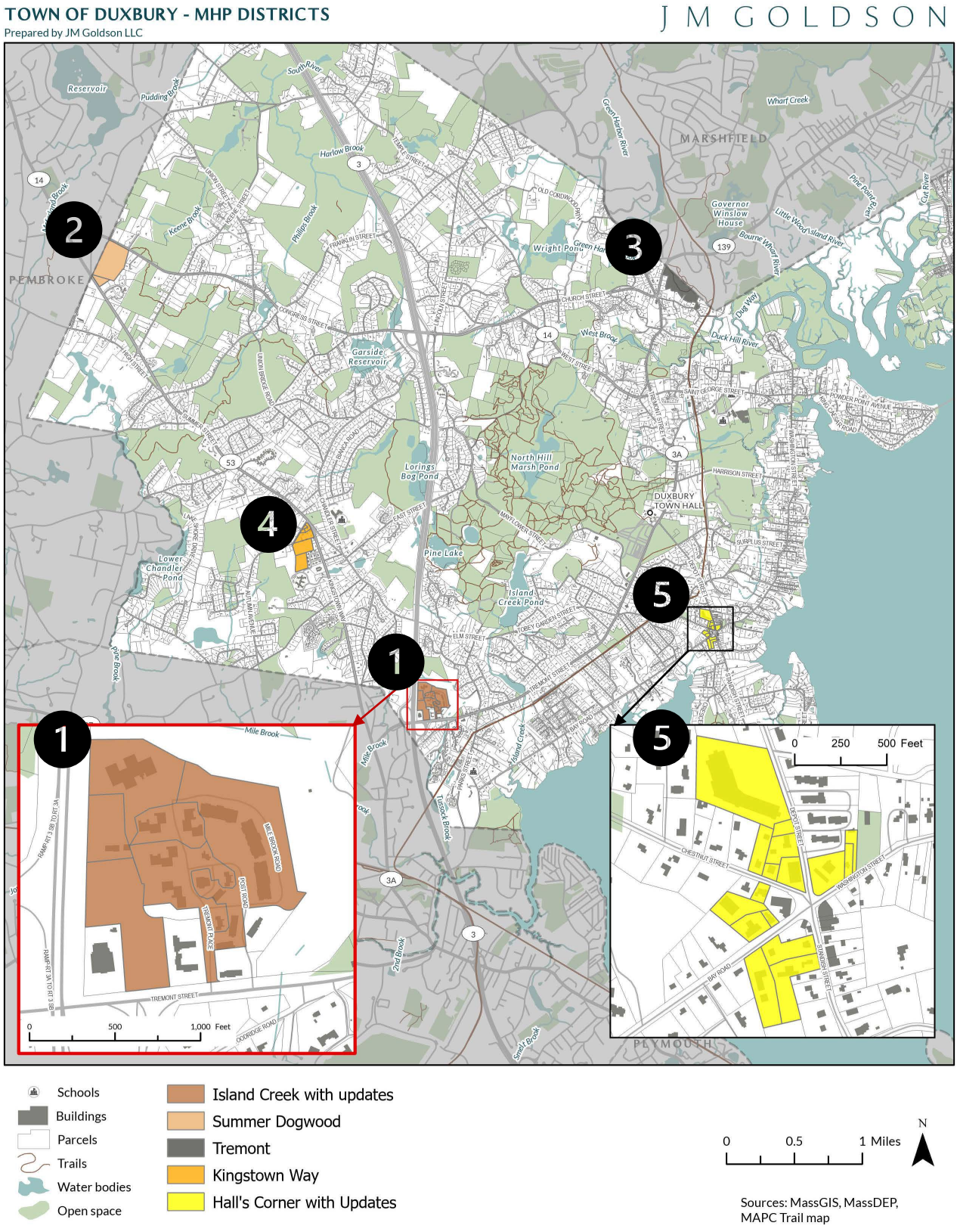
| Category | Guideline Requirements | Modeled Unit Capacity Results *(Island Creek, Summer Dogwood)* |
|---|---|---|
| Minimum Multi-family Unit Capacity: | 750 | 1, 079 |
| Minimum Land Area: | 50 | 61.2 |

Option 3: With a slight increase in size (4 acres) to either the Tremont or Island Creek location, the Town of Duxbury would be able to meet compliance with rezoning only two subdistrict locations. See Appendix *Scenario 2 Summary Table*. This has the same benefit as Option 2 but requires more analysis.

### *Option 3 Comparison Table of Requirements and Modeled Results*

| Category | Guideline Requirements | Modeled Unit Capacity Results *(Island Creek, Tremont Street)* |
|---|---|---|
| Minimum Multi-family Unit Capacity: | 750 | 746 |
| Minimum Land Area: | 50 | 46 |

## Map of Duxbury Areas for MBTA Compliance Model Testing



# APPENDIX

## PROJECT SCOPE

### Task 1

Feb/March: Initial Education and Visioning

- Meeting #1: Virtual kick-off meeting to review scope, schedule, and overview of requirements.
- Review existing and proposed zoning and planning studies.
- Identify obstacles and non-compliance issues.
- Meeting #2: In-person working meeting to identify up to 5 districts and map.

Deliverable: District(s) in GIS format, Meeting #1 Kick-off Presentation; Meeting #2 PowerPoint Presentation.

### Task 2

April: Evaluating Proposed District(s) for Compliance

- Import data, run model, and test compliance for up to 5 subdistricts.
- Testing modifications to reach compliance for up to 5 subdistricts.
- Meeting #3: Virtual meeting to discuss and outline recommendations to reach compliance.

Deliverable: Final completed compliance model; Final map of districts; Meeting #3 PowerPoint Presentation.

### Task 3

May: Written recommendations to reach compliance.

- Meeting #4: Virtual meeting to review proposed districts' compliance and recommendations to meet requirements.
- Writing a technical memo documenting the process and recommendations to meet requirements.

Deliverable: Technical memo documenting process and recommendations to meet requirements; Meeting #4 PowerPoint Presentation; Compliance Model User Guide, Section 3A Land Maps Sources and Methods, the MBTA Communities Sample Zoning.

## PROCESS

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

- Geographic boundaries of each proposed district were digitized into a GIS Shapefile format.
- A copy of the most recent zoning bylaw.
- Proposed zoning parameters to be tested in the model.

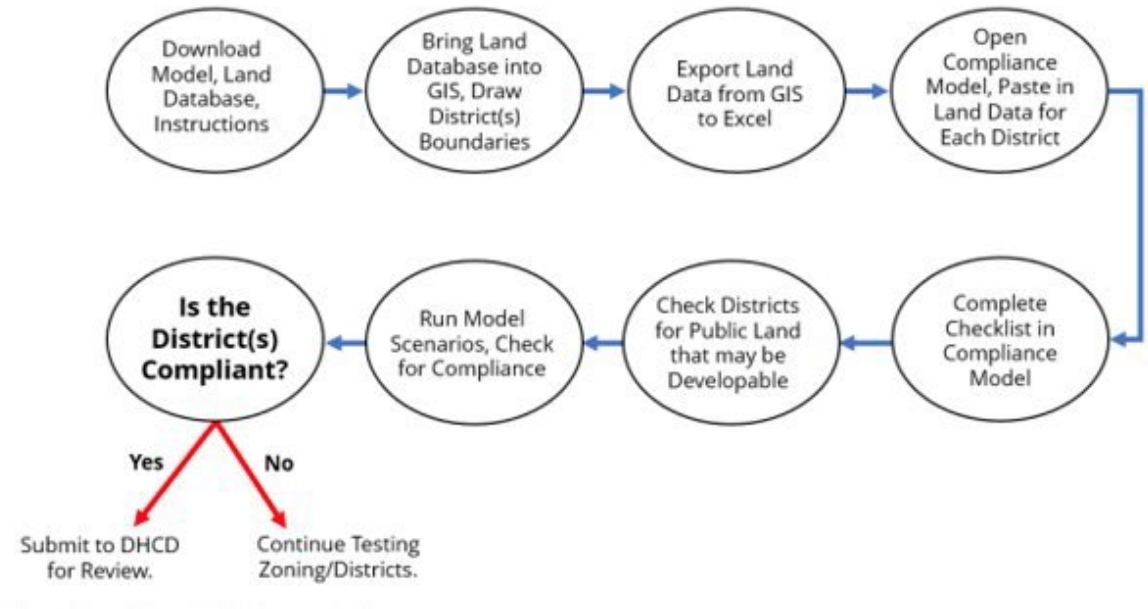
The purpose of collecting the information on the geographic boundaries of the district(s) was to test compliance with the minimum land area requirements. If any of the proposed districts were not compliant with these initial geographic requirements, those were flagged for follow-up.

The purpose of collecting the existing zoning bylaw was to look for any unique requirements in the zoning that the compliance model had yet to account for. Reviewing current zoning also allowed us to check for any missing information in the checklist or conflicts with any proposed zoning.

Lastly, proposed zoning inputs were put into the compliance model's checklist. From there, select requirements from the proposed zoning feed directly into the compliance model to calculate unit capacity on a parcel-by-parcel basis. The zoning requirements applied to each subdistrict serve as the drivers of unit capacity alongside district size and the amount of excluded land.

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

## *Compliance Model Outline*



## COMPLIANCE MODEL INPUTS – SCENARIOS 1 AND 2

The following shows the key inputs that drive the parcel-based unit capacity calculations in the compliance model.

### *Island Creek Area*

| Model Inputs for Calculating Unit Yield | Input |
|---|---|
| Minimum Lot Size | 20,000 |
| Open Space % | 25% |
| Excluded Land Counted Toward Open Space | N |
| Parking Spaces per Dwelling Unit | 1.50 |
| Building Height | 3 |
| Maximum Lot Coverage % | 50% |
| Floor Area Ratio | 0.00 |
| **Zoning Restrictions that Cap Unit Counts** | **Input** |
| Maximum Dwelling Units per Acre | 17.00 |

### *Summer-Dogwood Site*

| Model Inputs for Calculating Unit Yield | Input |
|---|---|
| Minimum Lot Size | 80,000 |
| Open Space % | 30% |
| Excluded Land Counted Toward Open Space | N |
| Parking Spaces per Dwelling Unit | 1.50 |
| Building Height | 3 |
| Maximum Lot Coverage % | 50% |
| Floor Area Ratio | 0.00 |
| **Zoning Restrictions that Cap Unit Counts** | **Input** |
| Maximum Dwelling Units per Acre | 20.00 |

### *Tremont Street*

| Model Inputs for Calculating Unit Yield | Input |
|---|---|
| Minimum Lot Size | 80,000 |
| Open Space % | 30% |
| Excluded Land Counted Toward Open Space | N |
| Parking Spaces per Dwelling Unit | 1.50 |
| Building Height | 3 |
| Maximum Lot Coverage % | 50% |
| Floor Area Ratio | 0.00 |
| **Zoning Restrictions that Cap Unit Counts** | **Input** |
| Maximum Dwelling Units per Acre | 15.00 |

### *Kingston Way Site*

| Model Inputs for Calculating Unit Yield | Input |
|---|---|
| Minimum Lot Size | 10,000 |
| Open Space % | 15% |
| Excluded Land Counted Toward Open Space | N |
| Parking Spaces per Dwelling Unit | 1.50 |
| Building Height | 3 |
| Maximum Lot Coverage % | 70% |
| Floor Area Ratio | 0.70 |
| **Zoning Restrictions that Cap Unit Counts** | **Input** |
| Maximum Dwelling Units per Acre | 20.00 |

### *Hall's Corner Area*

| Model Inputs for Calculating Unit Yield | Input |
|---|---|
| Minimum Lot Size | 5,000 |
| Open Space % | 0% |
| Excluded Land Counted Toward Open Space | N |
| Parking Spaces per Dwelling Unit | 1.50 |
| Building Height | 3 |
| Maximum Lot Coverage % | 90% |
| Floor Area Ratio | 1.00 |
| **Zoning Restrictions that Cap Unit Counts** | **Input** |
| Maximum Dwelling Units per Acre | 12.00 |

*Scenario 1 Unit Capacity per District Table*

| Data Metric | District 1 | District 2 | District 3 | District 4 | District 5 | Totals |
|---|---|---|---|---|---|---|
| District Name | Island Creek Area | Kingston Way Site | Hall's Corner Area | Summer-Dogwood Site | 0 Tremont Site | |
| Modeled Unit Capacity | 1,017 | 891 | 721 | 640 | 617 | 3,886 |
| Dwelling Units per Acre Limit | 463 | 428 | 215 | 669 | 274 | 2,049 |
| District Unit Cap Limit | | | | | | 0 |
| Max Lot Coverage Limit | 1,779 | 1,956 | 2,106 | 2,187 | 1,194 | 9,222 |
| Lot Area per Dwelling Unit Limit | | | | | | 0 |
| Max Units per Lot Limit | 1,017 | 891 | 721 | 640 | 617 | 3,886 |
| FAR Limit | | 652 | 780 | | | 1,432 |
| **Final Unit Capacity per District** | **464** | **428** | **200** | **605** | **274** | **1,971** |

*Scenario 1 Summary Table*

| Data Metric | District 1 | District 2 | District 3 | District 4 | District 5 | Totals |
|---|---|---|---|---|---|---|
| District Name | Island Creek Area | Kingston Way Site | Hall's Corner Area | Summer-Dogwood Site | 0 Tremont Site | |
| District Acreage *(see note)* | 27.2 | 21.4 | 17.9 | 33.5 | 18.3 | 118.3 |
| District Density Denominator *(see note)* | 26.4 | 21.4 | 17.6 | 22.3 | 17.3 | 104.9 |
| Final Unit Capacity per District | 464 | 428 | 200 | 605 | 274 | 1,971 |
| DU/AC | 17.6 | 20.0 | 11.4 | 27.2 | 15.8 | 18.8 |
| Parcel Acreage | 27.2 | 21.4 | 17.9 | 33.5 | 18.3 | 118.3 |
| Total Built Square Feet | 1,022,442 | 894,187 | 735,700 | 640,692 | 617,023 | 3,910,043 |
| Total Units in Station Area | 0 | 0 | 0 | 0 | 0 | 0 |
| Non-Conforming Parcels | 0 | 0 | 5 | 0 | 0 | 5 |
| Total Excluded Land (SF) | 37,527 | 0 | 21 | 487,221 | 42,931 | 567,700 |
| Total Open Space (SF) | 334,048 | 186,289 | 156,008 | 924,587 | 281,696 | 1,882,628 |
| Total Parking Area (SF) | 511,221 | 447,093 | 367,850 | 320,346 | 308,512 | 1,955,022 |
| Units Forgone due to Unit Cap in Zoning | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |

*Scenario 1 Comparison Table of Requirements and Modeled Results*

| Category | Guideline Requirements | Modeled Results |
|---|---|---|
| Community: | Duxbury | Duxbury |
| Community Category: | Adjacent community | Adjacent community |
| 2020 Housing Units (Census PL-94): | 6,274 | 6,274 |
| Minimum Multi-family Unit Capacity: | 750 | 1,971 |
| Minimum Land Area: | 50 | 118.3 |
| Developable station area: | 0.00 | 0.00 |
| % Unit Capacity within Transit Station Areas: | 0% | 0% |
| % Land Area Located in Transit Station Areas: | 0% | 0% |

*Scenario 2 Unit Capacity per District Table*

| Data Metric | District 1 | District 2 | District 3 | District 4 | District 5 | Totals |
|---|---|---|---|---|---|---|
| District Name | Island Creek Area | Kingston Way Site | Hall's Corner Area | Summer-Dogwood Site | 0 Tremont Site | |
| Modeled Unit Capacity | 1,039 | 891 | 462 | 640 | 617 | 3,649 |
| Dwelling Units per Acre Limit | 472 | 428 | 136 | 669 | 274 | 1,979 |
| District Unit Cap Limit | | | | | | 0 |
| Max Lot Coverage Limit | 1,813 | 1,956 | 1,332 | 2,187 | 1,194 | 8,481 |
| Lot Area per Dwelling Unit Limit | | | | | | 0 |
| Max Units per Lot Limit | 1,039 | 891 | 462 | 640 | 617 | 3,649 |
| FAR Limit | | 652 | 493 | | | 1,145 |
| Final Unit Capacity per District | 472 | 428 | 124 | 605 | 274 | 1,903 |

*Scenario 2 Summary Table*

| Data Metric | District 1 | District 2 | District 3 | District 4 | District 5 | Totals |
|---|---|---|---|---|---|---|
| District Name | Island Creek Area | Kingston Way Site | Hall's Corner Area | Summer-Dogwood Site | 0 Tremont Site | |
| District Acreage *(see note)* | 27.7 | 21.4 | 11.3 | 33.5 | 18.3 | 112.2 |
| District Density Denominator *(see note)* | 26.9 | 21.4 | 11.3 | 22.3 | 17.3 | 99.1 |
| Final Unit Capacity per District | 472 | 428 | 124 | 605 | 274 | 1,903 |
| DU/AC | 17.6 | 20.0 | 11.0 | 27.2 | 15.9 | 19.2 |
| Parcel Acreage | 27.7 | 21.4 | 11.3 | 33.5 | 18.3 | 112.2 |
| Total Built Square Feet | 1,042,617 | 894,187 | 469,063 | 640,692 | 617,023 | 3,663,582 |
| Total Units in Station Area | 0 | 0 | 0 | 0 | 0 | 0 |
| Non-Conforming Parcels | 0 | 0 | 1 | 0 | 0 | 1 |
| Total Excluded Land (SF) | 37,527 | 0 | 0 | 487,221 | 42,931 | 567,680 |
| Total Open Space (SF) | 339,652 | 186,289 | 98,631 | 924,587 | 281,696 | 1,830,855 |
| Total Parking Area (SF) | 521,309 | 447,093 | 234,532 | 320,346 | 308,512 | 1,831,791 |
| Units Forgone due to Unit Cap in Zoning | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |

## *Scenario 2 Comparison Table of Requirements and Modeled Results*

| Category | Guideline Requirements | Modeled Results *(5 districts)* |
|---|---|---|
| Community: | Duxbury | Duxbury |
| Community Category: | Adjacent community | Adjacent community |
| 2020 Housing Units (Census PL-94): | 6,274 | 6,274 |
| Minimum Multi-family Unit Capacity: | 750 | 1,903 |
| Minimum Land Area: | 50 | 112.2 |
| Developable station area: | 0.00 | 0.00 |
| % Unit Capacity within Transit Station Areas: | 0% | 0% |
| % Land Area Located in Transit Station Areas: | 0% | 0% |

**Disclaimer: The results of the unit capacity model shown in the Summary Tables 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 Duxbury.*