

The M.I.T. Endicott House  
A Study in Highest and Best Use

by

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Institute of San Diego

Submitted to the Department of Architecture in Partial Fulfillment  
of the Requirements for the Degree of Master of Science in Real  
Estate Development

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ABSTRACT

Since the 1950's, the Massachusetts Institute of Technology has been in possession of the Endicott House, a 19-acre property and former family estate located in Dedham, MA. A highest and best use analysis was performed on the subject site in an effort to determine which of several potential uses would yield the highest potential profit. Three major scenarios including selling the property as it exists currently, subdividing it and selling vacant lots for single-family homes and subdividing the property, constructing single-family homes and selling them were examined. Values for differing scenarios were derived in several ways, making sure to use the appropriate methods for each. These methods included discounted cash flow analysis, the sales comparison technique and assessed value to actual sales price ratio approach. In general, costs for scenarios involving the improvement of real estate were derived with the assistance of a development company with over 25 years of experience and specializing in the construction and sale of single-family homes and planned communities.

When estimated costs and expected sales returns were compared, a maximum development alternative was found to generate the highest potential profit. This scenario, which entailed the demolition of the majority of existing facilities and the construction of 14 new single-family homes, resulted in a projected value of \$27.2 million by 2010.

Research was also conducted on the market potential for development of senior housing facilities at the Endicott House site. Analysis of a 272 square mile study area suggested that the greatest opportunity in this housing market exists in the development of independent senior living units and in dementia care facilities.

Suggestions for areas of further study were made.

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## **CHAPTER 1 – INTRODUCTION**

### ***1.1 - Purpose of Study***

In the mid 1950's, the Massachusetts Institute of Technology (Institute) obtained ownership of a large family estate located in the Town of Dedham about 10 miles southwest of the City of Boston. The property, which was gifted by Bradford Maxwell Endicott, Russell B. Stearns, and John Haley, included 4 parcels totaling slightly fewer than 20 acres. The primary feature of the site was a 23,000 square foot (SF), 4-story mansion constructed in the 1920's. Commonly referred to as the Endicott House, this facility now serves as a conference facility for faculty, staff, students and guests of the Institute.

The purpose of the following study was to evaluate 3 broad scenarios for the sale and/or development and sale of the subject property. To that end, a highest and best use analysis was performed and considered the following 3 alternatives:

Scenario 1 – Sell the property as is. This would include sale of the Endicott House as either a non-profit conference center or as a single-family residence.

Scenario 2 – Subdivide the property and sell the newly created residential lots. This would involve three potential scenarios of varying density.

Scenario 3 – Subdivide the property, construct and sell single-family homes. Like scenario 2, this situation would involve the subdivision of the property into a varying number of lots, but would also include the construction and sale of a prototypical single-family home.

In addition, alternative uses involving the creation of senior housing were examined for their market potential. Moreover, a brief discussion of other potential uses and areas of further study is included in the final chapter of this thesis.

## ***1.2 - Methodology***

The information upon which analysis and conclusions in this study was based came from a variety of sources. The vast majority came from interviews conducted with industry experts in varying fields including land use planning, real estate sales, development and construction. Other printed and electronic resources were consulted throughout the course of the study to supplement findings.

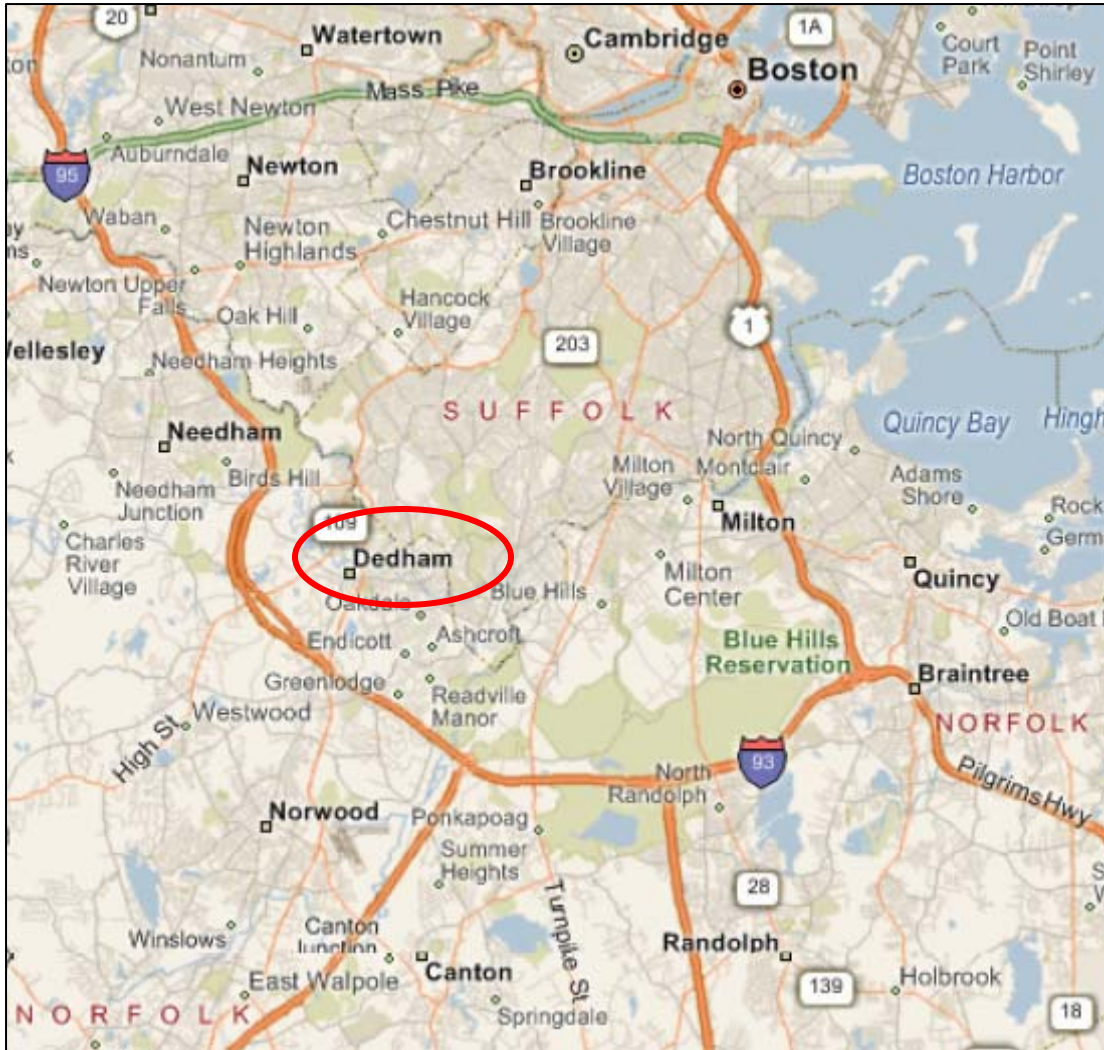


Figure 1 - Dedham in relation to Boston MSA

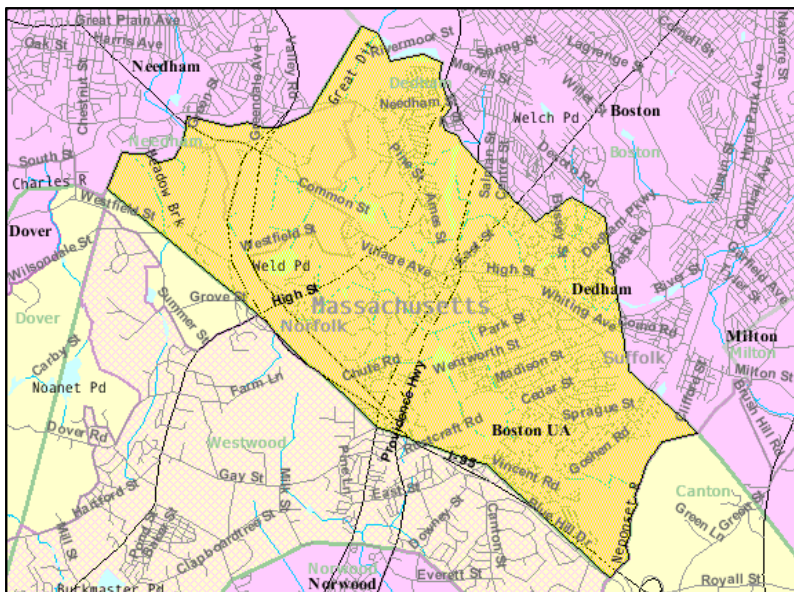


Figure 2 - Dedham town boundaries and surrounding communities

## **CHAPTER 2 – EXISTING CONDITIONS**

### ***2.1 - Geographic Characteristics***

#### **2.1.a. - Location**

The M.I.T. Endicott House is located at 80 Haven Street, in what is known as Precinct 1 of Dedham, Massachusetts, a suburb approximately 10 miles southwest of Boston (See Figure 1). Seated in Norfolk County in eastern Massachusetts, Dedham is one of the oldest communities in the state, and is bordered by the towns of Needham to the north, Canton and Westwood to the south and west, and the community of West Roxbury in the City of Boston to the north and East (See Figure 2).

According to the Massachusetts Department of Housing and Community Development's community profiles report for the town, Dedham is described as follows:

*Dedham is an historic suburban industrial town on the principal southern corridor of metropolitan Boston, and is the site of the earliest surviving framed house in New England, the handsome 1737 Fairbanks House. The 10.7 square mile community received its grant as a town from the Massachusetts Bay Colony in 1636, placing it among the oldest communities in the state. Its colonial agricultural economy was expanded by industry only after the town, in 1639, built one of the earliest water power canals connecting the Charles River with a tributary of the Neponset River and creating sufficient water power for grist and fulling mills. The character and future of the community changed drastically when it became the county seat for Norfolk County and the court house was built in 1796. As local historians pointed out, this brought in lawyers and officials, trained, educated and*

*ambitious men who changed the face of the community by investing in and supporting industrial development. Woolen mills were developed in Dedham and innovations such as power broadlooms were introduced. By 1830 there were two woolen mills, two cotton mills, four sawmills and five factories staffed by Irish and German immigrants who made up 27% of the Dedham population. Everything from pianos to furniture was made in Dedham, including famous Dedham crackleware pottery. The town shows a rich and diverse architectural face to the world, with its monumental granite court house of Greek Revival design, its Victorian prison, its limestone Neoclassical Registry of Deeds, Romanesque Revival public library and Renaissance and Georgian Revival schools. In addition, Dedham has a remarkably well preserved town center, with many handsome, historic houses of which the community is very proud*

*(Seal supplied by community. Narrative based on information provided by the Massachusetts Historical Commission).<sup>1</sup>*

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<sup>1</sup> Source: "Community Profiles." Massachusetts Department of Housing and Community Development. July 08, 2005 <<http://www.mass.gov/dhcd/iprofile/073.pdf>>.

### 2.1.b. - Transportation

According to the same study, Dedham benefits from excellent access to transportation, both public and private. Principal highways serving the community are U.S. Route 1, State Routes 109, 128, and 135, and Interstate Route 95. Commuter rail service to South Station and Back Bay Station in Boston is available from Dedham Corporate Center and Endicott located in the center of the town. Travel time from Endicott to Back Bay Station is approximately 17-18 minutes, while that from Dedham Corporate Center ranges from 16 to 22 minutes. Four hundred, ninety-seven parking spaces are available at Dedham Corporate Center. In addition, Amtrak's passenger service between Boston and New York City stops at the Route 128 Station in neighboring Westwood. The two-runway Norwood Memorial Airport is also conveniently located just off Route 1 south of Dedham.

### 2.1.c. - Population

Dedham's population has been steadily declining since the 1990 decennial census. As of the 2000 census, Dedham's population was estimated at 23,464, showing a slight reduction (-1.3%) from its 1990 population of 23,782. In 2003 population was estimated at 23,206, representing a -1.1% drop, and is projected to reach 22,778 by 2008.<sup>2</sup> In contrast, its median age has increased steadily from 34.4 in 1990 to 40.7 in 2003.

Dedham enjoys a relatively low crime rate. As of 2003, the total number of reported crimes per 100,000 citizens was 1,914.7 as compared to the state average of 3,018.9 or the national average of 4,063.4. Moreover, only 14% of the total crime was considered violent.

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<sup>2</sup> Community Profiles - Norfolk County: Dedham, MA, 2005; accessed 16 June 2006, The Warren Group, [http://rers.thewarrengroup.com/CommunityProfile/core/sc\\_compare.asp](http://rers.thewarrengroup.com/CommunityProfile/core/sc_compare.asp)

Almost 32.3% of the population has attained a bachelor's degree or higher, and approximately 48% have achieved at least a high school diploma. This places Dedham significantly below its neighboring communities, but slightly above the median for the state.<sup>3</sup>

#### 2.1.d. - Income

As illustrated in Figure 3, Dedham's income has been steadily rising for the past decade-and-a-half. According to the 1990 census, the town's median household income was \$45,687. It continued to grow steadily through 2003 and is projected to continue to rise to \$76,716 as of 2008.<sup>4</sup> In each historic instance, median income was significantly higher than the state average.<sup>5</sup> However, Dedham ranks significantly below its nearest neighbors of Canton (-12.4%), Needham (-31.4%) and Westwood (-32%).<sup>6</sup>

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<sup>3</sup> Community Profiles - Rank by Education (Bachelor and Higher), 2005; accessed 16 June 2006, The Warren Group, <http://rers.thewarrengroup.com/CommunityProfile/core/rptRank.asp>

<sup>4</sup>Community Profiles - Norfolk County: Dedham, MA, 2005; accessed 16 June 2006, The Warren Group, [http://rers.thewarrengroup.com/CommunityProfile/core/sc\\_compare.asp](http://rers.thewarrengroup.com/CommunityProfile/core/sc_compare.asp)

<sup>5</sup> Historical Income Tables – Households, 2004; accessed 16 June 2006, U.S. Census Bureau, <http://www.census.gov/hhes/income/histinc/h08.html>

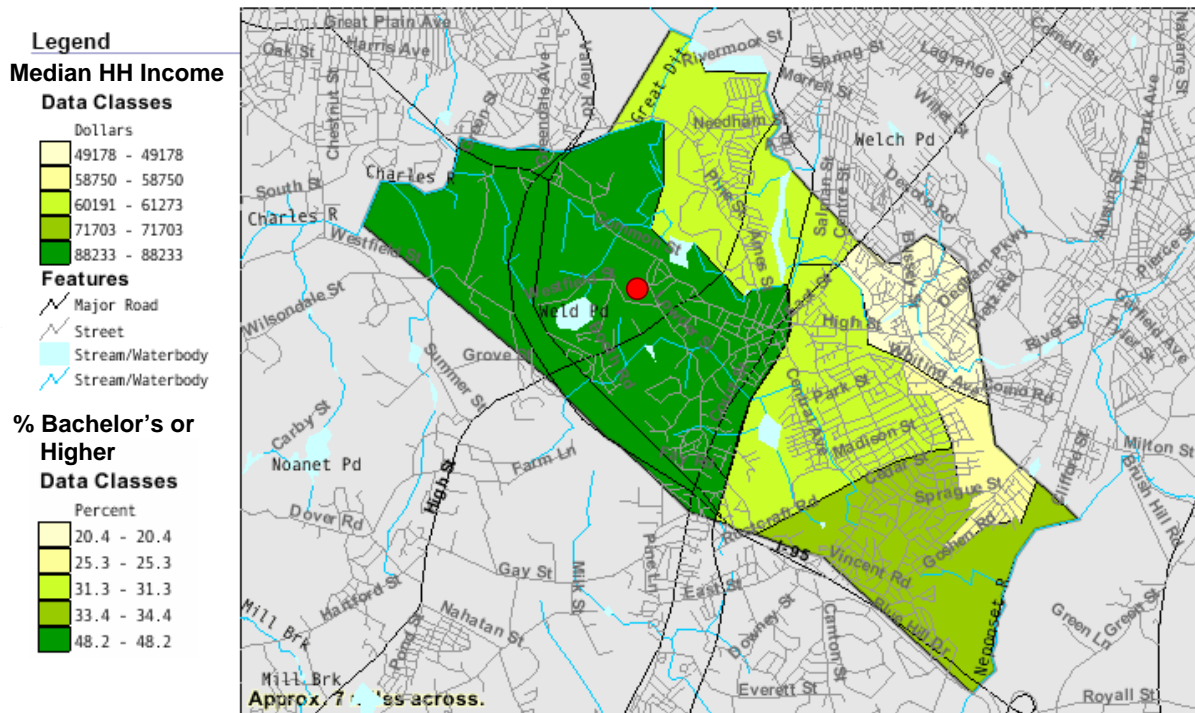
<sup>6</sup> Community Profiles - Rank by Median Household Income, 2005; accessed 16 June 2006, The Warren Group, <http://rers.thewarrengroup.com/CommunityProfile/core/rptRank.asp>

## Median Household Income

Year	1990	2000	2003	2008
Dedham	45,687	62,611	68,799	76,716
State	36,247	46,753	50,955	
% Difference	126%	134%	135%	

**Table 1 - Median Household Income: Dedham vs. Massachusetts**

It should be noted that, as illustrated in the map below, the area in which the subject site is located (indicated by a circle) boasts a significantly higher median household income and educational level than that of the rest of the municipality.



Source: U.S. Census Bureau, Census 2000 Summary File 3, Matrix P53.

public education in Dedham is considered inferior to that of surrounding communities.

According to 2005 MCAS test results, area public schools generally fall below the state averages



for advanced placement in subjects (specifically Mathematics, Science & Technology and English Language Arts), while they also exceed state averages for students needing improvement in the same subjects. This perhaps explains why approximately 28.5% of total school enrollment in Dedham is in private schools. This is a significantly higher percentage than that of the surrounding communities in which private school enrollment ranges from approximately 12% to 18%.<sup>7</sup>

#### 2.1.e. - Real Estate Trends

Local real estate prices in the Town of Dedham have risen steadily over the past 5 years with an estimated single-family home value increase of 46% (7.9% annually) over the same time period<sup>8</sup>. This is slightly less than the increase seen in Norfolk County overall (48.3% cumulative; 8.2% annual) and in the state as a whole (56.1% cumulative; 9.3% annual). Over the past year, real estate values in the region have seen a slight decrease. Single-family home values in Massachusetts have dropped by 1.8% and those in Norfolk County have seen a 3.8% reduction. Dedham has experienced an even larger impact of a cooling housing market with housing prices falling 4.7% in the last year. As such, single-family home values in the town are not expected to rise for the next several years.

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<sup>7</sup> Community Profiles - Norfolk County: Dedham, MA, 2005; accessed 16 June 2006, The Warren Group, [http://rers.thewarrengroup.com/CommunityProfile/core/sc\\_compare.asp](http://rers.thewarrengroup.com/CommunityProfile/core/sc_compare.asp)

<sup>8</sup> "Zillow.com - Dedham Real Estate - Real Estate Valuation for Dedham, MA." Zillow, Inc. 2006. <<http://www.zillow.com/local/Massachusetts/Norfolk/Dedham>>.

## 2.2 - SITE CHARACTERISTICS

### 2.2.a. - Physical & Environmental Attributes

As shown in the Figure 3, the subject site is bounded by Westfield Street on the west and Haven Street on the east. The grounds of the M.I.T. Endicott House are comprised of four parcels totaling 19.87 acres. These parcels include:

**Table 2 - Endicott House Parcels**

74 Haven Street Map 71, Lot 16	0.47 ac	82 Haven Street Map 71, Lot 18	1.17 ac
90 Haven Street Map 71, Lot 17	18 ac	121 Westfield Street Map 88, Lot 13a	0.23 ac

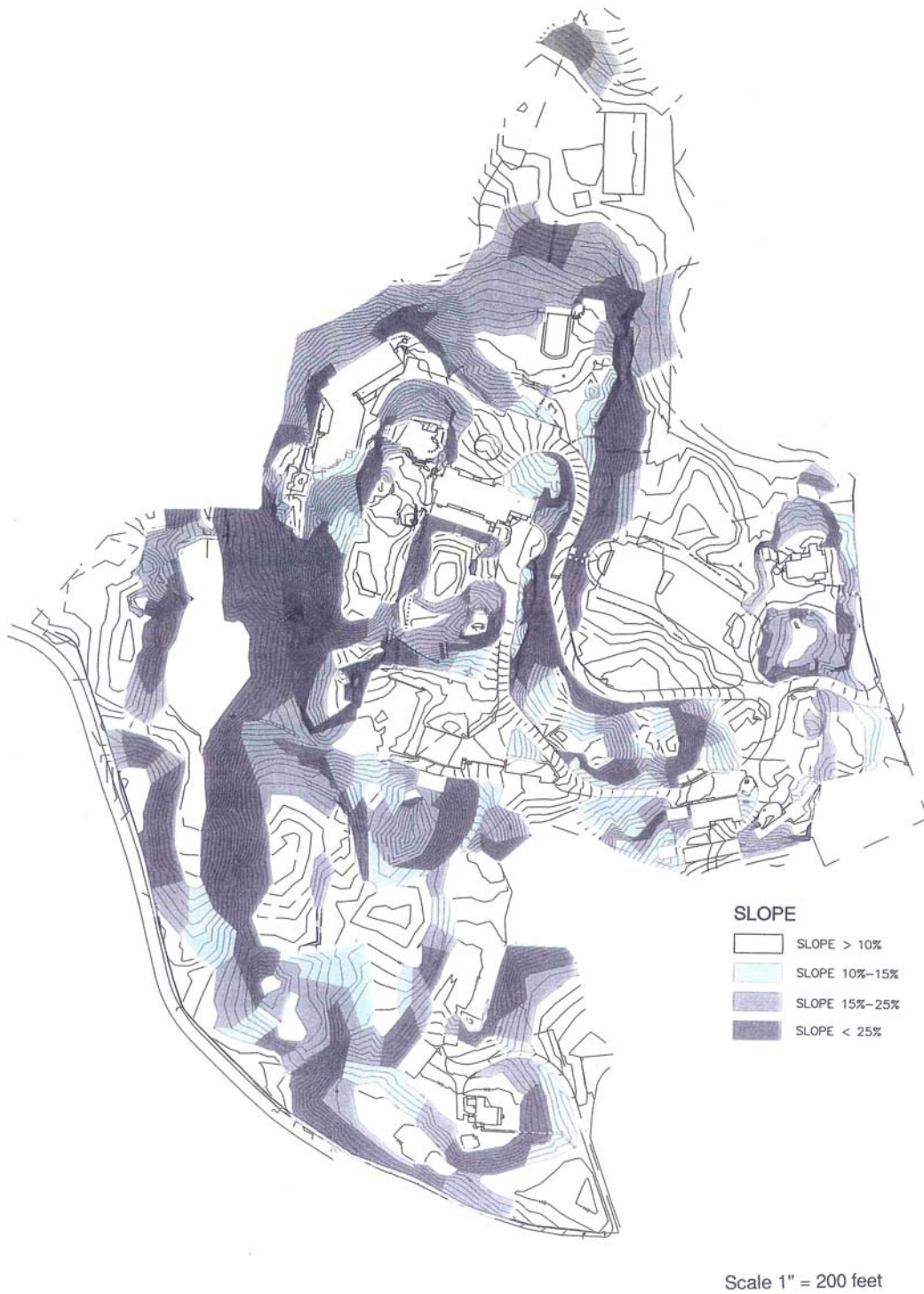
The site is characterized by generally hilly terrain which is intermittently interrupted by steep rock ledge. As illustrated in the Figure 4, a significant amount of the site is characterized by slopes greater 25%.

The property boasts a small man-made pond, gardens that were designed by Frederick Law Olmstead, exotic plants and flowers and views of the Charles River. It is served by municipal water but treats wastewater through on-site septic systems.



Figure 3 - Site Location

Figure 4 - Slope Map<sup>9</sup>



<sup>9</sup> Source: Cushing, Elizabeth H., and Richard Burck Associates, Inc. "Historic Landscape Report." March 2003.

### 2.2.b. - Existing Improvements

The site is home to several structures and other improvements, the most significant of which is the Endicott House itself, which in combination with the Brooks Center is operated by MIT as a conference facility. Table 3 contains a list of the site's existing improvements while Figure 5 illustrates their location on the site.

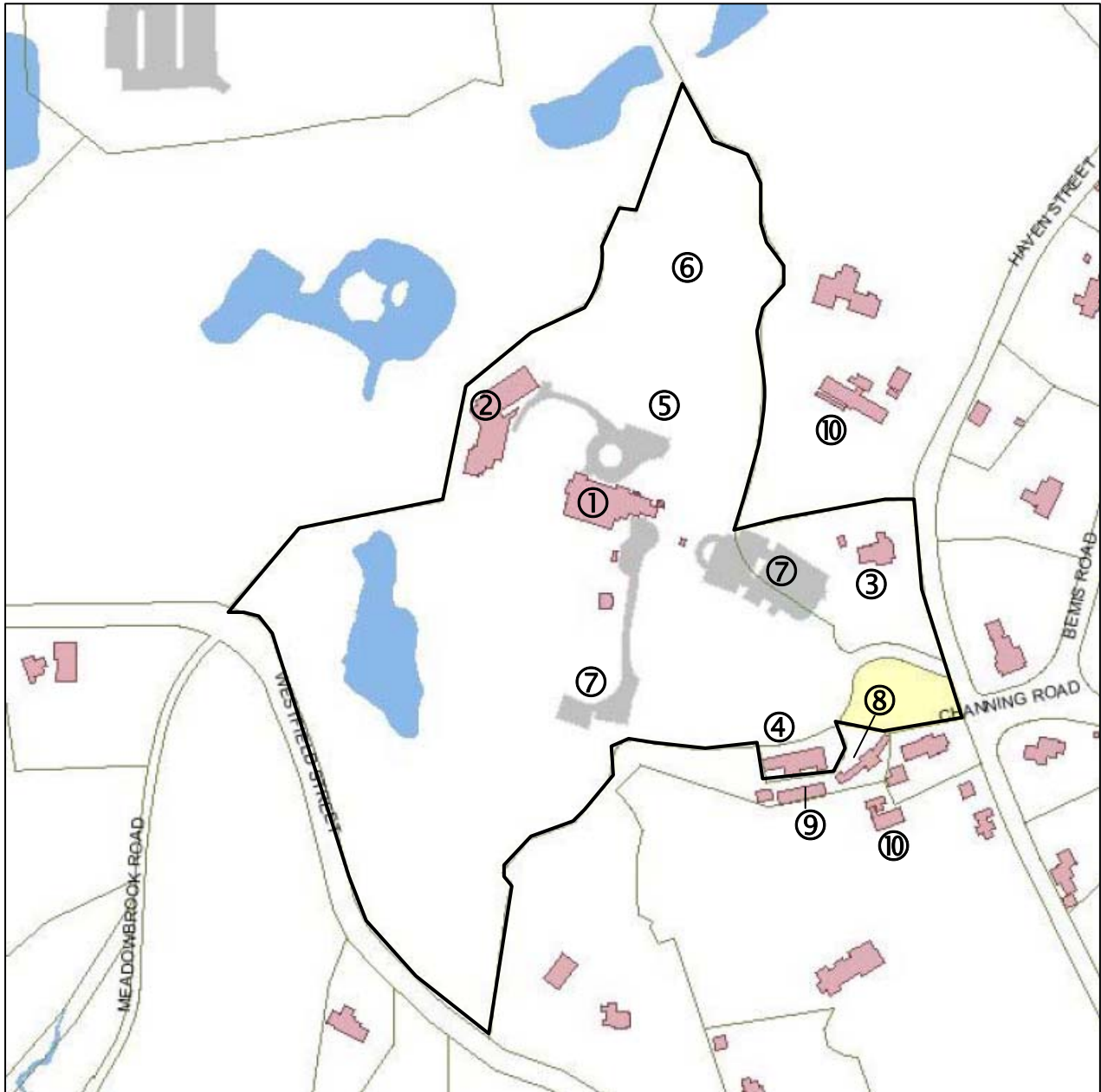


Figure 5 - Existing Improvements

**Table 3 - Existing Improvements**

	Improvement	Description
1	Endicott House	Large 4-story conference/retreat center with meeting and guest rooms, kitchen facilities and workers' quarters
2	Brooks Center	Two-story wood-frame building built in 1983. Includes conference rooms, 24 guest rooms and an exercise room.
3	Single-family Cottage	Two-story, conventional style, single-family home. Has a total of 6 bedrooms and 3 baths.
4	Large Barn/Utility Shed	Used for the storage of machinery and tractors. One side has an area formerly used as a cow milking station.
5	Pool	Small, fenced-in, in-ground pool.
6	Tennis Court	One fenced-in court
7	Parking Areas	Two separate areas including a lot just off the main entrance located below the Endicott House, and a lot in front of the same building
	Various Other Small Sheds	Used for storing tools and equipment
<i>Off-site Improvements:</i>		
8	Large Garage	According to the Town of Dedham's assessor's office, though this building is used by MIT, it is not located on property owned by the Institute. It has a small office area and equipment repair space.
9	Carriage Barn	According to the Town of Dedham's online assessor's records, though this building is used by MIT, it is not located on property owned by the Institute. It is used for the storage of machines and tools.
10	Greenhouses	Metal frame buildings which are heated during the winter. One is leased by the Institute while the other is used by MIT with the permission of the owner, the Endicott family,

### *The Endicott House*

The namesake of the property and the most significant of its structures, this primary building, which according to Dedham's records was constructed in 1920, is 3 and 4 stories with a living area of 23,272 square feet. A sub-basement at the base of the building contains an oil tank and boiler, as well as a small staff lounge. The main floor, which serves as the primary entry for guests, houses a reception area, administrative offices, laundry rooms, a recently renovated industrial kitchen, and a staff dining area. The first floor provides a combination of lounge space, meeting facilities, dining rooms and a food service/buffet area. It also serves as the access to a large patio at the rear of the building overlooking a glacial bowl, a large, grass-covered, natural depression. The second and third floors are the location of the guest accommodations, with 7 guestrooms on each floor, each with their own bathroom and closet. The fourth floor is attic space and is used for storage. The building is in excellent condition and much of the original detail is still evident.

### *The Brooks Center*

Built in 1983 in an effort to expand the conference facilities at the site, this 12,507 square foot facility is constructed with clapboard siding and contains 24 guest rooms, modern conference facilities, a small exercise room with aerobic equipment, a small staff kitchen and lounge space. The structure consists of 3 levels and features a large patio that overlooks the grounds. This building is also in excellent condition.

### *Single-family Cottage*

Located just north of the main entrance from Haven Street, the cottage is a Cape Cod-style home consisting of 2 stories, plus a finished attic and a basement. It is approximately 3,800 square feet, contains 6 bedrooms and 4 bathrooms and is sited independently on a 1.17-acre parcel. It is currently rented on a tenant-at-will basis. The researcher was not able to visit the home, but it appeared from the exterior to be in average condition.

#### *Large Barn/Utility Shed*

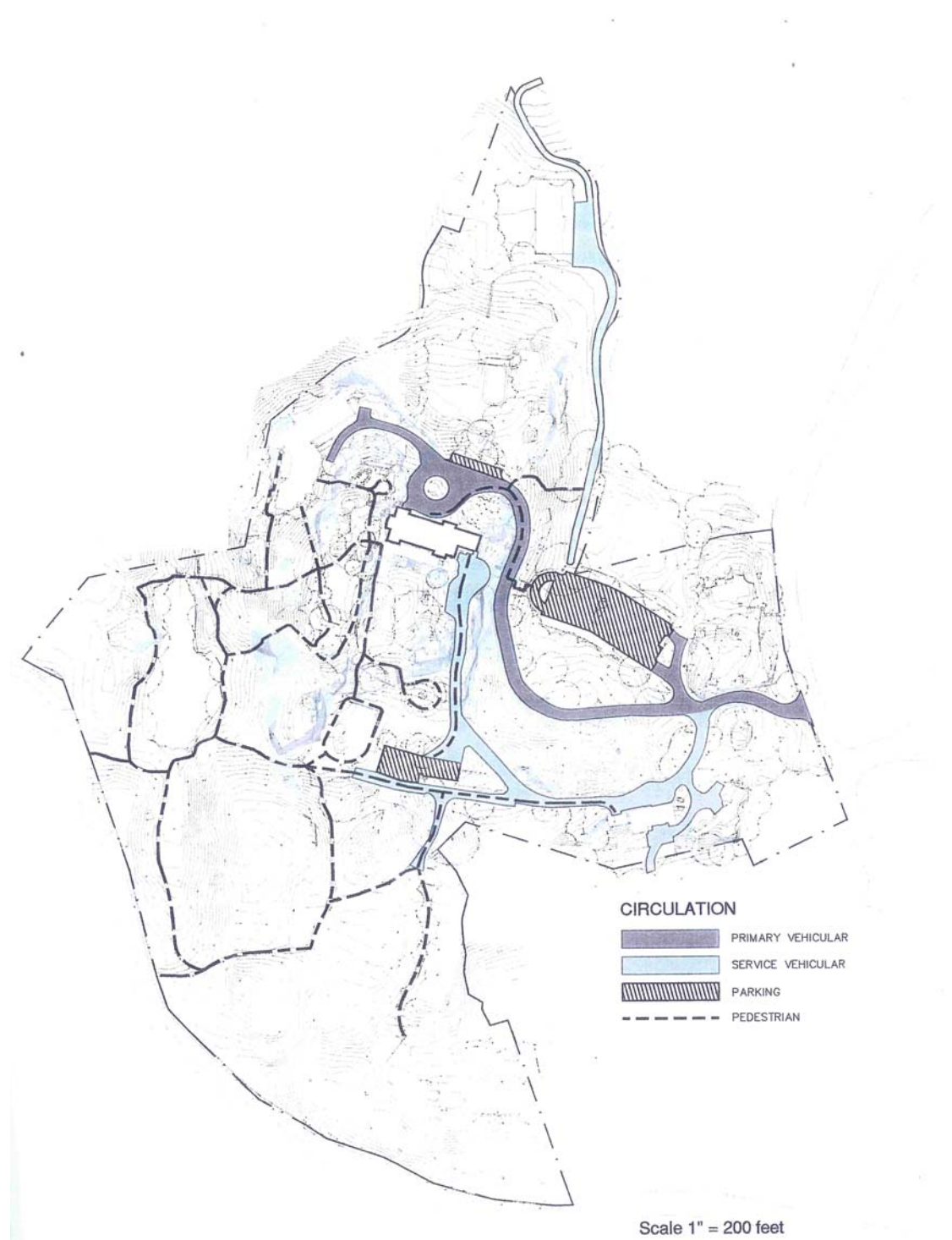
The main barn consists of 2 stories and a basement. The main level is largely garage space with a machine and tool repair area. The basement has a concrete floor and is used for storage, while the attic is unused at this time.

#### 2.2.c. - Access

Primary access to the site is provided by a 20'-wide road extending from Haven Street which terminates in front of the main building in a large circular driveway. The site is also benefited by a secondary 12'-wide easement that extends from the northern-most point of the property, crosses a lot owned by the Endicott family and adjoins Common Street, a major thoroughfare within Dedham. On-site vehicular and pedestrian circulation are also noted in Figure 6.



Figure 6 - On-site Circulation<sup>10</sup>



<sup>10</sup> Source: Cushing, Elizabeth H., and Richard Burck Associates, Inc. "Historic Landscape Report." March 2003.

#### 2.2.d. - Neighborhood Context

The subject property is located in what is known as Precinct 1, an expensive and highly desirable area in the Town of Dedham. Homes in the neighborhood are generally between 3500 and 5500 SF and are sited on 1- to 14-acre lots, with the majority on properties just over 1 acre in size.

#### 2.2.e. - Transportation

The property enjoys excellent access to transportation. Two on ramps to Interstate 95/SR 128 are located within 1.25 miles of the site. In addition, the Dedham Corporate Center and Endicott Stations along the Franklin Line of the commuter rail are located within 1.5 miles of the Endicott House grounds.

#### 2.2.f. - Zoning

The property is located in the Single Residence A (SRA) zone within the Town of Dedham. According to Town officials, this designation is Dedham's most restrictive with the exception of public open space. By right, it allows the construction of single family homes on minimum 40,000 SF lots with a maximum floor area ratio (FAR) of 0.15. A summary of the district's restrictions and allowances can be found in Table 4.

**Table 4 - Zoning Summary**

District:	Single Residence A
Minimum Lot Size:	40,000 SF
Minimum Frontage:	125 ft.
Setbacks:	Front: 25 feet Side: 10 feet Rear: 20 feet
Maximum Lot Coverage:	30%
Maximum FAR:	0.15
Height Limitations:	38 feet to pointed roof or gable, 30 feet to flat roof
Allowed Uses:	Single-family homes, orchards, farms, churches, non-profit country club, non-profit museum or library, child care facility, government administration building, greenhouses and accessory dwellings (not more than one per lot).
By Special Permit:	Hospital or convalescence home, assisted living facility, and multi-family.

## **CHAPTER 3 – SCENARIO ANALYSIS**

### ***3.1 - HIGHEST AND BEST USE ANALYSIS***

In an effort to assess the value of the Endicott House property, a highest and best use analysis was performed. Highest and Best Use can be defined as:

“The reasonably probable and legal use of vacant land or an improved property, which is physically possible, appropriately supported, financially feasible, and that results in the highest value. The four criteria the highest and best use must meet are legal permissibility, physical possibility, financial feasibility, and maximum profitability.”<sup>11</sup>

Further discussion of these four benchmarks can be found below:

*Legally permissible:* This first criterion considers the site’s zoning and what uses could potentially be allowed either by right, special permit, variance or zoning amendment.

*Physically possible:* This benchmark considers physical characteristics of the site such as topography, soils composition and infrastructure to determine what could potentially be constructed on and supported by the site.

*Financially feasible:* This criterion considers what uses could be constructed that would likely result in a total development cost that is less than the value of the completed asset.

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<sup>11</sup> American Institute of Real Estate Appraisers of the National Association of Realtors, *The dictionary of Real Estate Appraisal* (Chicago, IL, 1989).

*Maximum profitability:* This final benchmark considers what potential use would likely yield the highest return on cost.

In considering what potential uses the subject site could accommodate, the first two criteria, along with an added one (that of political viability), were used to narrow the scope of analysis to those uses which were most likely to yield the highest value. Discussion of this final criterion can be found below:

*Political Viability:* Recognizing that the development of new uses, or the adaptation of existing improvements, is often a political process and subject to public will, this benchmark considers the viability of uses in the event that public approval is required.

Using these three criteria (legal permissibility, physical possibility and political viability), the following potential uses were analyzed:

**Residential - Single-Family**

Physical:           Possible

Legal:              Allowed

Political:           Viable

The subject site falls within the Dedham Single-Family A residential zoning which calls for detached single-family homes on minimum 40,000 sf lots. The site is physically capable of supporting several lots within the restriction placed on it by the SFA zoning. Moreover, given that the site is located in the wealthiest area in Dedham, it is likely that homes in this area will command a relatively high market value.

### **Residential - Multifamily**

Physical: Possible

Legal: Special Use Permit

Political: Inviabile

Multifamily is allowed by special permit. However, given the character of the surrounding neighborhood, and based on discussions with a local city official, it is highly likely that such a project would be met with heavy opposition from the site's neighbors, the Town or both. Currently, the town's affordable housing percentage exceeds the minimum required by the Commonwealth. As such, 40B is not applicable in this case.

### **Institutional Uses**

Physical: Possible

Legal: Allowed

Political: Viable

At present, the site falls under the protection of the Massachusetts General Laws, Chapter 40A, section 3 as a non-profit educational use. Expansion or adjustment of current activities within the educational classification is allowed by right, but would be subject to review by the town planning board. In such instance, no specific restrictions on height, lot size, setbacks, etc. are imposed by the Dedham zoning bylaws; however, the plans may be reviewed for their reasonableness.

### **Corporate Training Headquarters**

Physical: Possible

Legal: Not allowed

Political: Inviably

Although this use would be largely the same as that currently active on the site, according to town officials, if the property were sold to a for-profit corporate training company or the like for use as a national or regional training headquarters it would lose the exempt status granted under Chapter 40A as mentioned above. As such, it would be addressed by the town as a conference center use, which is not allowed under the SFA zoning. The Town of Dedham does not permit use variances, consequently such use would require a 2/3rds approval by a town meeting, and therefore, has a very low probability of success.

### **Senior Housing Alternative**

Physical: Possible

Legal: Special Use Permit/Uncertain

Political: Uncertain

In the current market, many different housing types exist for older adults, aged 65 years and up. The underlying zoning contemplates both convalescence/nursing home and assisted living uses, which would be allowed only by special permit. However, no mention of independent living accommodations with minimal communal facilities or other combinations of senior housing alternatives is discussed. As such political viability and legal permissibility are questionable depending on the specific uses proposed.

### **Commercial, Retail, Industrial**

Physical: Possible

Legal: Not allowed

Political: Inviabile

The subject site is located in the town's most restrictive single-family home zoning.

Commercial, retail and industrial uses are not permitted and would require 2/3rds approval by a town meeting which is highly unlikely at this location. Such uses would likely encounter staunch opposition from both the neighborhood and the Town government.

Based on the above analysis, four of the six scenarios were considered for further examination. Financial analysis was performed on the first three to determine which would likely result in maximum profitability. The fourth was considered in order to further expound on the market opportunities that it may entail. They included:

Scenario 1 – Sell the property as is. This would include sale of the Endicott House under two separate circumstances. In both, the existing Cottage would be sold as a single-family residence on its current parcel. The first situation would entail sale of the site as a non-profit conference center. The Endicott House and other accessory uses, with the exception of the Cottage, would be sold on 18.7 acres of land. The second situation examined sale of the estate as a single-family residence. In this situation, the Brooks Center would be demolished and the Endicott House itself sold as a single-family residence on 18.7 acres.



Scenario 2 – Subdivide the property and sell the newly created residential lots. This would involve three potential scenarios of varying density. Option A, representing the maximum development alternative, would call for the demolition of the Endicott House and the Brooks Center, and would create 14 new lots in addition to the existing Cottage parcel. Option B would involve the creation of 7 new lots while the Endicott House would remain on 10.3 acres. The Cottage would again remain on its existing parcel. Option C, the final alternative considered, would involve the creation of 3 new lots along Westfield Street. The Endicott House would remain on 12 acres and the Cottage on its current lot.

Scenario 3 – Development and sale of single-family homes. This alternative would mirror the options presented under Scenario 2; however, it would also entail the construction and sale of a prototypical single-family home on the newly created lots.

Scenario 4 – Senior Living. There exists a great deal of variety in residential accommodations for seniors, ranging from full-time care convalescence homes to independent living homes on a residential campus. This scenario was explored to further discuss the market potential of several different senior housing product types.

### ***3.2 - SCENARIO 1 – SELL AS IS***

Sale of the main facilities on subject site could be accomplished in one of two ways: as a non-profit conference center, or as a residence. In either case, for the purpose of analysis, it was assumed that the Cottage would be sold separately as a single-family residence since it does not contribute to the operation of the facility as a conference center.

### 3.2.a. - Sale as Non-profit Conference Center

#### *Assumptions*

In order to remain in compliance with the underlying zoning, the sale of the site as a conference center would require that the purchasing entity be a non-profit or institutional buyer as defined in the Massachusetts General Laws, Chapter 40A. Furthermore, the facility would need to be operated in accordance with the charter of said entity. If sale of the site to a for-profit entity, such as a corporate training firm, was executed, the conference use would then lose its exempt status under Chapter 40A, would be construed by the town to be out of compliance with the SRA zoning and would not be allowed. Therefore, for the purpose of this analysis, it is assumed that a) a buyer who meets the requirements of Chapter 40A, such as a school or church, could be located, b) that said buyer would operate the facility in largely the same manner as it is currently run, and c) could afford to pay an appropriate purchase price. In addition, given that the Cottage would be sold as a separate single-family home, it is also assumed that the parking lot for the Endicott House would need to be relocated in order to remove it from the lot on which the Cottage is sited. In a previous study of the property in 2000<sup>12</sup>, \$150,000 was estimated for the relocation of said parking lot as well as for the demolition of the Brooks Center. For purpose of this analysis, a conservative estimate of \$100,000 was used for the parking lot relocation alone.

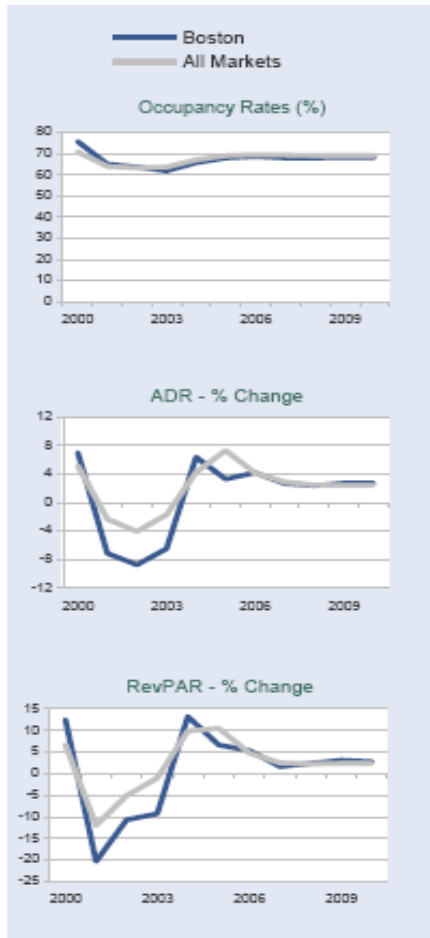
#### *Conference Center Methodology: Discounted Cash Flow Approach*

There are several ways in which the value of the conference facility could be derived. One such method would involve attempting to assess the property based on the recent sale of comparable

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<sup>12</sup> An appraisal of the property was conducted by Meredith and Grew in 2000. In this study, an assumption regarding the need to demolish the Brooks Center and relocate the primary parking lot was made. It was estimated that this effort would cost a total of \$150,000.

facilities. Unfortunately, due to the Endicott House’s unique character, comparable recent sales of similar conference centers are extremely difficult to locate. Another method involves the use of a discounted cash flow (DCF) evaluation which entails assessment of the property’s value



based on its projected cash flows over a set time horizon.

Considering that the Endicott House is an income-producing property, and that potential buyers will likely assess its value based on the revenues that it is projected to generate, the DCF method was employed.

Annual income projections through 2010 were supplied by the Institute and can be seen in Table 5. Again, due to the unique nature of the property, discount rates for this specific type of facility were not readily available. The most similar property type to that of the Endicott House is a luxury hotel, which often includes conference facilities. Fortunately, discount rates for this property type are available.

**Figure 7 - Market Trends: Boston vs. All Markets**

According to the First Quarter 2006 Korpacz Real Estate Investor Survey published by Price Waterhouse Coopers, discount rates for the luxury hotels range nationally between 8.00% and 13.00% with an average of 11.11%.<sup>13</sup> For the sake of projecting a conservative estimate of value, a 12% discount rate, slightly above the national average, was chosen. According to the same study, residual capitalization rates range between 5% and 11% with an average of 9%.

<sup>13</sup> 1Q2006 Korpacz Real Estate Investor Survey. 2006, Volume 19, No. 1, pgs. 36-40, PricewaterhouseCoopers, LLC., Ridgewood, NJ, First Quarter 2006

Based on analysis by Torto Wheaton Research and PFK Hospitality Research<sup>14</sup>, the Boston hotel market is projected to closely match the average of all other major MSA's in terms of occupancy rates, average daily rates, and revenue per available room for the next several years. For that reason, the average residual capitalization rate of 9% was used to estimate potential sale price at the end of the 4-year time horizon. In order to estimate operating results for 2011, a compound annual growth rate (CAGR) was calculated for each line item based on 2006-2010 operating projections. A 5% sales commission was also assumed for purpose of analysis.

*Conference Center Valuation Results:*

As is depicted in Table 5, using the assumptions previously discussed, the DCF analysis yields an estimated present value (as of January 1, 2007) of approximately \$4.5 million.

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<sup>14</sup> Hotel Outlook: Boston. 2005, PFK Hospitality Research and Torto Wheaton Research, Fall 2005

**Table 5 - Endicott House Financial Projections**

Endicott House Financial Statement without Debt Service or Capital Expenses

<b>Revenue</b>		<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>	<b>CAGR</b>
Internal (MIT generated)		1,057,000	1,110,835	1,167,422	1,226,901	1,289,420	1,355,109	0.050945
External		2,321,823	2,470,072	2,577,825	2,730,186	2,891,962	3,055,156	0.05643
<b>Total</b>		<b>3,378,823</b>	<b>3,580,908</b>	<b>3,745,247</b>	<b>3,957,087</b>	<b>4,181,382</b>	<b>4,410,266</b>	
<b>Expenses</b>								
Variable		FY06	FY07	FY08	FY09	FY10	FY11	
Food		551,518	579,728	610,134	642,178	675,950	711,219	0.052177
Meeting		46,222	48,587	51,135	53,821	56,651	59,607	0.052179
Tel		52,525	55,212	58,108	61,160	64,376	67,735	0.052179
Other		32,776	34,452	36,259	38,164	40,171	42,267	0.052178
Overnight staff		425,961	447,749	471,233	495,981	522,065	549,305	0.052177
Labor		838,790	881,694	927,938	976,672	1,028,035	1,081,674	0.052177
<b>Total Variable</b>		<b>1,947,792</b>	<b>2,047,422</b>	<b>2,154,807</b>	<b>2,267,976</b>	<b>2,387,248</b>	<b>2,511,807</b>	
<b>Overhead Expenses</b>								
Admin Staff + EB		516,979	534,039	551,663	569,867	588,673	608,099	0.033
Admin Expenses		100,752	103,774	106,887	110,094	113,397	116,799	0.029999
Utilities		198,063	217,869	239,656	263,621	289,983	318,981	0.099999
Facilities (maint)		162,024	166,885	171,891	177,048	182,360	187,831	0.030001
Grounds (immediate) 75%		163,556	168,463	173,517	178,722	184,084	189,607	0.03
Grounds (extended) 25%		53,059	54,651	56,290	57,979	59,718	61,509	0.029998
Negative GIB		31,000	31,000	31,000	31,000	31,000	31,000	0
<b>Total Overhead Expenses</b>		<b>1,225,433</b>	<b>1,276,681</b>	<b>1,330,904</b>	<b>1,388,331</b>	<b>1,449,215</b>	<b>1,513,826</b>	
<b>Total Expenses</b>		<b>3,173,225</b>	<b>3,324,103</b>	<b>3,485,711</b>	<b>3,656,307</b>	<b>3,836,463</b>	<b>4,025,633</b>	
Residual Sale						4,273,693		
<b>Operating Result</b>		<b>205,598</b>	<b>256,805</b>	<b>259,536</b>	<b>300,780</b>	<b>4,618,612</b>	<b>384,632</b>	
Present Value			\$229,290	\$231,729	\$268,554	\$4,123,761		
NPV (as of Jan 01, 2007):		<b>\$4,853,333</b>						
Less Commissions		\$242,667						
Less Pkg. Lot Relocation		\$100,000						
<b>Total Projected Sales Value:</b>		<b>\$4,510,667</b>						

*Cottage Methodology: Sales Comparison Approach*

Value of the cottage located on site was derived by assuming that it would be sold separately as a single-family home. The subject home is a Cape Cod-style, 2-story residence with a basement and finished attic. It contains 6 bedrooms and 4 bathrooms within its 3,804 SF living area and is sited on 1.17 acres. In order to assess its likely sale price, seven comparable home sales in Dedham over the last two years were considered. A summary of these can be found in Table 6.

986 High Street

Located less than one quarter mile from the subject site, this 1902 Colonial Revival-style home contains 5 bedrooms and 3.5 baths within 5,310 SF of living space. It is sited on 1.81 acres and sold in January of 2006 for \$1.8 million.

19 Wampatuck Road

Sited on 0.74 acres, this 2,952 SF home contains 4 bedrooms and 2.5 baths. It was constructed around 1800 and sits less than one-third of a mile from the subject site. It sold in August of 2005 for \$1,010,000.

94 Village Avenue

This 3,844-SF, Colonial-style home sold in July of 2005 for \$1.24 million. It contains 4 bedrooms and 3.5 baths and is located a little over one half mile from the subject site.

443 Westfield Street

This 5,400-SF home is located approximately three quarters of mile from the subject site and is sited on 5.89 acres. It contains 5 bedrooms, 4 baths and 2 half-baths. It was constructed in 2004 and sold in February of 2005 for \$2,125,000.

#### 215 Country Club Road

Sold in August of 2004 for \$2,108,500, this Colonial-style home contains 5 bedrooms and 4.5 bathrooms. It has 4,400 SF of living are and sits on 12 acres of land. It is located 1.4 miles from the subject site.

#### 50 Old River Place

This Antique-style, 4,011-SF home contains 4 bedrooms and 2.5 baths. It is sited on 0.76 acres and sold in July of 2004 for \$1,112,000. It is located slightly less than 1 mile from the subject site in the heart of Dedham.

#### 915 High Street

Built in the Federal Colonial style, this 5-bedroom, 4.5-bath home sold in July of 2004 for \$1,425,000. It has a living area of just under 4,800 SF, sits on 0.8 acres and is located approximately 1/5 miles from the subject site.

**Table 6 - Cottage Comparable Home Sales**

No.	Address	Sale Date	Sale Price	Bldg. Area (SF)	Land Area (acres)
1	986 High Street Dedham	1/17/2006	\$ 1,800,000	5310	1.82
2	19 Wampatuck Road Dedham	8/19/2005	1,010,000	2952	0.75
3	94 Village Avenue Dedham	7/27/2005	1,240,000	3844	0.34
4	443 Westfield St. Dedham	2/18/2005	2,125,000	5400	5.89
5	215 Country Club Road Dedham	8/25/2004	2,018,500	4400	12.02
6	50 Old River Place Dedham	7/28/2004	1,112,000	4011	0.76
7	915 High Street Dedham	7/12/2004	1,425,000	4792	0.80

*Cottage Valuation Results:*

Of the comparable homes analyzed, 986 High Street is the most similar to the Cottage in terms of year constructed, lot size, number of bedrooms and bathrooms, and location. It is approximately 18 years older than the subject home, contains 1 less bedroom and slightly fewer baths; however, it also contains 1,500 more square feet of living space and a lot just over ½ acre larger than that of the Cottage. Moreover, the sale of this home occurred this year, giving a high degree of confidence in its ability to predict current prices in Dedham. As such, it is believed that the Cottage could command a similar sales price in the range of \$1.5-1.7 million.

In order to supplement the above conclusion, and to attempt to rigorously predict the sale price of the cottage, a regression analysis was run on the comparable properties listed above.

Microsoft Excel 2003 Data Analysis Toolpack software was used to execute the regression. The analysis compared the relationship of sale price to five variables including Sale Year, Bldg. Area



(SF), Land Area (SF), Number of Bedrooms and Number of Baths in an effort to determine which were most strongly correlated to sales price.

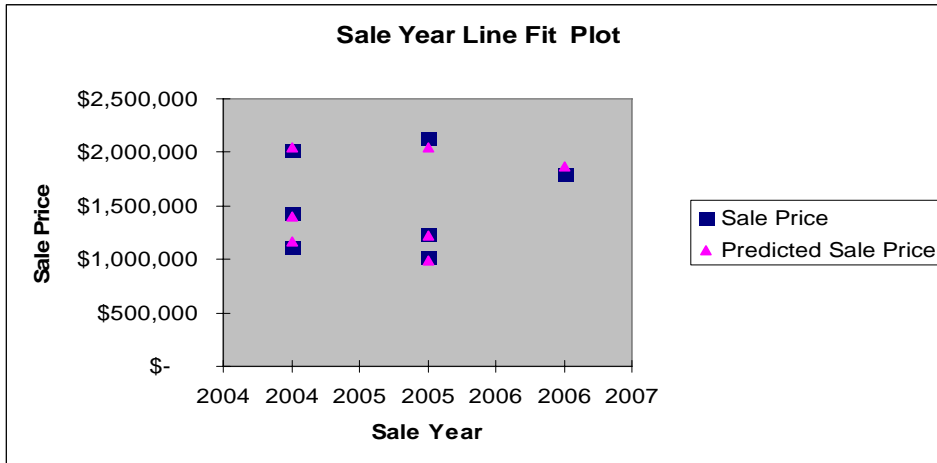
The results of the analysis found all variables to be significant (t scores of  $> \pm 2$ ) with a confidence level of 95% with the exception of Number of Bedrooms and Number of Bathrooms. When a sixth variable, Building Age (calculated by subtracting the year in which the home was constructed from the present year), was added, the regression analysis failed, yielding an R squared score of 1 and a standard error of 0 suggesting some auto-correlation of the variables. However, when the original regression analysis was run again, excluding the Building Age variable and the two aforementioned insignificant variables, the following formula was derived:

$$\alpha = -243,854,976 + (121,659 * \text{Sales Year}) + (292 * \text{Building Area}) + (1.56 \text{ Land Area})$$

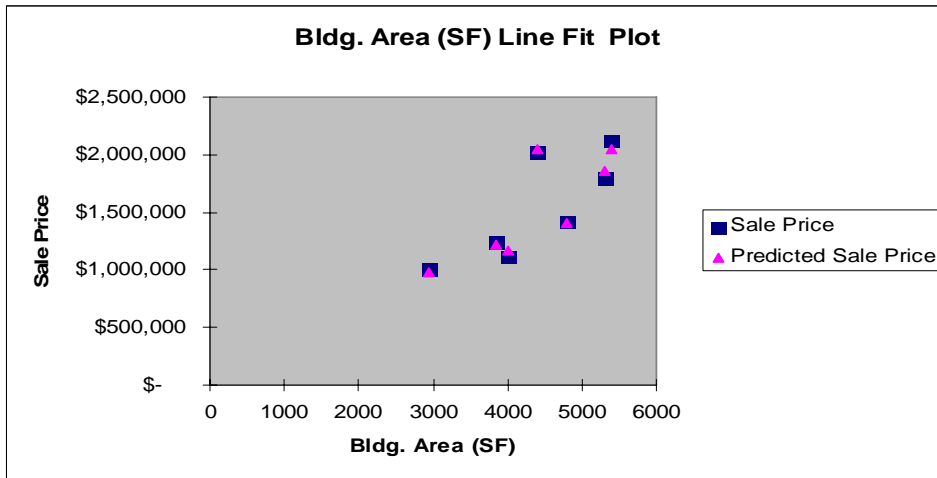
As can be seen from Figures 8-10, the sales prices predicted by this equation for each of the above observations closely matched actual sales prices, suggesting a certain degree of accuracy. However, it should be noted that due to the small sample size, biases in the data set may be present and could not be controlled for. As such, the regression equation above was used only to supplement the findings of other estimation techniques.

When the specifications of the Cottage were input into the formula, the result was a predicted sales price in 2007 of approximately \$1.5 million, which is in keeping with that predicted above.

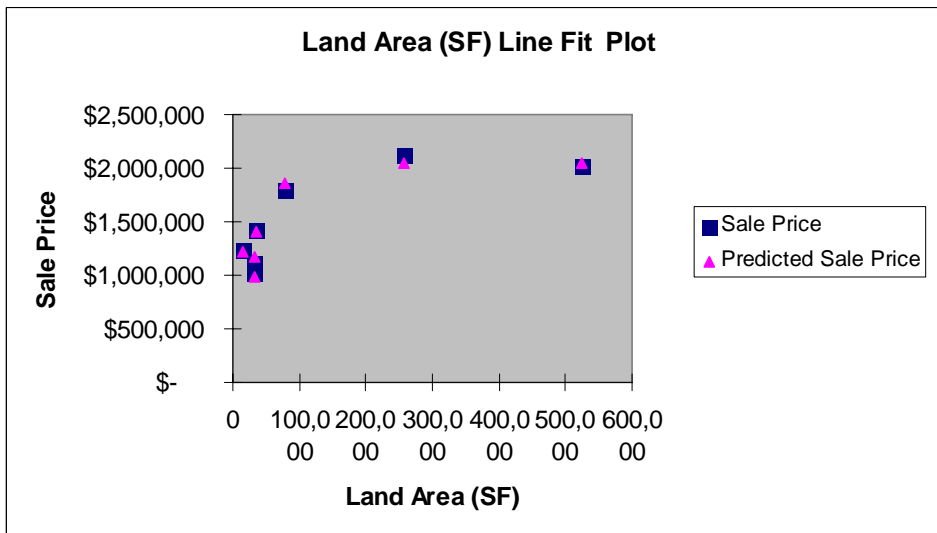
**Figure 8 - Sale Year Line Fit Plot**



**Figure 9 - Building Area Line Fit Plot**



**Figure 10 - Land Area Line Fit Plot**



*Conclusions:*

Based on the above analysis, the total predicted sales price of the subject property as a conference center and a separate single-family home would be approximately \$6.1 million with the conference center commanding \$4.5 million and the Cottage selling for an estimated \$1.6 million.

3.2.b. - Sale as a Single-family Home

*Assumptions:*

In the case of sale of the Endicott House as a single-family home, for the purpose of analysis, it was assumed that a market for homes of this size exists. In addition, it was assumed that costs would be incurred, not only for the relocation of the parking lot as discussed previously, but also for the demolition of the Brooks Center. In the aforementioned study by Meredith and Grew a figure of \$150,000 was allotted for this purpose. In an attempt to adjust this expense to reflect increases in costs over the past 6 years, a conservative estimate of \$180,000 was used, an increase of 20% over the previous estimate.

*Methodology:*

As it was the case with the Endicott House as a conference center, it also the case that as a single-family home the property is unique. With over 23,000 SF of living area and 18.7 acres of land, the Endicott House is unlike any other property recently sold in the area. As such, comparable sales for such a home were not readily available making that approach to assessing value impossible. However, two other approaches were used for the purpose of analysis in an attempt to estimate the potential sales price of the Endicott House as a residence.

The first method involved utilizing the aforementioned regression analysis. By inputting the home's specifications into the formula derived above, a potential 2007 sales price of \$8,369,000 was generated. The second method attempted to assess the property's value by considering the ratio of assessed value to actual price. According to The Warren Group, a real estate and financial services information provider based in New England, the ratio of single-family house sale price to assessed value in Dedham was 1.2:1<sup>15</sup> for the last full year. In other words, on average actual home sales prices were 120% higher than the assessed value. According to town records, the Endicott House and its accessory buildings have an assessed value of \$4,082,400, while the surrounding land has a combined value of 3,104,300 for a total assessed value of \$7,186,700. Applying the ratio above generates an estimated sale price of \$8,624,040, a difference of \$255,040 from that produced by the regression analysis.

*Conclusion:*

Given that the two estimates of the value of the sale of the Endicott House as a residence are relatively similar, it was thought that they represent an accurate estimate as to the potential actual sales price. Greater weight was given to the value ascribed using the ratio of sales price to assessed value. When the value of the Cottage as derived above was added to this, and the estimate for demolition of the Brooks Center and relocation of the parking lot was subtracted, the total value of the Endicott House property when sold as a residence is estimated at approximately \$10 million.

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<sup>15</sup> Community Profiles - Comparison Report: Dedham v. Canton. 2005, Accessed: 23 July 2006, The Warren Group, [http://ers.thewarrengroup.com/CommunityProfile/core/sc\\_compare.asp](http://ers.thewarrengroup.com/CommunityProfile/core/sc_compare.asp)

### ***3.3 - Scenario 2 – Subdivide and Sell Vacant Lots***

The second scenario considered for purposes of valuation of the subject property involved its partial or total subdivision into vacant, residential lots which would then be sold. Three scenarios were designed to represent a spectrum of potential development densities ranging from the maximum development allowed under current zoning, to a minimally invasive development option that would preserve as much of the existing site as possible. They included:

Option A – This scenario involved the subdivision of the property into the maximum number of allowable lots. This would involve the demolition of existing facilities and the creation of a new residential lane. Fourteen new 1-acre, residential lots would be created.

Option B – This alternative represents a potential development of less density. It involved the creation of 7 new lots, each approximately 1 acre in size, the preservation of the Cottage on its existing parcel and the retention of the Endicott House and adjunct facilities on 10.3 acres.

Option C – Representing a minimum development alternative, this scenario calls for the creation of only 3 new lots while the Cottage is kept on its current parcel and the Endicott House and its accessory buildings remain on approximately 12 acres.<sup>16</sup>

The maximum development alternative explored the possibility of removing virtually all existing structures from the site, whereas the minimum development alternative was designed to maintain

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<sup>16</sup> The previous property assessment conducted by Meredith and Grew in 2000 included this scenario and found it to be the highest and best use. As such, it was included here for purposes of comparison.

the integrity of the existing facilities and grounds. Option B was intended as a blending of the two, representing a moderate level of development that also maintained significant acreage around the Endicott House itself and its accessory uses.

In an effort to estimate sales price of the newly created lots, five comparable land sales over the last two years in Dedham were considered. All five lots were permitted for single-family home construction prior to sale and are discussed in greater detail below:

#### 0 Sprague Street

This parcel of vacant land is located almost 2.5 miles southeast of the subject property on the opposite side of Dedham. It is the most recent of the five comparable transactions having been completed in January of the present year. It is located adjacent to 250 Sprague Street and is the second smallest of the five lots considered.

#### 62 Greensboro Road

Located slightly less than 3 miles southeast of the subject site, this vacant property sold in December of 2005 for \$172,000, or approximately \$480,000/acre.

#### 17 Warren Road

This 2.74-acre site is located just less than 1 mile northwest of the subject site off Common Street. Given its location within Precinct 1 and its relatively recent sale date, it is thought that this comparable sale most accurately reflects prices for single-family home lots of similar size. It is the largest of the lots considered.

#### 24 Oak Street

This 7,000 SF lot is located just over 1.5 miles east of the subject site near the center of Dedham.

It is the smallest of the lots considered

#### 74 Country Club Road

This vacant lot is located approximately 1 mile west of the subject property. Given its size and location within Precinct 1, this comparable sale is thought to most accurately reflect prices for lots close to 1 acre in size.

For convenience, Table 7 summarizes the above-listed properties. It can be noted from this summary that lot size and price/square foot have an inverse relationship. In other words, as lot size increases, price per square foot of land decreases.

**Table 7 - Vacant Land Sale Comparables**

No.	Address	Sale Date	Sale Price	Sale Year	Land Area (acres)	Land Area (SF)	\$/SF of Land
1	0 Sprague Street Dedham	1/30/2006	160,000	2006	0.23	10,054	\$ 15.91
2	62 Greensboro Road Dedham	12/19/2005	\$172,000	2005	0.36	15,569	\$ 11.05
3	17 Warren Road Dedham	10/21/2005	625,000	2005	2.74	119,156	\$ 5.25
4	24 Oak Street Dedham	4/5/2005	180,000	2005	0.16	7000	\$ 25.71
5	74 Country Club Road Dedham	9/11/2004	300,000	2004	1.13	49156	\$ 6.10

Estimates for construction of necessary infrastructure were derived with the assistance of a housing developer with over 25 years of experience and specializing in residential subdivisions and master plan communities. Projections were based on actual costs incurred by residential projects similar to those proposed in this study. They were then adjusted for regional differences using data provided by RS Means, a leading supplier of construction cost information in North America.<sup>17</sup> Demolition expenses and cost categories were based on the aforementioned 2000 Meredith and Grew study. Quantities used in estimating total costs were developed based on the site plans used in each of the scenarios.

Due to a lack of availability of projections of construction price increases, the Consumer Price Index (CPI) was used to account for a generally recognized upward trend. In order to estimate these increases, annual percentage changes in CPI since 1999 were obtained from the U.S.

<sup>17</sup> "RS Means Quickcost Estimator." Reed Business Information, 2006.  
<<http://www.rsmeans.com/calculator/index.asp>>.



Department of Labor's Consumer Price Index webpage.<sup>18</sup> An average compound annual growth rate of 8.24% was calculated based on these records and then applied to overall construction costs. Ten percent of direct costs was assumed for general and administrative expenses incurred by a developer or contractor and 15% of gross sales was included for developer's profit. Finally 5% of sales was assumed for commissions and fees.

An architect based in the Boston area was retained to generate the basic site designs found in Options A and B. He also reviewed Option C to ensure that it could feasibly be developed within the same constraints. All three options considered were designed or found to be in conformance with the restrictions of the underlying SFA zoning.

### 3.3.a. - Option A – Maximum Density

#### *Assumptions:*

Option A calls for the creation of 15 new residential lots, each approximately 1 acre in size, as depicted in Figure 11. As such, it necessitates the demolition of the Endicott House itself, the Brooks Center and the facility's parking lots. This option also requires the creation of a new residential lane extending from Westfield Street to serve four of the new lots. It is assumed that the existing driveway would be improved to meet the standards of a residential street and would serve five lots. The Cottage would be retained on its existing parcel, while the pool and tennis court would remain for the benefit of one of the newly created lots.

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<sup>18</sup> "Consumer Price Index Summary." U.S. Department of Labor. 19 July 2006 Division of Consumer Prices and Price Indexes. <<http://www.bls.gov/news.release/cpi.toc.htm>>.

Based on conversations with local brokers, a 6-month marketing period was anticipated for an individual lot. However, given the number of lots, one full year was allotted for sale of all the newly created parcels as well as the Endicott House and the Cottage. In addition, information

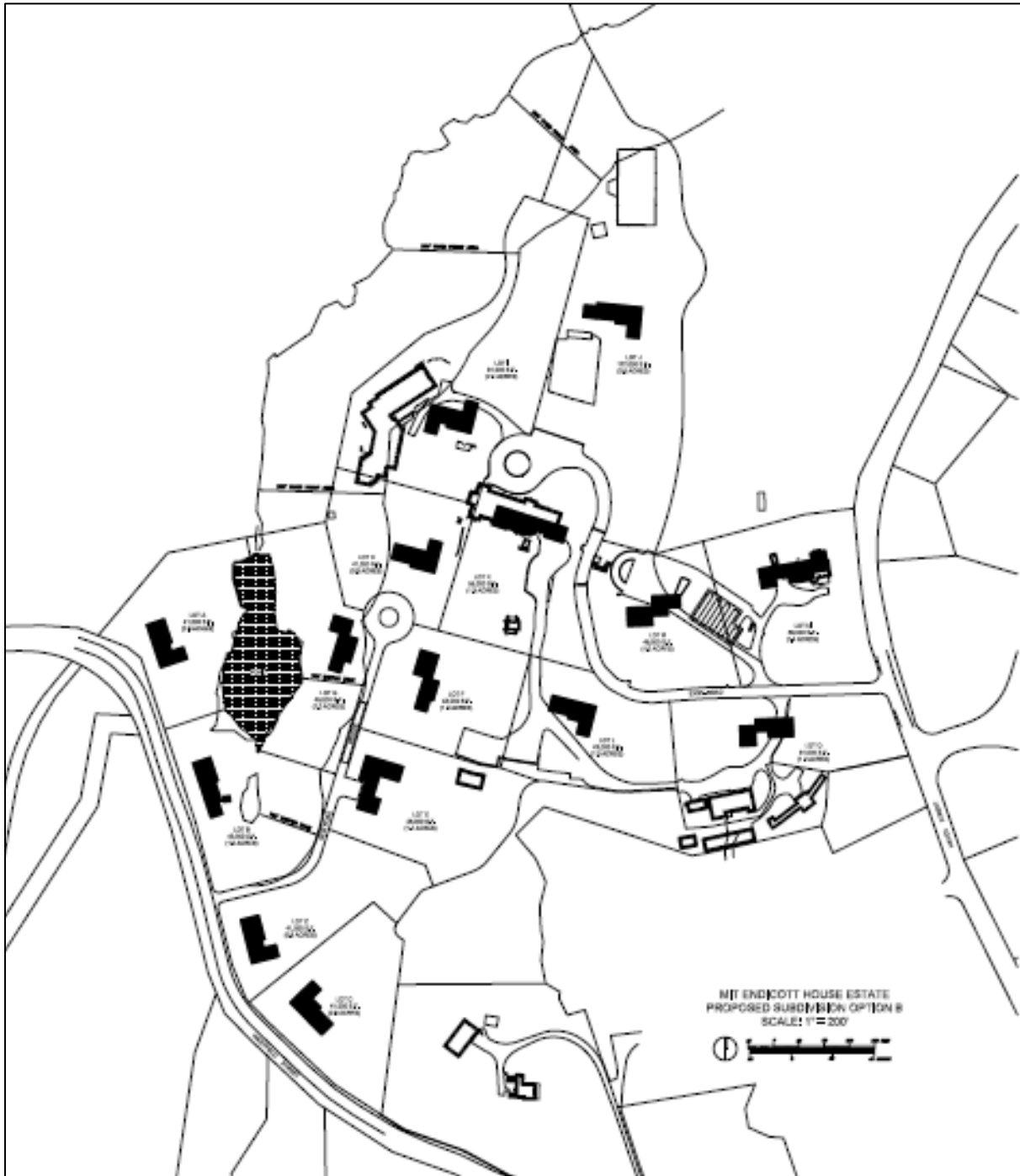


Figure 11 - Option A Site Plan

provided by the Town of Dedham indicates that a subdivision of this size would require between 4.5 and 8 months to gain approval and another 3-4 months to obtain the necessary permits. For purposes of this analysis, 1 year was allotted to gain all required approvals and permits. In addition, it was assumed that construction of necessary infrastructure would take between 4 and 6 months. As such, a total development time of 2.5 years was estimated for completion of the project.

*Methodology:*

As mentioned previously in the description of the comparable properties, that of 74 Country Club Road appeared to be the best indicator of sale price for lots approximately 1 acre in size. According to Zillow.com, an online real estate information provider that tracks real estate trends across the country, the annual appreciation of real estate in Dedham from 2004-2005 was 1.5%, while real estate from June of 2005 to the present time (July of 2006) has depreciated 3.7%<sup>19</sup>. When these annualized appreciation/depreciation figures were applied to the sale price of 74 Country Club Road as is depicted in Table 8, a current estimated value for vacant lots of similar size of \$294,756 was derived. Based on current market conditions, it is thought for purposes of this analysis that this number is a reasonable estimate of value at the completion of the project 2.5 years in the future. Once developer's profit and commissions and fees were factored, the result was a total estimated sales value for 15 lots of \$3,537,000.

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<sup>19</sup> "Zillow.com - Dedham Real Estate - Real Estate Valuation for Dedham, MA." Zillow, Inc. 2006. <<http://www.zillow.com/local/Massachusetts/Norfolk/Dedham>>.

**Table 8 - Adjusted Value for 74 Country Club Road**

2004 Sale Price	2004-2005 Appreciation	Estimated 2005 Value	2005-2006 Depreciation	Estimated 2006 Value
\$300,000	1.50%	\$ 304,500	-3.20%	\$ 294,756

As depicted in Table 9, the total cost for development of necessary infrastructure was estimated at approximately \$660,000. Soft costs including town fees, studies, architectural, legal and engineering services and other related expenses were estimated at 20% of direct costs. The demolition of the Brooks Center and the facility's parking areas was estimated at \$180,000. Removal of the Endicott House was estimated at \$100,000.

**Table 9 - Option A Estimated Development Costs**

<b>Infrastructure</b>	Unit Cost	Unit	Total
Asphalt Paving	\$1.85	SF	\$54,945.00
Curb & Gutter (6", Type H)	9.50	LF	31,350
Storm Manholes	2,700.00	EA	13,500
Utilities (underground; Gas, Telephone, Electricity, Cable)	60.00	LF	99,000
Utilities (services)	4.50	LF	7,425
Survey Monuments	315.00	EA	2,835
Street Signs	350.00	EA	1,400
Street Lights	3,000.00	EA	21,000
Sidewalks (6" base, 2" pvg.)	N/A		0
Water Main (12")	32.00	LF	52,800
Storm Drainage (18" R.C.P.)	45.00	LF	218,250
Hydrants	2,500.00	EA	5,000
Sewer Main (8" PVC)	30.00	LF	151,500
		Infrastructure Subtotal:	\$659,005.00
		Soft Costs (% of Direct):	0
		Total Soft Costs:	131,801
		<b>Total Lot Creation Cost</b>	<b>\$790,806</b>
<b>Demolition</b>	Est. Cost	Unit	
Mansion			100,000
Brooks & Pkg. Lot Removal			150,000
Contingency			20%
		Total Demolition:	<b>\$300,000</b>
<b>Miscellaneous</b>	Est. Cost	Unit	
G & A	10%	Dir. Costs	95,901
		Total Miscellaneous:	<b>\$95,901</b>
		Subtotal:	\$1,187,000
		Regional Multiplier:	1.1043
		2006 Development Cost:	\$1,311,000
		Annual Growth Factor:	1.08
		Development Time (years):	2.5
		<b>Total Development Cost:</b>	<b>\$1,598,000</b>

*Conclusions:*

When the resulting total development cost of \$1,598,000 is compared with the total estimated sale value of the newly created lots, the projected revenue for this scenario is \$1,939,000 around June 1, 2009.

3.3.b - Option B – Medium Density

*Assumptions:*

This second option calls for the creation of 7 vacant, 1-acre, residential lots as depicted in the figure below. The Endicott House would be retained on 10.3 acres along with most accessory uses and the Cottage would remain on its current parcel. No new roads would need to be constructed, though a driveway serving a single lot would extend 312 feet from Westfield Street, and the current driveway serving the facility would need to be upgraded to a residential lane in order to service the existing cottage and 2 new lots. As in Option A, the same review process would be required. As such, the same total development and sell-out time of 2.5 years was estimated for this alternative.

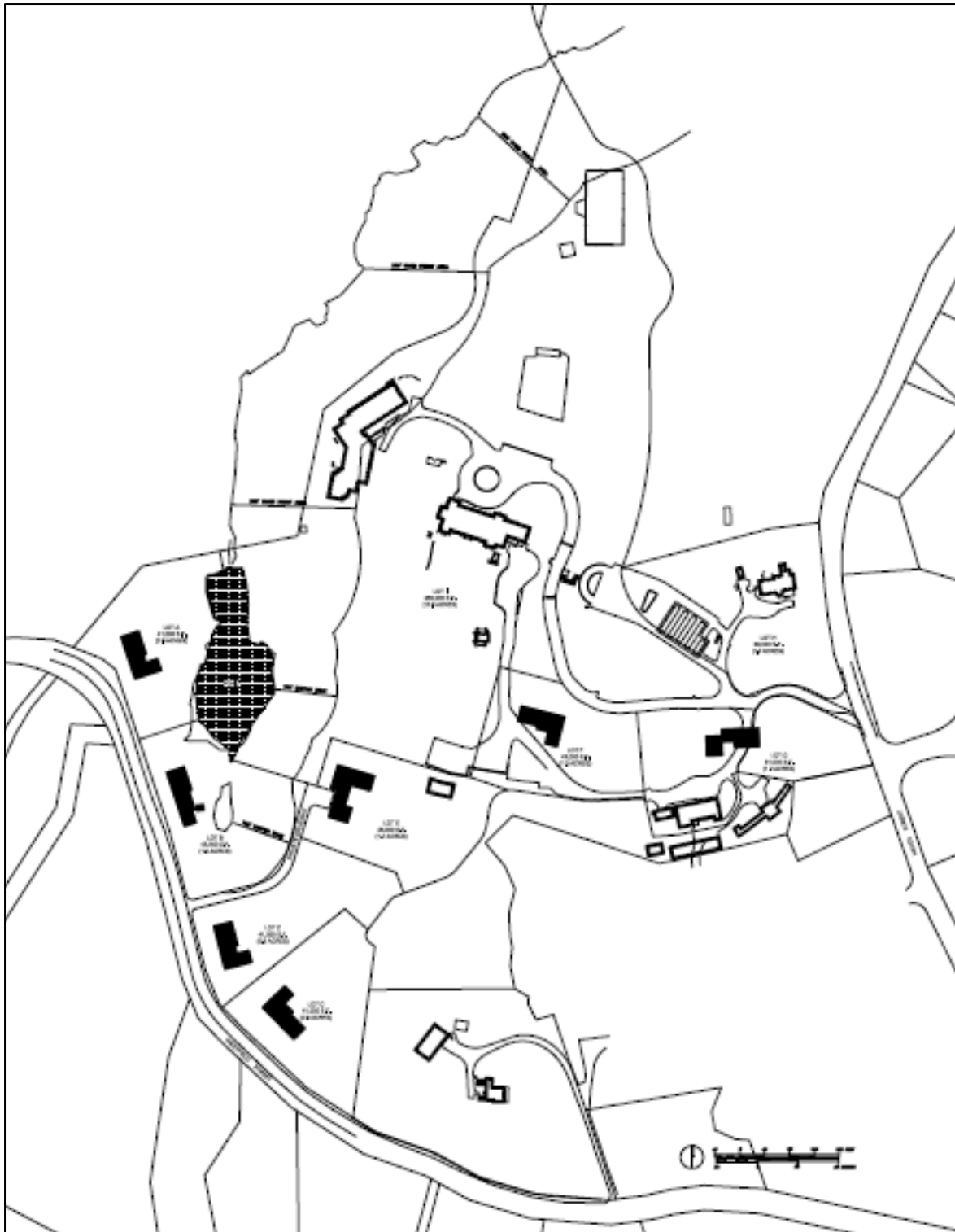


Figure 12 - Option B Site Plan

*Methodology:*

As in Option A, the most appropriate comparable sale given the location and size of the parcel was 74 Country Club Road. Based on the adjusted estimate provided in the above analysis, the estimated sales value of seven one-acre lots would be \$2,063,292.

Sale of the Endicott House with 10.3 acres could again be accomplished as either a residence or a conference center. If sold as a conference center, there is no way to discern exactly what the impact of the subdivision and sale of a portion of the property would be. Given that the site plan is laid out in an effort to retain current views from the main facilities and to maximize their privacy, it is not believed that operational revenues will suffer from subdivision of the land. Since the value of the conference center is derived by discounting project cash flows from operations, it is not believed that a significant portion of its value would be lost. However, in an effort to provide a conservative estimate, \$200,000 of the original projected sales price was deducted resulting in a value of approximately \$4.3 million.

In order to assess the value of the Endicott House if it were sold as a residence, the same techniques and assumptions employed in Scenario 1 were used. When applying the formula supplied by the regression analysis, and adjusting the land area to reflect the 10.3-acre parcel, a total projected sales value of \$7,799,000 is derived. The second method involved the application of the ratio of assessed value to actual sales price as supplied by The Warren Group.<sup>20</sup> In order to arrive at an assessed value for land, it was first determined that 10.3 acres was approximately

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<sup>20</sup> "Community Profiles - Comparison Report: Dedham v. Canton." The Warren Group. 2005. The Warren Group, Claritas. <[http://rers.thewarrengroup.com/CommunityProfile/core/sc\\_compare.asp](http://rers.thewarrengroup.com/CommunityProfile/core/sc_compare.asp)>.



55% of the total land area for the subject property excluding the Cottage site. This percentage was then applied to the total assessed land value to generate an estimated assessed value of approximately \$1,707,000 for 10.3 acres. When this was combined with the assessed building value of \$4,082,400, and the aforementioned ratio was applied, the result was a total projected residential sale value of \$6,948,000.

It should be noted that when these two techniques were applied, a discrepancy of approximately \$850,000 emerged. To address this, a current residential value of \$7.2 million was projected, reflecting the greater influence of the assessed value to sales price ratio method over the regression equation method. When adjusted to account for time until ultimate sale, the final value was assessed at \$8,435,000.

Finally, the adjusted sales value of the Cottage at \$1,875,000 was incorporated. The result is a projected total property sales value of \$8,238,000 if the Endicott House were sold as a conference center or \$12,373,000 if sold as a single-family residence.

As depicted in Table 10, total infrastructure costs were estimated at approximately \$564,000. A 20% contingency for soft costs was again incorporated. Demolition costs were calculated based on the sale of the Endicott House as both a single-family residence and as a conference center. In the case of the former, both the Brooks Center and the parking lots would require demolition. As before, a total demolition cost of \$180,000 was applied for this purpose. The result was a total development cost of \$1,253,000. In the case of the latter, the primary parking lot would only need

**Table 10 - Option B Estimated Development Costs**

<b>Infrastructure</b>	Unit Cost	Unit	Total
Asphalt Paving	\$1.85	SF	\$40,293
Curb & Gutter (6", Type H)	9.50	LF	23,978
Storm Manholes	2,700.00	EA	10,800
Utilities (underground; Gas, Telephone, Electricity, Cable)	60.00	LF	75,720
Utilities (services)	4.50	LF	5,679
Survey Monuments	315.00	EA	2,205
Street Signs	350.00	EA	1,400
Street Lights	3,000.00	EA	18,000
Sidewalks (6" base, 2" pvg.)	N/A		-
Water Main (12")	32.00	LF	40,384
Storm Drainage (18" R.C.P.)	45.00	LF	200,790
Hydrants	2,500.00	EA	5,000
Sewer Main (8" PVC)	30.00	LF	139,860
	Infrastructure Subtotal:		<b>\$564,109</b>
	Soft Costs (% of Direct):		20%
	Total Soft Costs:		112,822
	Total Lot Creation Cost:		<b>\$676,931</b>
<b>Demolition</b>	Est. Cost	Unit	
*Pkg. Lot Relocation (Conference Center Only)			100,000
Brooks & Pkg. Lot Removal			150,000
Contingency			20%
	Total Demolition:		<b>\$180,000</b>
<b>Miscellaneous</b>	Est. Cost	Unit	
G & A	10%	Dir. Costs	74,411
	Total Miscellaneous:		<b>\$74,411</b>
	Subtotal:		\$931,342
	Regional Multiplier:		1.1043
	2006 Development Cost:		\$1,028,000
	Annual Growth Factor:		1.08
	Development Time (years):		2.5
	<b>Total Development Cost:</b>		<b>\$1,253,000</b>

to be relocated. As in Scenario 1, \$100,000 was estimated to account for this possibility. The total development cost in the event that the Endicott House was sold as a conference center was \$1,135,000.

*Conclusions:*

As was the conclusion in Scenario 1, it appears that sale of the Endicott House as a single-family residence is likely to generate the highest value for the subject property. After total development costs under this alternative, developer's profit, and commissions and fees are deducted from anticipated sales revenues of \$12,373,000, a profit of approximately \$9.9 million dollars remains.

### 3.3.c. - Option C – Minimum Density

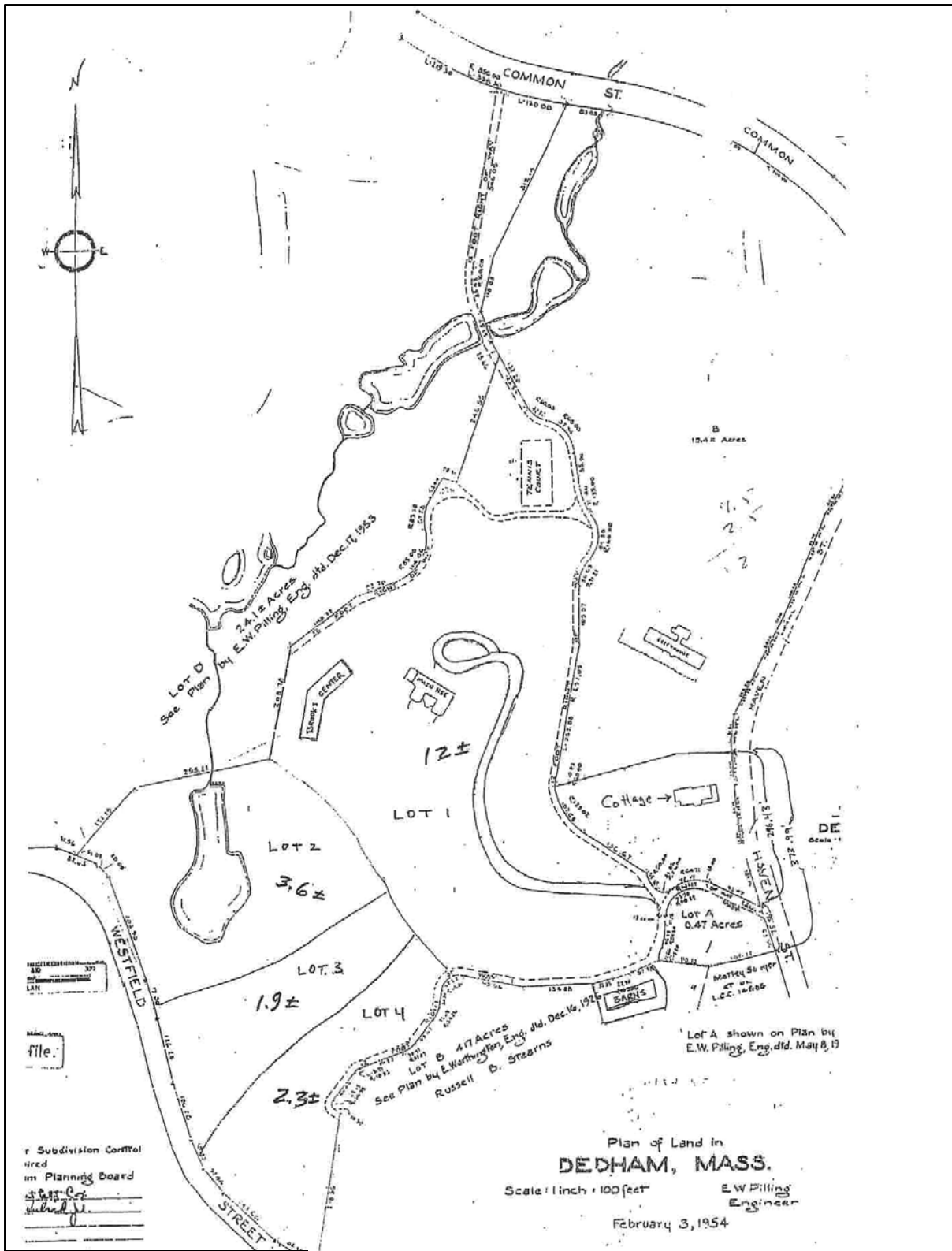
*Assumptions:*

The final option considered for development of vacant, single-family home lots called for minimal development. It involves the creation of only 3 new lots with an average size of 2.6 acres, all of which would be located along Westfield Street, as depicted in Figure 13. This plan also retains the existing Endicott House and accessory facilities on approximately 12 acres, and the Cottage on its current parcel. No new residential lanes or improvements to the existing driveway would be required. As such, this option represents a minimal-cost alternative.

Moreover, according to town officials, because this option does not require the creation of any new streets, it would be considered an "as of right" development and would only require a 21-day administrative review by the Dedham Planning Board in addition to building permits, making Option C the least time consuming alternative. For purposes of analysis, a 1-year period

was allotted for sell-out time, as before, and 6 months were assumed for obtaining administrative approvals and necessary permits, resulting in a total development time of 1.5 years.

Figure 13 - Option C Site Plan<sup>21</sup>



<sup>21</sup> Source: Cepas, Gintaras P., and Marcus E. Johnson. Appraisal Report: Massachusetts Institute of Technology Endicott House and Excess Land. Vol. 14246. Boston, MA: Meredith and Grew, ONCOR International, 2000.

*Methodology:*

Given the projected parcel size in this alternative, of the five vacant lot sales considered, 17 Warren Road appeared to be the best indicator of price. Only minor adjustment to its \$625,000 sales price was performed due to the fact that the transaction was completed less than a year prior to this study. Consequently, with an average parcel size of 2.6 acres (slightly less than that of 17 Warren Road) and in response to the downward trend in real estate over the past year, it was estimated that the average sales price of the newly created lots would be approximately \$600,000, resulting in a sales value for all three of \$1.8 million.

As in Option B, the Endicott House property was again evaluated as if sold as a residence and as a conference center; however this time, price was adjusted to reflect the 12-acre parcel size. As before, it was not felt that this would greatly impact the operational revenues of the conference center, and as such, the original estimate in Scenario 1 derived using the DCF method was only reduced by \$100,000 to account for the diminished land size, resulting in an estimated sale price of \$4.4 million.

The same methods described in Option B to determine a potential residential sale value for the Endicott House were again employed. The regression analysis method yielded a price of \$7.9 million, while the assessed value to sale price ratio method resulted in a projected value of \$7.3 million, a difference of \$600,000. As before, greater weight was given to the latter technique, producing an estimated residential sale price of approximately \$7.5 million.

As in previous scenarios, the sale value of the Cottage remained at \$1.6 million.

A summary of estimated development costs can be found in Table 11. Due to the lack of infrastructure required, only \$133,000 was projected. As before, 20% was added to this to account for soft costs.

As in Option B, demolition costs were estimated separately for alternatives under which the Endicott House would be sold as a residence and as a conference center. In the event of the former, demolition would include removal of the Brooks center and the facility's parking lots at a projected cost of \$180,000. In the case of the latter, only relocation of the parking lot would be required and was estimated at \$100,000.

**Table 11 - Option C Estimated Development Costs**

<b>Infrastructure Line Items</b>	Unit Cost	Unit	Quantity	Total
Asphalt Paving	\$1.85	SF	0	\$0.00
Curb & Gutter (6", Type H)	9.50	LF	0	0.00
Storm Manholes	2,700.00	EA	0	0.00
Utilities (underground; Gas, Telephone, Electricity, Cable)	60.00	LF	0	0.00
Utilities (services)	4.50	LF	0	0.00
Survey Monuments	315.00	EA	0	0.00
Street Signs	350.00	EA	0	0.00
Street Lights	3,000.00	EA	0	0.00
Sidewalks (6" base, 2" pvg.)	N/A		0	-
Water Main (12")	32.00	LF	312	9,984.00
Storm Drainage (18" R.C.P.)	45.00	LF	1600	72,000.00
Hydrants	2,500.00	EA	0	0.00
Sewer Main (8" PVC)	30.00	LF	1700	51,000.00
				\$132,984.00
Subtotal Infrastructure Cost:				\$133,000
Soft Costs (% of direct)				20%
Total Soft Costs:				26,600
Total Lot Creation Cost				<b>\$159,600</b>
<b>Demolition</b>				
	Est. Cost	Unit		
Pkg. Lot Relocation				100,000
Brooks and Pkg. Lot Removal				150,000
Contingency				20%
Total Demolition:				<b>\$180,000</b>
<b>Miscellaneous</b>				
	Est. Cost	Unit		
G & A	10%	Dir. Costs		31,300
Total Miscellaneous:				<b>\$31,300</b>
Subtotal:				\$370,900
Regional Multiplier:				1.1043
2006 Development Cost:				\$410,000
Annual Growth Factor:				1.00
Development Time (years):				1.5
<b>Total Development Cost:</b>				<b>\$410,000</b>



*Conclusions:*

As in the previous alternatives, sale of the Endicott House as a residence appears to achieve the highest value. Total sale price in this case including the three newly created lots and the Cottage would be \$10.9 million. When total development costs, commissions, fees and developer's profit are deducted from this, a total profit of \$8,720,000 is realized around June of 2008.

In contrast, if the Endicott House were sold as a conference center, the total estimated sales price, including the three newly created lots and the existing Cottage, would be \$7.8 million. Once total development costs of \$286,700 are deducted and commissions, fees, developer's profit, a profit of only \$5.95 million remains.

***3.4 - SCENARIO 3 – DEVELOPMENT AND SALE OF SINGLE-FAMILY HOMES***

A third scenario that was investigated in order to determine the highest and best use involved the subdivision of the property, and the construction and sale of single-family homes. The same three scenarios of high, medium and low density that were explored in the last section were again considered. However, the additional cost and time of constructing single-family homes was added, and the sales comparables used in Scenario 1 were reexamined in order to establish a likely sale price.

Local brokers and real estate agents were interviewed and asked a series of questions in an effort to determine a typical buyer's ideal home in terms of dimensions and specifications.<sup>22</sup> These

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<sup>22</sup> See Appendix A for a list of real estate broker/agent questions.

responses were then used to generate a prototype home which was used to establish likely construction costs as well as to determine a probable sales price.

The prototypical home conceived based on interview responses is a high-end, 4,500-SF, luxury home. It is 2 stories with a finished basement and a walk-up attic. It contains 5 bedrooms and 3.5 bathrooms, central air/heating, 3 fireplaces, a 2.5-car garage, an asphalt shingle roof, stone/masonry exterior, and a high level of finish on the interior.

In each scenario, construction costs on a per-square-foot basis were supplied by the same housing developer mentioned above and a multiplier derived using RS Means Data was again applied to compensate for cost differences across regions. Costs were then deducted from total estimates sales to calculate a likely property-level return.

### 3.4.a - Option D – Maximum Density

#### *Assumptions:*

As in Option A under Scenario 2, this alternative considers the costs and revenues associated with maximum allowable construction of the subject site. Just as before, this option involves the demolition of the Endicott House, the Brooks Center and the two parking lots, as well as the construction of a residential lane and the improvement of the existing driveway to meet standards as a residential street according to Dedham subdivision requirements. As depicted in figure 14, 15 homes would be constructed on site in conformance with the town's SRA zoning constraints. The Cottage would be retained on its existing parcel. The large barn/storage shed would also remain for the benefit of one of the new home sites, as would the pool and tennis court.

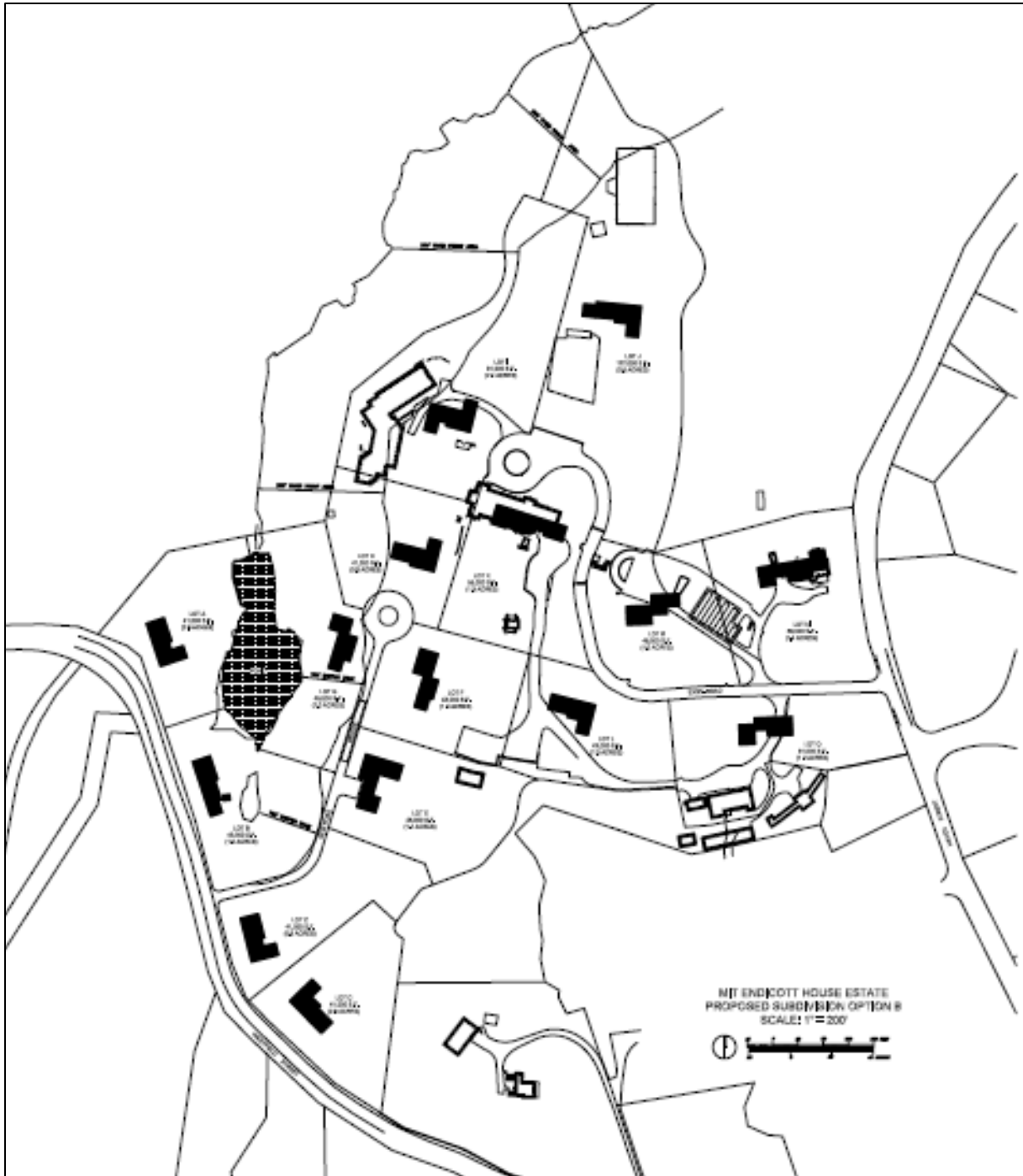


Figure 14 - Option D Site Plan

According to the local brokers and real estate agents interviewed, typical time on the market for a single-family home is between 2 and 5 months. Given market conditions, and the number of units involved, 1 year was again allotted for sale of all units. Three months was added to the permitting timeline to account for additional design review resulting in a total public review and permitting timeline of 15 months. Estimates provided by the aforementioned housing developer suggested that 6 months would be required for the construction of infrastructure, and construction of the 14 new homes would require an additional 9 months, putting total development time at 2.5 years. When marketing and sell out is considered, total revenues would likely not be realized until June of 2010 if permit applications were submitted to the Town of Dedham by January 1, 2007.

Based on recent market trends, it was assumed for purposes of analysis that single-family home prices in the Dedham submarket would not change substantially over the next year (2007). After that, it was assumed that housing prices would grow to match projected consumer price index (CPI) increases as depicted in Table 12.

*Methodology:*

The value of the newly created homes was derived based on comparable sales of single-family homes in the area. Of the seven observations listed in Scenario 1, it was determined that 986 High Street, which had been used previously to estimate sales price of the Cottage, was the most similar to the prototypical home described above, and therefore, the best indicator of current value. For convenience, the description of this property is located below:

986 High Street

Located less than one quarter mile from the subject site, this 1902 Colonial Revival-style home contains 5 bedrooms and 3.5 baths within 5,310 SF of living space. It is sited on 1.81 acres and sold in January of 2006 for \$1.8 million.

**Table 12 - Projected 2010 Sales Price**

In addition to being located in the same area, as envisioned, the new home prototype would have the same number of bedrooms and baths. It would be slightly smaller in size and would be sited on a significantly smaller lot; however, it would be new construction and would likely have a higher level finish on both the exterior

Year	CPI	Est. Sales Price
1999	2.7	
2000	3.4	
2001	1.6	
2002	2.4	
2003	1.9	
2004	3.3	
2005	3.4	
2006	4.7	\$ 1,800,000
CAGR	1.08	
2007	5.09	1,800,000
2008	5.51	1,948,000
2009	5.96	2,109,000
<b>2010</b>	<b>6.45</b>	<b>2,283,000</b>

and interior of the home. As such, it is felt that the average conceptual home would also command a current sales price of approximately \$1.8 million. When this figure is treated as discussed above to adjust for housing price increases over the next several years, a 2010 sales value of \$2,283,000/home results as seen in the table above.

**Table 13 - Option D Estimated Development Costs**

<b>Infrastructure</b>	Unit Cost	Unit	Total
Items as described previously in Option A			
		Infrastructure Subtotal:	\$659,005
		Soft Costs (% of Direct):	20%
		Total Soft Costs:	131,801
		<b>Total Lot Creation Cost</b>	<b>\$790,806</b>
<b>Demolition</b>			
Mansion			100,000
Brooks & Pkg. Lot Removal			150,000
Contingency			20%
		<b>Total Demolition:</b>	<b>\$300,000</b>
<b>Home Construction</b>			
	Est. Cost/SF	SF	
Single Family Home	81.10	3000	243,000
Finished Basement	40.55	1500	61,000
		Total per Unit:	304,000
		Number of Units:	14
		Subtotal:	4,256,000
		Soft Costs (% of Direct):	20%
		Total Soft Costs:	851,200
		<b>Total Home Construction:</b>	<b>5,107,000</b>
<b>Miscellaneous</b>			
	Est. Cost Unit		
G & A		10% Dir. Costs	521,501
		<b>Total Miscellaneous:</b>	<b>\$521,501</b>
		Subtotal:	6,719,307
		Regional Multiplier:	1.1043
		2006 Development Cost:	\$7,420,000
		Annual Growth Factor:	1.08
		Development Time (years):	3.5
		<b>Total Development Cost:</b>	<b>\$9,790,000</b>

As depicted in Table 13, lot creation and demolition costs were projected to be identical to those described in Option A in Scenario 2. Construction costs for the primary living quarters of the home prototype were estimated at \$81.10/SF and \$40.55/SF for the finished basement. A soft cost allowance of 20% of direct costs was allotted to account for engineering and design of the homes, bringing the total home construction to approximately \$5.1 million. Once the regional multiplier and annual growth factors were considered, the total development cost for Option D was \$9,790,000.

*Conclusions:*

Sales prices for the 15 homes that would be sold under this alternative are enumerated in Table 14. A slight adjustment was made to account for the additional amenities that would

remain on the site of house 14, resulting in a projected sales value of \$2.35 million for that home. In addition the original projected \$1.6 million sales price

**Table 14 - Option D 2010 Sales Income**

	Estimated Sales Price	Notes
Homes 1-13	29,679,000	Prototype
Home 14	2,350,000	Includes Pool and Tennis Court
Cottage	2,030,000	
Total:	34,059,000	

of the Cottage was adjusted in the same manner discussed above, generating an estimated 2010 sales price of just over \$2 million. The resulting total projected income from sale of the 15 homes was slightly over \$34 million. When the total development cost of \$6,844,000 was

deducted, and commissions, fees and developer's profit were considered, the remaining profit to be gained in 2010 was \$20.4 million.



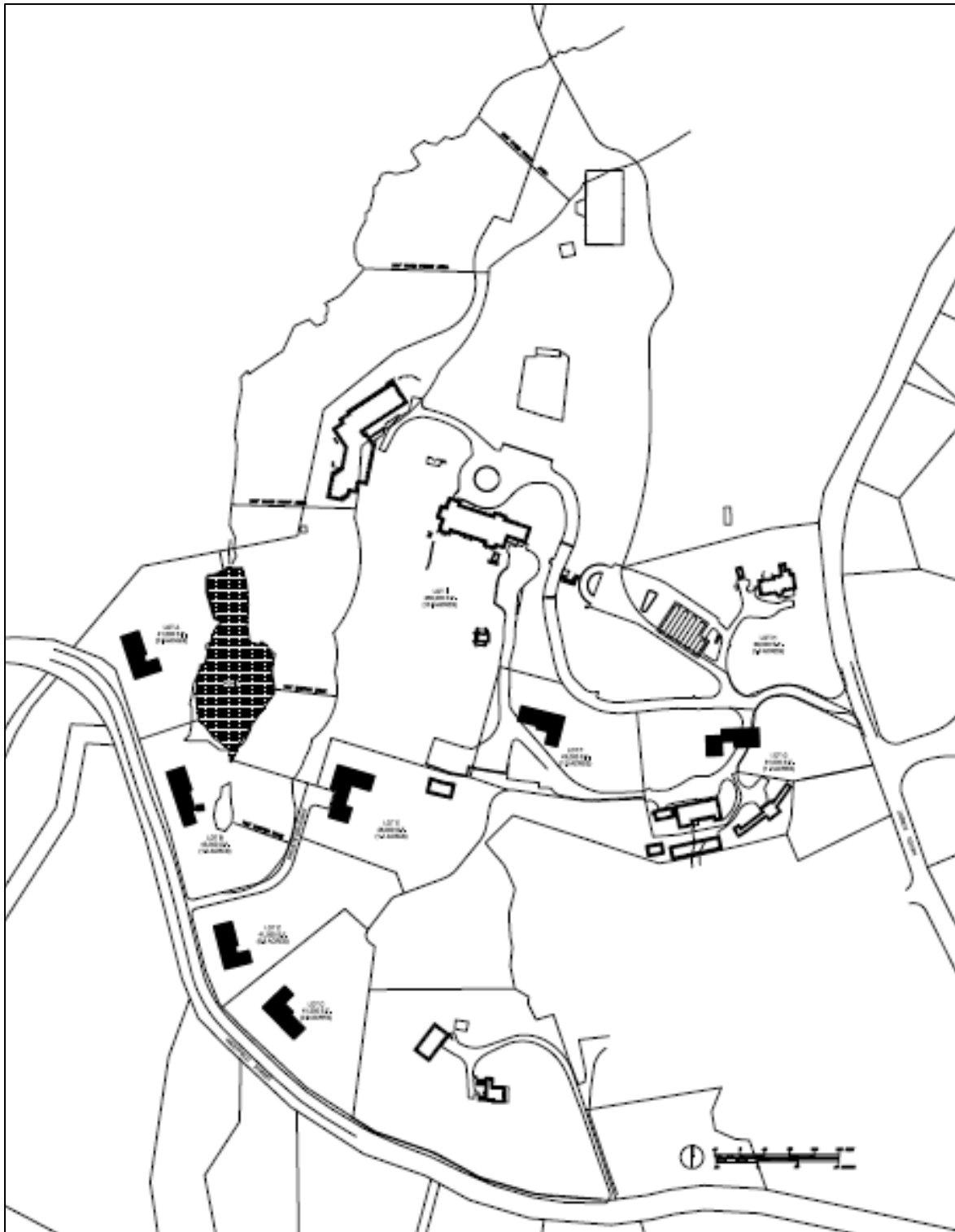


Figure 15 - Option E Site Plan

### 3.4.b. - Option E – Medium Density

#### *Assumptions:*

As in Scenario 2, Option B, Option E was based on an alternative that called for the creation of 7 new lots on which single-family homes would be constructed. The Cottage would remain on its own 1.17-acre property, while the Endicott House and the majority of its accessory uses would remain on 10.3 acres, as depicted in Figure 15. Also as in Option B, a new driveway extending from Westfield Street would be constructed to service 1 new home site and the existing driveway would be improved to meet town standards for a residential lane. It was assumed that this alternative would undergo the same process to gain public approval and the necessary permits as in Option D. Due to the unique nature of the Endicott House itself, 1 year was again allotted for the sale of all the properties, resulting in a total development and sale timeline of 3.5 years.

#### *Methodology:*

For the purpose of analysis, the potential current and future sales prices of the newly created homes, as well as the existing Cottage were derived in the same manner discussed in previous

sections. Consequently, the contributing value of the 7 newly created houses and the Cottage was estimated at approximately

**Table 15 – Option E 2010 Sale Prices**

	Estimated Sales Price	Notes
Homes 1-7	15,981,000	Prototype
Cottage	2,030,000	
Conf. Ctr.	5,453,000	
Residence	9,130,000	

\$18 million. As in previous alternatives, sale of the Endicott House as either a residence or a

**Table 16 - Option E Estimated Development Costs**

<b>Infrastructure</b>	Unit Cost	Unit	Total
<hr/> Items as described previously in Option B <hr/>			
		Infrastructure Subtotal:	\$564,109
		Soft Costs (% of Direct):	20%
		Total Soft Costs:	112,822
		<b>Total Lot Creation Cost</b>	<b>\$676,931</b>
<hr/>			
<b>Demolition</b>			
*Pkg. Lot Relocation (Conference Center Only)			100,000
Brooks & Pkg. Lot Removal			150,000
Contingency			20%
		<b>Total Demolition:</b>	<b>\$180,000</b>
<hr/>			
<b>Home Construction</b>	Est. Cost/SF	SF	
Single Family Home	81.10	3000	243,000
Finished Basement	40.55	1500	61,000
		<b>Total per Unit:</b>	<b>304,000</b>
		Number of Units:	7
		Subtotal:	2,128,000
		Soft Costs (% of Direct):	20%
		Total Soft Costs:	425,600
		<b>Total Home Construction:</b>	<b>2,554,000</b>
<hr/>			
<b>Miscellaneous</b>	Est. Cost	Unit	
G & A	10% Dir. Costs		287,211
		<b>Total Miscellaneous:</b>	<b>\$287,211</b>
		Subtotal:	3,698,142
		Regional Multiplier:	1.1043
		2006 Development Cost:	\$4,084,000
		Annual Growth Factor:	1.08
		Development Time (years):	3.5
		<b>Total Development Cost:</b>	<b>\$5,388,000</b>

conference center was considered. Present values were derived in the same manner as that described in Option B and compounded to a 2010 value as described in Option D. In the case of sale as a conference center, it is estimated that the Endicott House would command a price of approximately \$5.45 million. If sold as a residence, it would likely contribute \$9.3 million to the value of the subject property.

Infrastructure, demolition, and soft costs were estimated in the same manner described under Option B as depicted above resulting in a combined total of approximately \$857,000 in the case of sale as a residence and \$777,000 if sold as a conference center. Likewise, estimates for housing construction were estimated as described in Option D, producing a total home construction cost of \$2,554,000. The resulting total development cost once general administrative expenses were accounted for and the regional multiplier and annual growth factors were applied was \$5,388,000.

*Conclusions:*

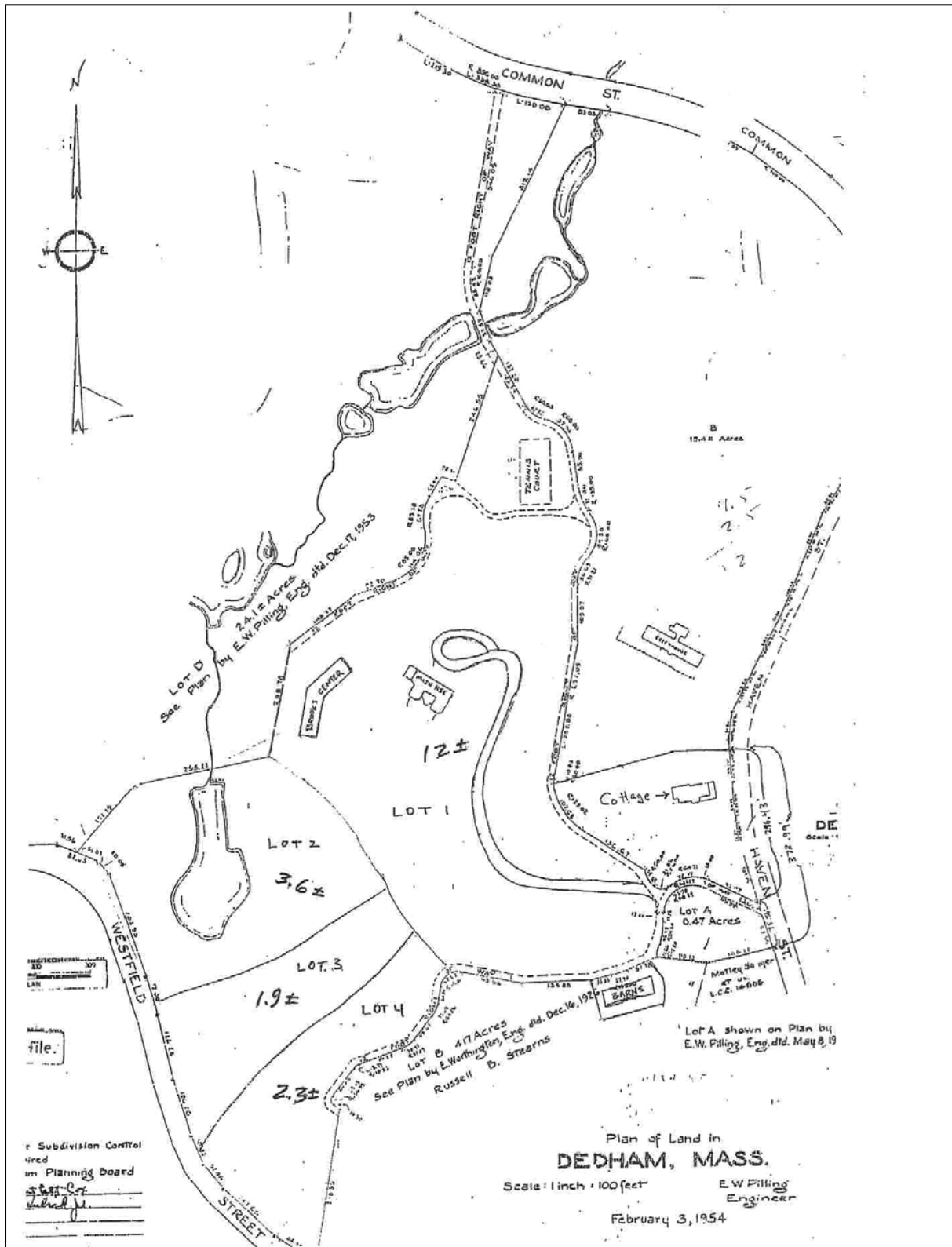
As in all prior alternatives examined, the sale of the Endicott House as a conference center resulted in a lower net value. Once development costs, fees, commissions and developer's profit were deducted from estimated total sales revenues of \$23,464,000, the remaining value was estimated at approximately \$13.5 million. By comparison, if the Endicott House were sold as a residence, the estimated sales value of \$27,141,000 resulted in a total property value of almost \$16.3 million, a difference of \$2.8 million.

### 3.4.c - Option F – Minimum Density

#### *Assumptions:*

Based on the same site plan discussed in Option C, this final development scenario calls for minimum development and maximum preservation of the site. Three lots averaging 2.6 acres in size would be created along Westfield Street, while the Endicott House and its accessory uses would remain on approximately 12 acres (Table 16). The Cottage would remain on its existing parcel. No new roads would be created and improvements to the existing driveway would not be required. As such, total time for town administrative review and permitting would be reduced to 9 months. Construction of infrastructure and 3 new homes would take approximately 1 year and sell-out time remains at an estimated 12 months, resulting in a total development and sale time horizon of 2 years, 9 months.

Figure 16 - Option F Site Map<sup>23</sup>



<sup>23</sup> Cepas, Gintaras P., and Marcus E. Johnson. Appraisal Report: Massachusetts Institute of Technology Endicott House and Excess Land. Vol. 14246. Boston, MA: Meredith and Grew, ONCOR International, 2000.



*Methodology:*

Given the increased size of the proposed lots for the 3 new homes, a revised estimate for current value had to be made. Of the seven comparable sales considered, 986 High Street was still regarded as the most similar property, and thus, the best indicator of sale price. In addition to being located in the same area, as envisioned, the new home prototype would have the same number of bedrooms and baths. It would be slightly smaller in size but would be sited on a significantly larger lot. Additionally, it would be new construction and would likely have a higher level finish on both the exterior and interior of the home. As such, it was felt that the average conceptual home would be able to obtain a higher sales price than that of 986 High Street. The estimated value was placed at approximately \$2.1 million.

To supplement this estimate, the regression equation derived in Scenario 1 was employed. The result was a projected current value of \$2,168,000, slightly greater than that estimated through the sales comparison approach. As in previous instances where these two techniques had been used, greater credence was given to the sales comparison approach, yielding an estimated value of \$2.1 million for each of the 3 new homes. When this was compounded forward to a 2009 estimated sales price, the result was a total value for all three new homes of \$6,327,000, as illustrated in Table 17.



Sales value of the Endicott House as both a conference center and a residence was again assessed

**Table 17 - Option F 2009 Sale Prices**

as described in Scenario C and

adjusted to reflect a 2009 sale

date. The result of sale as a

conference center was an

estimated value of \$5,156,000,

and that in the event of sale as a residence was \$8,787,000.

	Estimated Sales Price	Notes
Homes 1-3	6,327,000	Prototype
Cottage	1,875,000	
Conf. Ctr.	5,156,000	
Residence	8,787,000	

The current value of the Cottage was set at estimated \$1.6 million, as derived in Scenario 1. This was adjusted to reflect a 2009 sale date, yielding an increased value of \$1,875,000.

Infrastructure, demolition and soft costs were estimated in the same manner described under Option C as depicted in Table 18 resulting in a combined cost of approximately \$340,000 in the case of sale as a residence and \$260,000 if sold as a conference center. Likewise, estimates for housing construction were estimated as described in Option D, producing a total home construction cost of \$1.1 million. If the property were sold as a conference center, the resulting total development cost once the regional cost multiplier and annual growth factor were applied would be approximately \$ 2 million. If the property were sold as a residence, total development cost would be \$2.14 million.

**Table 18 - Option F Estimated Development Costs**

<b>Infrastructure</b>	Unit Cost	Unit	Total
<hr/> Items as described previously in Option C <hr/>			
		Infrastructure Subtotal:	\$133,000
		Soft Costs (% of Direct):	20%
		Total Soft Costs:	26,600
		Total Lot Creation Cost	<b>\$159,600</b>
<hr/> <b>Demolition</b> <hr/>			
*Pkg. Lot Relocation (Conference Center Only)			100,000
Brooks & Pkg. Lot Removal			150,000
Contingency			20%
		Total Demolition:	<b>\$180,000</b>
<hr/> <b>Home Construction</b> <hr/>			
	Est. Cost/SF	SF	
Single Family Home	81.10	3000	243,000
Finished Basement	40.55	1500	61,000
		Total per Unit:	304,000
		Number of Units:	3
		Subtotal:	912,000
		Soft Costs (% of Direct):	20%
		Total Soft Costs:	182,400
		Total Home Construction:	<b>\$1,094,000</b>
<hr/> <b>Miscellaneous</b> <hr/>			
	Est. Cost	Unit	
G & A	10%	Dir. Costs	122,500
		Total Miscellaneous:	<b>\$122,500</b>
		Subtotal:	1,556,100
		Regional Multiplier:	1.1043
		2006 Development Cost:	\$1,718,000
		Annual Growth Factor:	1.08
		Development Time (years):	2.75
		<b>Total Development Cost:</b>	<b>\$2,136,000</b>

*Conclusions:*

As in previous alternatives explored, sale of the Endicott House as a residence yielded a higher value than sale as a non-profit conference center. In the case of the latter, when total development costs, commissions, fees and developer's profit were deducted from expected sales revenue of \$13,358,000, a total property value of \$9,343,000. If sold as a residence, the increased sales value of \$17 million would yield a total property value of \$11,464,000.

## Chapter 4 – Additional Alternatives

### *4.1 - SCENARIO 4 – SENIOR LIVING OPPORTUNITIES*

The final scenario considered as a possible alternative use for the subject site involves the development of senior housing. As discussed in the beginning of this chapter, this use appears to be physically possible, has been contemplated to a certain degree in the underlying zoning and is likely politically viable at the location of the current Endicott House. Unfortunately, due the limited scope of this report, this alternative was explored further only in an effort to discuss market opportunities and constraints. Analysis of the potential financial returns such a project would generate would require additional study and refinement of the specific use or combination of uses most likely to be developed on the subject site.

The information provided in this section was derived almost exclusively based on a confidential, professional assessment conducted in 2004 which explored the market potential of several different types of senior living products within a study area that included the Town of Dedham.

#### 4.1a. - Senior Housing Defined

In the current marketplace, many housing alternatives exist for seniors, defined as adults age 65 and up. Definitions of a number of these options have been taken from Senioroutlook.com<sup>24</sup>, an internet-based service provider assisting seniors in locating appropriate housing options, and are listed below. This is not intended to be an exhaustive list, but a thorough description of popular housing options for aging adults.

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<sup>24</sup> "Senior Outlook - Housing Options for Senior Living." United Advertising Publications, Inc. 2006. <<http://www.senioroutlook.com/glossary.asp>>.

*Accessory Apartment* – A separate living unit inside a single-family home. This is a popular senior housing option for people who want to stay in their homes, and a potential source of caregiving between an older person and a friend, neighbor or relative, providing the convenience of physical closeness while maintaining privacy. It provides additional income for the landlord, and low rent for the tenant.<sup>25</sup>

*Assisted Living* – A special combination of housing, personalized supportive services and health care designed to meet the needs -- both scheduled and unscheduled -- of those who need help with activities of daily living. Services provided in Assisted Living residences usually include:

- Three meals a day served in a common dining area
- Housekeeping services
- Transportation
- Assistance with eating, bathing, dressing, toileting and walking
- Access to health and medical services
- 24-hour security and staff availability
- Emergency call systems for each resident's unit
- Health promotion and exercise programs
- Medication management
- Personal laundry services
- Social and recreational activities

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<sup>25</sup> O'Brien, Sharon, LMHC. "Senior Housing - Glossary of Common Terms." About, Inc., a part of the New York Times Company. 2006. <<http://seniorliving.about.com/od/housingoptions/a/housingglossary.htm>>.

*Continuing Care Retirement Community (CCRC)* – A continuing care retirement community (CCRC) is a community that offers several levels of assistance, including independent living, assisted living and nursing home care. It is different from other housing and care facilities for seniors because it usually provides a written agreement or long-term contract between the resident (frequently lasting the term of the resident's lifetime) and the community which offers a continuum of housing, services and health care system, commonly all on one campus or site.

*Independent Living* – A multi-unit senior housing development that may provide supportive services such as meals, housekeeping, social activities, and transportation. This alternative is available as part of Congregate Housing, Supportive Housing, and Retirement Communities. Independent Living encourages people to socialize by providing meals in a central dining area and through scheduled social programs. This term may also be used to describe housing with few or no services such as Senior Apartments.<sup>26</sup>

*Life Care Community* – A Continuing Care Retirement Community (CCRC) that offers an insurance type contract and provides all levels of care. It often includes payment for acute care and physician's visits. Little or no change is made in the monthly fee, regardless of the level of medical care required by the resident, except for cost of living increases.

*Nursing Home* – Provides 24-hour skilled care for the more acute patients. Patients generally rely on assistance for most or all daily living activities (such as bathing, dressing and toileting). [It is] one step below hospital acute care. Regular medical supervision and rehabilitation therapy are

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<sup>26</sup> O'Brien, Sharon, LMHC. "Senior Housing - Glossary of Common Terms." About, Inc., a part of the New York Times Company. 2006. <<http://seniorliving.about.com/od/housingoptions/a/housingglossary.htm>>.

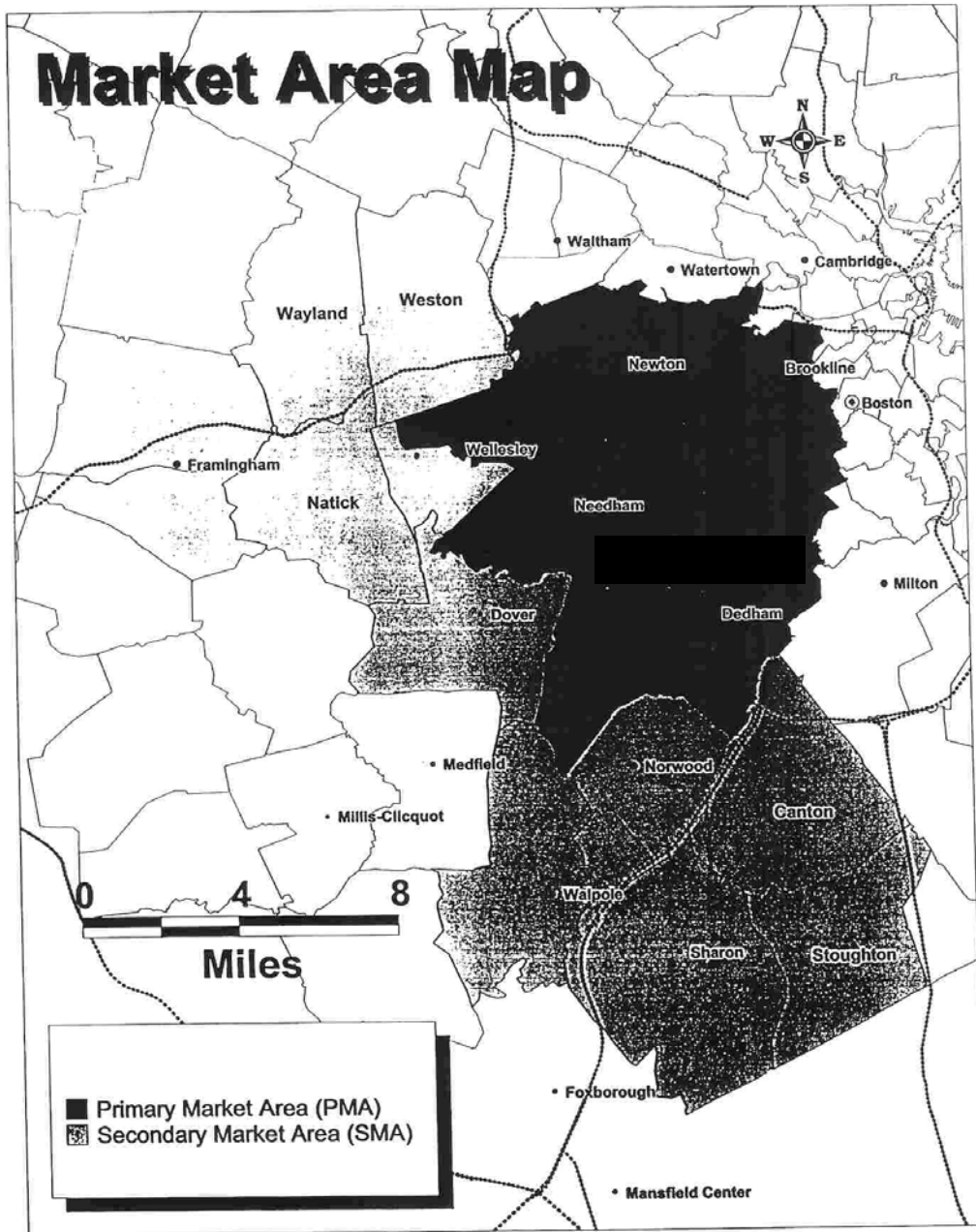
mandated to be available, and nursing homes are eligible to participate in the Medicaid program. These facilities are State Licensed.

*Senior Apartment* – Age-restricted multiunit housing for older adults who are able to care for themselves. Usually no additional services such as meals or transportation are provided. [This is] similar to Independent Living.

#### 4.1.b. - Description of Market Assessment

The aforementioned 2004 market assessment considered a 272 square mile study area that was located generally west of the City of Boston. As is illustrated in Figure 17, the primary market area (PMA) encompassed 84 square miles and included the following zip codes and all or portions of the following associated communities: Auburndale (02466), Brighton (02135), Brookline (02446, 02446), Chestnut Hill (02467), Dedham (02026), Hyde Park (02136), Jamaica Plain (02130), Needham (02492), Needham Heights (02494), Newton (02458), Newton Center (02459), Newton Highlands (02461), Newton Lower Falls (02462), Newton Upper Falls

Figure 17 - Market Area<sup>27</sup>



<sup>27</sup> Source: Confidential Marketing Report. 2004.



(02464), Newtonville (02460), Roslindale (02131), Waban (02468), Wellesley Hills (02481), West Newton (02465), West Roxbury (02132), and Westwood (02090). The secondary market area (SMA) encompassed 187 square miles including the zip codes and associated communities of: Canton (02021), Dover (02030), East Walpole (02032), Framingham (01701, 01702), Natick (01760), Norwood (02062), Sharon (02067), Stoughton (02072), Walpole (02081), Wayland (01778), Wellesley (02482) and Weston (02493).

The primary elements of the study were:

- 1) A demographic analysis of the senior population including: population by age group, projections of the number of elderly households by age and income, household composition, housing values and other information relevant to characterizing and quantifying the market for housing and services.
- 2) An inventory of the existing facilities within the defined service/market area.
- 3) An analysis of the demand for independent living units (with services), assisted living and nursing/dementia care facilities. The demand for additional senior housing product types was not explored.

#### 4.1.c. - Zoning

Some types of senior housing have been contemplated in the SRA zoning underlying property.

These include convalescence (i.e. nursing) home and assisted living uses, both of which are allowed only by special permit. The minimum conditions under which special permits for these uses may be granted are listed in Sections 6.1 and 7.5 of the Zoning Bylaws of the Town of Dedham. No discussion of senior independent living or CCRC uses is evident in the text of

zoning bylaws for this designation. However, a separate Senior Campus (SC) district is contemplated under section 7.6. This designation gives broad latitude to the planning board to approve facilities designed for the housing and care of aged adults. Though inclusion in this district is contingent upon the subject property being located within an existing SRA district, additional requirements state that properties to be considered for such inclusion must contain no fewer than 100 contiguous (or essentially contiguous) acres. This precludes the subject property raising the issue as to the legal viability of some of the options considered below at that location.

4.1.d. - Market Report Findings

*Market Additions*

Since the time when the subject assessment was completed, two significant additions to market supply were made. The German Center for Extended Care developed 62 assisted living units in West Roxbury in a facility called Edelweiss Village.<sup>1</sup> In addition, the Sophia Snow House, located in Roxbury, engaged in a major expansion of its facilities resulting in a total of 42 supplementary independent living apartments and 36 new assisted living beds.<sup>1</sup>

**Table 19 – Total Additional Existing and Proposed Unit Types and Quantities**

<u>Unit Type</u>	<u>Quantity</u>
Long-term care beds	268
Assisted Living Apartments	189
Independent Living Apartments (w/services)	224
Independent Living Cottages (w/services)	50
Independent Living Villas (w/services)	24
Total Units:	755

Hebrew Senior Life (HSL), a major provider of aged adult housing and services, also submitted an application with the Town of Dedham for the creation of a new Senior Campus Community.

According to the written statement accompanying the Site Plan Review and Special Permits Application submitted in June of 2005<sup>28</sup>, the proposed campus would include a variety of housing types. When combined with the additional facilities previously mentioned, total quantities of new units are as listed in Table 19.

#### *Independent Living (with services)*

Examination of existing facilities within the market area identified 9 in operation consisting of 1,522 independent living units. The average occupancy of these facilities was 98% suggesting a strong demand that had outstripped existing supply. Data gathered by the report projected total independent living unit demand at 423 new units (275 PMA, 148 SMA). Of this, 78% (2126 PMA, 115 SMA) came from the upper income cohort (i.e. annual household income of greater than \$50,000). When segmented by unit type preference, total demand was for 201 apartments and 222 homes.

As depicted, the total number of new and proposed units since the time of the study is 298, resulting in an estimated excess demand of 125 units. Preferences expressed in the original study indicate that an excess supply of 23 apartments may exist at this quantity. However, when contrasted with the quantities listed above, the same preferences show an excess demand for independent living houses of 148 units.

#### *Assisted Living*

According to the study's findings, in 2004, 23 facilities offered a combined 1,205 assisted living units within the designated study area. As before, these facilities experienced a low level of

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<sup>28</sup> Senior Campus Community: Site Plan Review and Special Permits Application. Hebrew Senior Life, 2005.

vacancy with an average occupancy of 95%, suggesting unmet market demand. Depending on whether national or local utilization data was used, estimates for demand indicated that a minimum of 78 beds (national data) and 108 beds (local data) would be needed by 2008. According to the table above, 189 assisted living apartments have recently been added to the study area or are being proposed at HSL's senior living campus. As such, the data suggests a supply that will significantly outpace future demand.

#### *Nursing/Dementia Care*

According to the marketing assessment, 11 facilities within the study area offered a combined 348 residential dementia care beds. These facilities were reported to have an average 94% occupancy rate. Likewise, 69 facilities representing 7,855 beds were reported to offer nursing care. The average occupancy for these facilities was 91%. Demand estimates for residential dementia care set the unmet need at a minimum of 84 new units while those for nursing care indicated no need for additional facilities.

#### 4.1.e. - Conclusions

Based on the market data presented above, the results of the 2004 study suggest that an as of yet unmet need for senior independent living units may exist in the vicinity of the Endicott House property. Likewise, residential care for patients suffering from dementia may also be an area for potential expansion. Further investigation of these estimates should be conducted to affirm their accuracy. Moreover, additional analysis should be conducted to establish the legal, political and financial constraints and opportunities the subject site may offer for these senior housing alternatives.

## **Chapter 5 - Study Conclusions**

In the foregoing study, highest and best use analysis was applied to M.I.T. Endicott House in an effort to ascertain the highest possible financial return among feasible alternative uses. A summary of the 3 main scenarios investigated can be found in Table 20.

It was found that that use which met the aforementioned criteria of legal permissibility, physical possibility, political viability and financial feasibility, and that would most likely result in maximum profitability was Option D, which called for the construction and sale of 14 new homes and the sale of the existing Cottage. The value of the subject site under this alternative was estimated at \$20.4 million. It should be noted however, that this scenario required the longest time horizon before returns could be realized. In an effort to quantify this consequence, a return/month calculation was made. Due to the significantly higher returns realized in the housing development alternatives, financial returns when viewed on a per-month basis still remain similar to other, less time consuming alternatives.

It should be noted that among the expenses considered in this study, financing costs for each of the scenarios was not included. This is due largely to the fact that different entities are able to secure different financing. Moreover, tax assumptions were not made based on the idiosyncratic and highly variable nature of such variables.

**Table 20 - Summary of Estimated Values**

Proposed Alternative	Estimated Value (\$ millions)	Estimated Time to Return (months)	Return /month
<b>Scenario 1 - Sell As Is</b>			
Sale as conference center	\$6.10	12	\$508,000
Sale as residence	10	12	\$833,000
<b>Scenario 2 - Sale of Subdivided Lots</b>			
Maximum Density Alternative (Option A)	1.9	30	\$63,000
Medium Density Alternative (Option B)	9.9	30	\$330,000
Minimum Density Alternative (Option C)	8.7	18	\$483,000
<b>Scenario 3 - Sale of Single-family Homes</b>			
Maximum Density Alternative (Option D)	20.4	42	\$486,000
Medium Density Alternative (Option E)	16.3	42	\$388,000
Minimum Density Alternative (Option F)	11.5	33	\$348,000

### *5.1 - Areas of Further Study*

It should also be noted that the range of alternatives investigated during the course of this study does not represent the full spectrum of possible uses. Additional research should be conducted investigating the applicability of statutes set forth in Chapter 40R of the Massachusetts General Laws which allow override of local zoning restrictions in return for provision of additional affordable housing. Due to the limited time frame of this thesis, this potential opportunity could not be explored. Additional research should also be conducted investigating the political, legal and financial feasibility of developing independent senior living units or residential dementia care facilities on the subject site. Adaptation of the existing Endicott House for use as senior nursing care, independent living apartments or other multi-family residences could also be examined.

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## **Appendix A**

List of Questions Asked of Local Real Estate Agents and Brokers:

Of the following specifications for new homes, what would be preferred by a typical home buyer in Precinct 1 in Dedham?

- 2 stories or 3 stories?
- Basement: finished or unfinished?
- Number of beds?
- Number of baths?
- Level of interior finishes?
- Number of kitchens?
- Is central air/heating preferred?
- Number of fireplaces?
- Size of garage?
- Lot size?
- Porch or no porch?
- Pool?

What is current sales velocity of single-family homes and how has it changed over the past year?

Under what terms are vacant lots being sold? Is it typical for a buyer to pay cash or is there often another type of financing used?