

CHESTER SENIOR CENTER FEASIBILITY STUDY

April 2019

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MARKET STUDY & ANALYSIS

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SECTION 1

INTRODUCTION & SUMMARY

INTRODUCTION & SUMMARY

This feasibility study was commissioned by the Town of Chester to explore construction of a new Senior Center for use by the Council on Aging and senior citizens of the Town. The facility, if approved, will replace the current Senior Center located in the basement of Town Hall. Due to its small size and the lack of program and parking space, the existing center does not adequately serve the Chester population. Data indicates that the senior population will nearly double over the next 15 years, placing even greater demands on the Senior Center. Historical data suggests that a new Senior Center will double or triple annual unduplicated senior visits, adding to the demand for space.

The Council on Aging, through the Senior Center, provides Chester seniors with education, recreation, social services, outreach programs and volunteering opportunities. The Chester Council on Aging works to identify the unique needs and interests of the Town's senior citizens and implements programs that will enhance the quality of life, independence and physical and emotional well-being of Chester's older residents.

The Town's investment in a new Senior Center is an opportunity to ensure that Chester is an age friendly community where residents can "Age in Place," and that the Senior Center can meet the expanding demand for services. The entire community benefits when services are provided in a proactive manner, resulting in fewer crisis demands on Town services whether they be related to health, well-being, property maintenance or traffic safety.

The goals of this study were twofold. The first was to generate a building program spelling out needs for building rooms and parking, which was determined based on a needs analysis and demographic analysis. From this information block diagrams were prepared to illustrate identified space needs and adjacencies. As the exact size, needs, and budget are unknown at this point, a range of block diagrams were created ranging from 2,400 sf to 7,000 sf.

The second goal was to evaluate sites in the Town of Chester to determine if they are appropriate for the construction of a new Senior Center. Attributes, constraints, and limitations related to each site were identified as well as its capacity to support the programs of service planned for the Senior Center. Various cost drivers that could be unique to each site were analyzed in a comparative manner.

Sites Considered

BH+A evaluated three sites selected by the Town of Chester. The three sites that were recommended for our study are:

1. Hampden Street Park
2. 47 Emery Street (Chester Town Park)
3. 0 Middlefield Road

All three sites are currently owned by the Town of Chester.

Project Cost

The building options and sites were estimated by an independent cost estimator. These were then evaluated to create a realistic working "model cost" to provide a range of building/site variable costs. The construction costs are Massachusetts public construction values (Chapter 149). The site work costs were averaged from among the sites considered. This provides a reasonable site baseline cost even though the sites may not be ultimately used. In addition, the Total Project Cost was determined in order to provide the funding amount. Total Project Costs included other costs the Town will incur to construct the building.

The total project costs range from an average of \$3.0M for the 2,400 sf, smallest option, to \$5.2M for the 7,000 sf option. A supportive care or senior care options adds \$660,000 to any of these options. A complete breakdown of options is contained in chapter 7.

Conclusion

The feasibility study found that a Senior Center could be accommodated on all three sites. Each site has unique characteristics which will need to be considered when making the final site selection. The size of the senior center building is to be determined by the Town, obviously using funding ability as a major criteria.

SECTION 2

METHODOLOGY

METHODOLOGY

The following steps were undertaken in completion of the feasibility study:

1. Document Review: Reviewed available site maps and surveys for zoning compliance, storm water and environmental issues such as wetlands and flood plans. Prepared existing conditions documents and photos describing the sites.
2. Site Plan Analysis: Developed a schematic site plan and building layout along with a summary of the site plan conditions and the approximate number of vehicular parking spaces.
3. Conformance with Regulations: Analyzed the site plan for conformance with the requirements of the Chester zoning bylaw requirements.
4. Community Context: Identified the site characteristics relative to their surrounding neighborhood, accompanied by photographs of surrounding buildings, features, and landscapes, that provided an understanding of the physical context of the site.
5. Program of Uses and Parking Requirements: Created a space allocation program for one story building options that range from 2,400 sf to 7,000 sf, allowing for a room by room occupancy. This led to a use-based parking program which was compared with the requirements of the zoning bylaws.
6. Schematic Design: Prepared drawings of the proposed building depicted in existing conceptual design showing interior layouts options which “step-up” incrementally from 2,400 sf to 7,000 sf.
7. Permits & Approvals: Identified applicable permits required for the proposed construction.
8. Cost: Prepared a design cost estimate for each site proposed. The estimate includes a per square foot cost for the various building options, as well as an abstract site work cost.
9. Present Data: Met with the town officials and the Board of Selectmen to review the Design plans and cost estimates.

SECTION 3

NEEDS ASSESSMENT



Market Assessment

Ballard*King & Associates (B*K) has been hired to perform a market for the Town of Chester, MA.

The following is a summary of the demographic characteristics within the service area that has been identified with help from Town staff.

B*K accesses demographic information from Environmental Systems Research Institute (ESRI) who utilizes 2010 Census data and their demographers for 2018-2023 projections. In addition to demographics, ESRI also provides data on housings, recreation, and entertainment spending and adult participation in activities. B*K also uses information produced by the National Sporting Goods Association (NSGA) to overlay onto the demographic profile to determine potential participation in various activities.

Service Areas:

The primary service area has been identified as the townships that make up the Gateway Regional School District and slightly beyond.

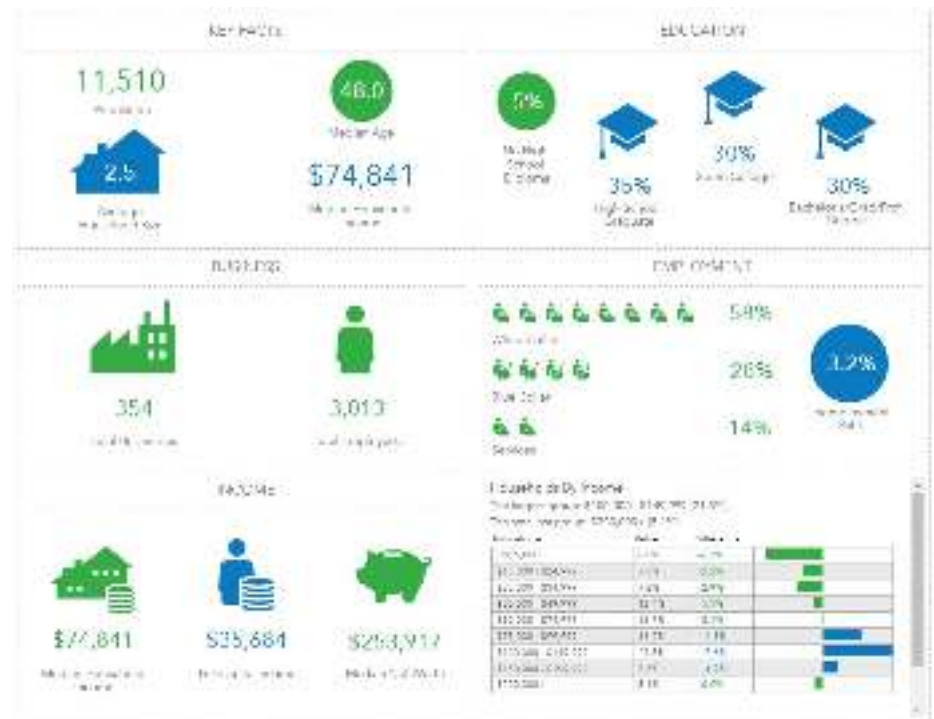
A Primary Service Area can be defined as the distance people will travel on a regular basis (a minimum of once a week) to utilize facilities. Use by individuals outside of this area will be much more limited and will focus more on special activities or events.

Service areas can flex or contract based upon a facility's proximity to major thoroughfares. Other factors impacting the use as it relates to driving distance are the presence of alternative service providers in the service area. Alternative service providers can influence membership, daily admissions and the associated penetration rates for programs and services.

Service areas can vary in size with the types of components in the facility.



Infographic



Household by Income comparison uses the Primary Service Area and compares it to Berkshire County.

Demographic Summary

	Primary Service Area	Chester, MA
Population:		
2010 Census	10,819 ¹	1,337 ²
2018 Estimate	11,510	1,452
2023 Estimate	11,819	1,508
Households:		
2010 Census	4,392	543
2018 Estimate	4,643	584
2023 Estimate	4,756	603
Families:		
2010 Census	3,055	374
2018 Estimate	3,215	400
2023 Estimate	3,290	412
Average Household Size:		
2010 Census	2.46	2.46
2018 Estimate	2.48	2.49
2023 Estimate	2.48	2.50
Ethnicity (2018 Estimate):		
Hispanic	2.5%	1.9%
White	96.6%	97.9%
Black	0.5%	0.1%
American Indian	0.2%	0.0%
Asian	0.6%	0.3%
Pacific Islander	0.03%	0.0%
Other	0.4%	0.4%
Multiple	1.6%	1.4%
Median Age:		
2010 Census	45.6	45.0
2018 Estimate	48.0	46.5
2023 Estimate	49.5	46.8
Median Income:		
2018 Estimate	\$74,841	\$67,615
2023 Estimate	\$83,962	\$80,887

¹ From the 2000-2010 Census, the Primary Service Area, experienced a 2.3% increase in population.

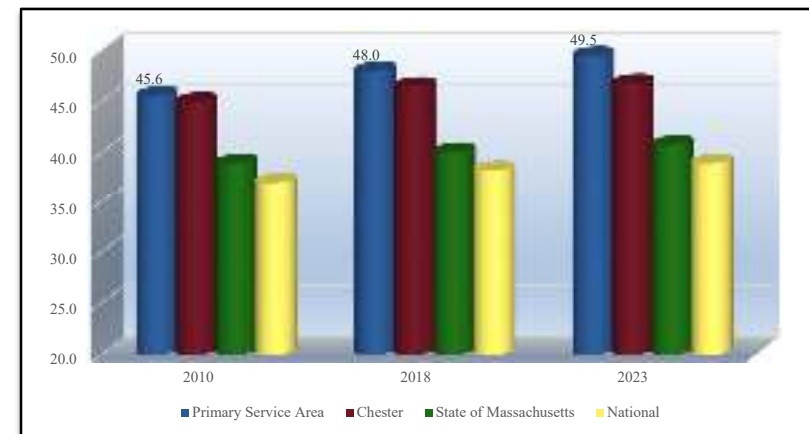
² From the 2000-2010 Census, Chester experienced a 2.2% increase in population.

Age and Income: The median age and household income levels are compared with the national number as both factors are secondary determiners of participation in recreation activities. The lower the median age, the higher the participation rates are for most activities. The level of participation also increases as the median income level goes up.

Table A – Median Age:

	2010 Census	2018 Projection	2023 Projection
Primary Service Area	45.6	48.0	49.5
Chester	45.0	46.5	46.8
State of Massachusetts	39.0	40.1	40.8
Nationally	37.1	38.3	39.0

Chart A – Median Age:



The median age in the Primary Service Area is greater than the State of Massachusetts and the state is greater than the National number. A higher median age typically points to the presence of older individuals and retirees, that may support a senior center or community center. While the population is older, there are families with children that would use an indoor facility. Across the country B*K is experiencing less purpose built “senior centers” and more community centers that program and provide services to the full age spectrum which includes new and traditional seniors.



The following chart provides the number of households and percentage of households in Primary Service Area with children.

Table B – Households w/ Children

	Number of Households w/ Children	Percentage of Households w/ Children
Primary Service Area	1,229	28.0%
Chester	159	29.3%

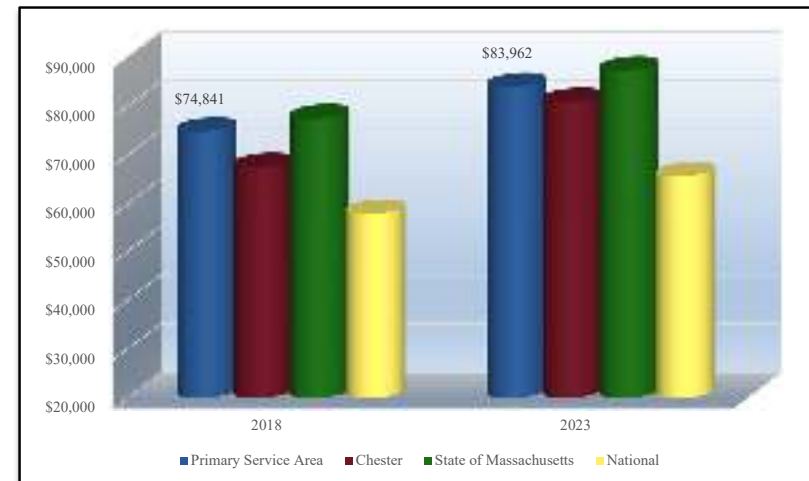
The information contained in Table-B helps further outline the presence of families with children. As a point of comparison in the 2010 Census, 30.8% of households in Massachusetts and 33.4% of households nationally had children present.



Table C – Median Household Income:

	2018 Projection	2023 Projection
Primary Service Area	\$74,841	\$83,962
Chester	\$67,615	\$80,887
State of Massachusetts	\$77,518	\$87,301
Nationally	\$58,100	\$65,727

Chart B – Median Household Income:



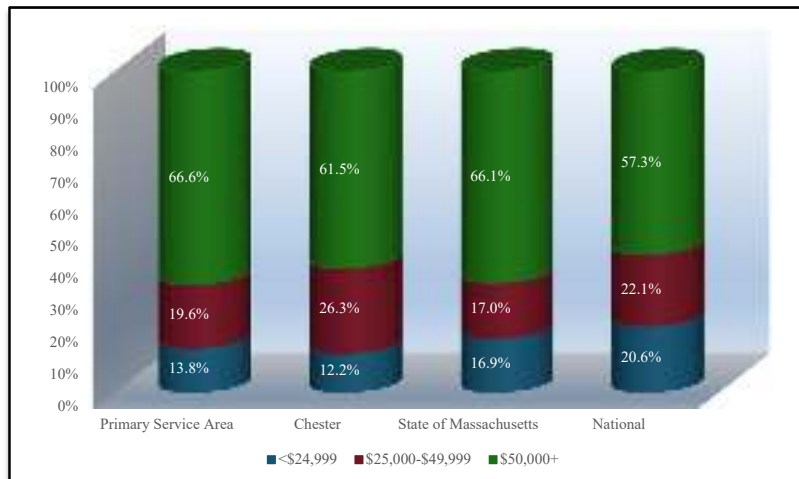
Based on 2018 projections for median household income the following narrative describes the service areas:

In the Primary Service Area, the percentage of households with median income over \$50,000 per year is 66.6% compared to 57.2% on a national level. Furthermore, the percentage of the households in the service area with median income less than \$25,000 per year is 13.8% compared to a level of 20.6% nationally.

In Chester, the percentage of households with median income over \$50,000 per year is 61.5% compared to 57.2% on a national level. Furthermore, the percentage of the households in the service area with median income less than \$25,000 per year is 12.2% compared to a level of 20.6% nationally.

While there is no perfect indicator of use of an indoor recreation facility, the percentage of households with more than \$50,000 median income is a key indicator. Therefore, those numbers are significant and should be balanced with the overall cost of living.

Chart C – Median Household Income Distribution



In addition to looking at Median Age and Median Income, it is important to examine Household Budget Expenditures. In particular, reviewing housing information; shelter, utilities, fuel and public services along with entertainment & recreation can provide a snapshot into the cost of living and spending patterns in the services areas. The table below looks at that information and compares the service areas.

Table D – Household Budget Expenditures³:

Primary Service Area	SPI	Average Amount Spent	Percent
Housing	103	\$22,357.26	29.8%
Shelter	102	\$17,096.82	22.8%
Utilities, Fuel, Public Service	106	\$5,260.44	7.0%
Entertainment & Recreation	108	\$3,462.97	4.6%

Chester	SPI	Average Amount Spent	Percent
Housing	95	\$20,600.72	29.8%
Shelter	93	\$15,636.54	22.6%
Utilities, Fuel, Public Service	100	\$4,964.19	7.2%
Entertainment & Recreation	101	\$3,239.72	4.7%

State of Massachusetts	SPI	Average Amount Spent	Percent
Housing	128	\$27,867.96	31.2%
Shelter	130	\$21,891.39	24.5%
Utilities, Fuel, Public Service	121	\$5,976.57	6.7%
Entertainment & Recreation	123	\$3,975.02	4.4%

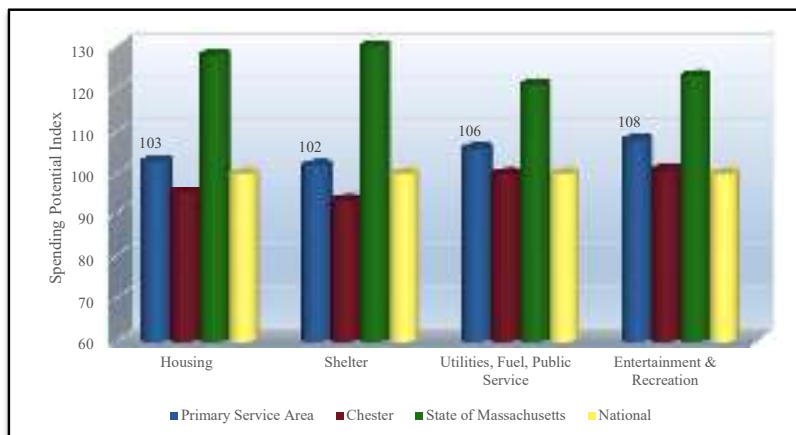
SPI: Spending Potential Index as compared to the National number of 100.
Average Amount Spent: The average amount spent per household.
Percent: Percent of the total 100% of household expenditures.

Note: Shelter along with Utilities, Fuel, Public Service are a portion of the Housing percentage.

³ Consumer Spending data are derived from the 2014 and 2015 Consumer Expenditure Surveys, Bureau of Labor Statistics. ESRI forecasts for 2018 and 2023.



Chart D – Household Budget Expenditures Spending Potential Index:



The consistency between the median household income and the household budget expenditures is important. It also points to the fact that compared to a State level the dollars available, and that are being spent in the Primary Service Area are less. This could point to challenges for the ability to pay for programs and services offered at a senior center or community center.

The total number of housing units in the Primary Service Area is 5,911 and 74.3% are occupied, or 4,392 housing units. The total vacancy rate for the service area is 25.7%. Of the available housing units:

- For Rent 0.5%
- Rented, not Occupied 0.2%
- For Sale 1.6%
- Sold, not Occupied 0.2%
- For Seasonal Use 21.1%
- Other Vacant 2.2%

The percentage of home that are for seasonal use is significant. It is difficult to program to these individual and take their wants and needs into account.

Recreation Expenditures Spending Potential Index: Finally, through the demographic provider that B*K utilizes for the market analysis portion of the report, we can examine the overall propensity for households to spend dollars on recreation activities. The following comparisons are possible.

Table E – Recreation Expenditures Spending Potential Index⁴:

Primary Service Area	SPI	Average Spent
Fees for Participant Sports	108	\$122.43
Fees for Recreational Lessons	106	\$146.32
Social, Recreation, Club Membership	107	\$242.62
Exercise Equipment/Game Tables	107	\$61.59
Other Sports Equipment	113	\$8.67

Chester	SPI	Average Spent
Fees for Participant Sports	96	\$108.64
Fees for Recreational Lessons	91	\$125.84
Social, Recreation, Club Membership	95	\$213.88
Exercise Equipment/Game Tables	88	\$50.89
Other Sports Equipment	104	\$8.00

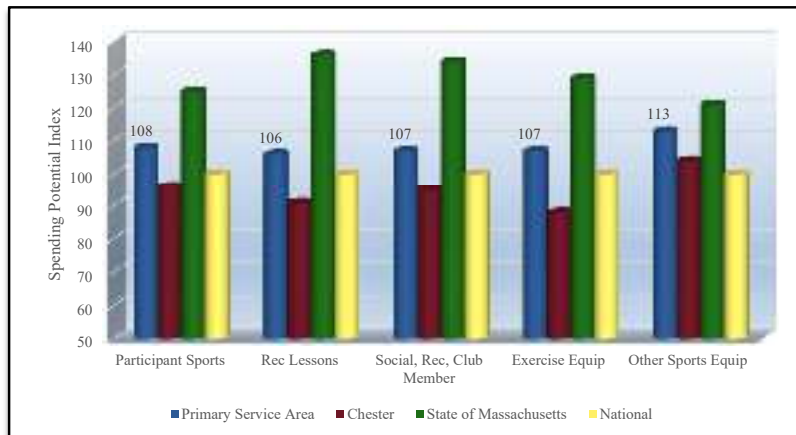
State of Massachusetts	SPI	Average Spent
Fees for Participant Sports	125	\$141.03
Fees for Recreational Lessons	136	\$187.88
Social, Recreation, Club Membership	134	\$303.34
Exercise Equipment/Game Tables	129	\$74.12
Other Sports Equipment	121	\$9.35

Average Amount Spent: The average amount spent for the service or item in a year.

SPI: Spending potential index as compared to the national number of 100.

⁴ Consumer Spending data are derived from the 2014 and 2015 Consumer Expenditure Surveys, Bureau of Labor Statistics.

Chart E – Recreation Spending Potential Index:



Again, there is a great deal on consistency between median household income, household budget expenditures and now recreation and spending potential.

Map A – Primary Service Area





Population Distribution by Age: Utilizing census information for Primary Service Area the following comparisons are possible.

Table F – 2018 Primary Service Area Age Distribution
(ESRI estimates)

Ages	Population	% of Total	Nat. Population	Difference
0-5	483	4.3%	6.0%	-1.7%
5-17	1,577	13.7%	16.3%	-2.6%
18-24	696	6.1%	9.7%	-3.6%
25-44	2,511	21.9%	26.4%	-4.5%
45-54	1,789	15.5%	12.8%	+2.7%
55-64	2,234	19.4%	13.0%	+6.4%
65-74	1,533	13.3%	9.4%	+3.9%
75+	687	5.9%	6.5%	-0.6%

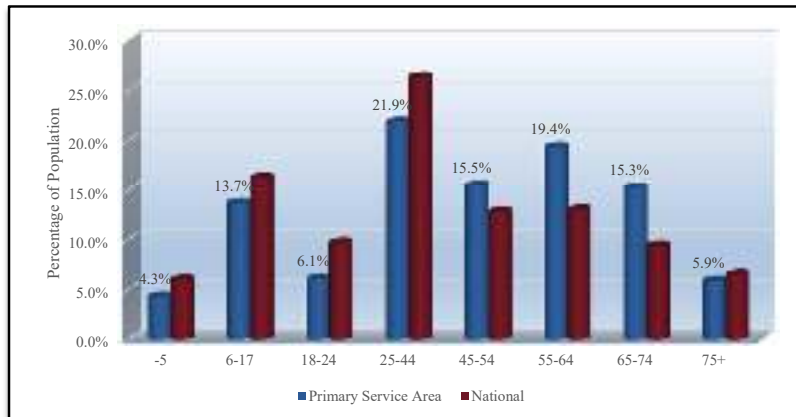
Population: 2018 census estimates in the different age groups in the Primary Service Area.

% of Total: Percentage of the Primary Service Area population in the age group.

National Population: Percentage of the national population in the age group.

Difference: Percentage difference between the Primary Service Area population and the national population.

Chart F – 2018 Primary Service Area Age Group Distribution



Population Distribution Comparison by Age: Utilizing census information from Primary Service Area the following comparisons are possible.

Table H – 2018 Primary Service Area Population Estimates
(U.S. Census Information and ESRI)

Ages	2010 Census	2018 Projection	2023 Projection	Percent Change	Percent Change Nat'l
-5	501	483	475	-5.2%	+2.5%
5-17	1,672	1,577	1,568	-6.2%	+0.9%
18-24	720	696	633	-12.1%	+0.7%
25-44	2,398	2,511	2,602	+8.5%	+12.5%
45-54	2,155	1,789	1,550	-28.1%	-9.5%
55-64	1,929	2,234	2,129	+10.4%	+17.2%
65-74	905	1,533	1,901	+110.1%	+65.8%
75+	539	687	961	+78.3%	+40.2%

	2010 Census	2018 Projection	2023 Projection	Percentage Change
Primary (60+ Population)	2,306	3,312	3,975	+72.4%
Chester (60+ Population)	275	362	415	+50.9%



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25-44	2,398	2,511	2,602	+8.5%	+12.5%
45-54	2,155	1,789	1,550	-28.1%	-9.5%
55-64	1,929	2,234	2,129	+10.4%	+17.2%
65-74	905	1,533	1,901	+110.1%	+65.8%
75+	539	687	961	+78.3%	+40.2%

	2010 Census	2018 Projection	2023 Projection	Percentage Change
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Chart H – Primary Service Area Population Growth

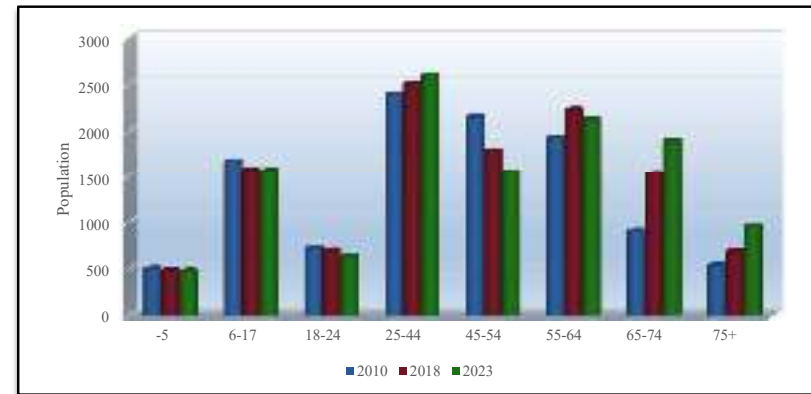


Table-H illustrates the growth or decline in age group numbers from the 2010 census until the year 2023. It is projected that all age categories, except 25-44, 55-64, 65-74 and 75+ age groups, will see a decrease in population. The population of the United States is aging, and it is not unusual to find negative growth numbers in the younger age groups and significant net gains in the 45 plus age groupings in communities which are relatively stable in their population numbers.



Below is listed the distribution of the population by race and ethnicity for Primary Service Area for 2018 population projections. Those numbers were developed from 2010 Census Data.

Table J – Primary Service Area Ethnic Population and Median Age 2018
(Source – U.S. Census Bureau and ESRI)

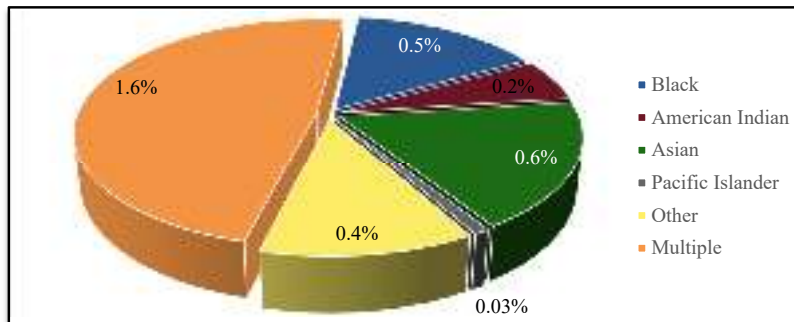
Ethnicity	Total Population	Median Age	% of Population	% of MA Population
Hispanic	290	24.8	2.5%	12.2%

Table K – Primary Service Area by Race and Median Age 2018
(Source – U.S. Census Bureau and ESRI)

Race	Total Population	Median Age	% of Population	% of MA Population
White	11,119	48.3	96.6%	76.3%
Black	52	46.7	0.5%	7.6%
American Indian	28	50.0	0.2%	0.3%
Asian	71	40.6	0.6%	6.8%
Pacific Islander	3	17.5	0.03%	0.04%
Other	49	25.8	0.4%	5.7%
Multiple	188	28.2	1.6%	3.2%

2018 Primary Service Area Total Population: 11,510 Residents

Chart J – 2018 Primary Service Area Population by Non-White Race



Tapestry Segmentation

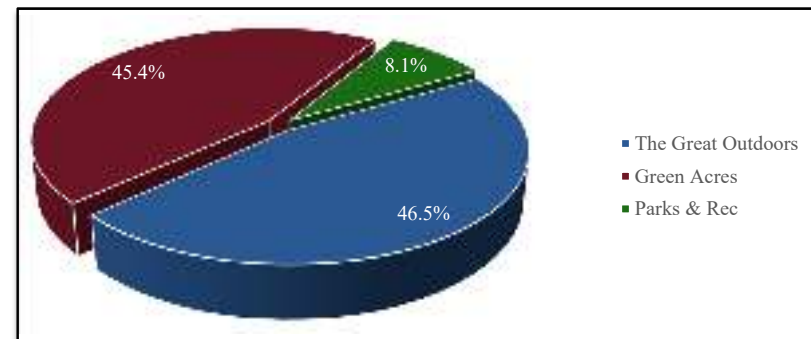
Tapestry segmentation represents the 4th generation of market segmentation systems that began 30 years ago. The 65-segment Tapestry Segmentation system classifies U.S. neighborhoods based on their socioeconomic and demographic compositions. While the demographic landscape of the U.S. has changed significantly since the 2000 Census, the tapestry segmentation has remained stable as neighborhoods have evolved.

There is value including this information for Primary Service Area. The data assists the organization in understanding the consumers/constituents in their service area and supply them with the right products and services.

Table N – Primary Service Area Tapestry Segment Comparison
(ESRI estimates)

	Primary Service Area		Demographics	
	Percent	Cumulative Percent	Median Age	Median HH Income
The Great Outdoors (6C)	46.5%	46.5%	46.3	\$53,000
Green Acres (6A)	45.4%	91.9%	43.0	\$72,000
Parks & Rec (5C)	8.1%	100.0%	40.3	\$55,000

Chart L – Primary Service Area Tapestry Segment Representation by Percentage:





The Great Outdoors (6C) – These neighborhoods are found in pastoral settings throughout the U.S. Consumers are educated empty nesters living an active but modest lifestyle. Their focus is land. They are active gardeners and partial to homegrown and home-cooked meals. Most of these residents still work, with incomes slightly above the U.S. level. Over 55% of households are married-couple families; 36% are couples with no children living at home.

Green Acres (6A) – Resident's lifestyle feature country living and self-reliance. They are avid do-it-yourselfers, maintaining and remodeling their homes, with all the necessary power tools to accomplish the jobs. Outdoor living also features a variety of sports; hunting and fishing, motorcycling, hiking and camping, and even golf. An older market primarily married couples, most with no children.

Parks & Rec (5C) – Many of these families are two-income married couples approaching retirement age; they are comfortable in their jobs and their homes, budget wisely, but do not plan on retiring anytime soon or moving. The appeal of these kid-friendly neighborhoods is now attracting a new generation of young couples. Household by type mirror the U.S. distribution; married couples, more without children, dominate. There is a significant Hispanic (11.3%) population in this segment.



Demographic Summary

The following summarizes the demographics of the Primary Service Area. When developing indoor community centers, B*K typically looks for a younger median age, higher median household income and a population of greater than 50,000. Those characteristics point to the ability to not only support but generate significant revenue from a membership-based facility. The characteristics of the primary service differ significantly, but that does not mean that there isn't a need for indoor spaces and services. Any indoor space that a community would look to develop, would need to focus on providing services to the older population segments, but also include the full age spectrum.



Section II – Participation, Trends & Providers

In addition to analyzing the demographic realities of the service areas, it is possible to project possible participation in recreation and sport activities.

Participation Numbers: On an annual basis, the National Sporting Goods Association (NSGA) conducts an in-depth study and survey of how Americans spend their leisure time. This information provides the data necessary to overlay rate of participation onto the Primary Service Area to determine market potential. The information contained in this section of the report, utilizes the NSGA’s most recent survey. For that data was collected in 2017 and the report was issued in May of 2018.

B*K takes the national average and combines that with participation percentages of the Primary Service Area based upon age distribution, median income, region and National number. Those four percentages are then averaged together to create a unique participation percentage for the service area. This participation percentage when applied to the population of the Primary Service Area then provides an idea of the market potential for various activities.

Indoor Activities Participation: These activities are could take place at an indoor community center or senior center.

Table A –Participation Rates for Primary Service Area

	Age	Income	Region	Nation	Average
Aerobic Exercise	15.4%	14.6%	15.0%	15.2%	15.0%
Bicycle Riding	12.0%	14.9%	11.9%	12.3%	12.8%
Billiards/Pool	6.7%	7.2%	8.1%	7.1%	7.3%
Bowling	10.5%	13.5%	12.1%	11.5%	11.9%
Exercise Walking	38.2%	34.1%	36.7%	35.4%	36.1%
Exercise w/ Equipment	19.3%	17.8%	20.8%	18.8%	19.2%
Golf	6.4%	7.7%	9.3%	6.1%	7.4%
Pilates	0.3%	2.1%	1.3%	1.9%	1.4%
Running/Jogging	13.2%	15.6%	15.4%	14.8%	14.8%
Swimming	15.8%	18.2%	17.8%	16.2%	17.0%
Table Tennis/Ping Pong	3.1%	3.8%	3.2%	3.5%	3.4%
Tennis	3.7%	5.2%	5.3%	4.2%	4.6%
Weight Lifting	12.0%	12.7%	14.8%	12.4%	13.0%
Workout at Clubs	12.4%	13.2%	17.7%	12.7%	14.0%
Yoga	9.4%	11.6%	10.6%	10.0%	10.4%
Did Not Participate	23.3%	17.6%	22.1%	22.8%	21.5%

Age: Participation based on individuals ages 7 & Up of the Primary Service Area.
Income: Participation based on the 2016 estimated median household income in the Primary Service Area.
Region: Participation based on regional statistics (New England).
National: Participation based on national statistics.
Average: Average of the four columns.

Notes:

- “Did Not Participate” refers to all 55 activities tracked by the NSGA.
- It is important to understand that the activities referenced in Table-A, outside of Pilates, are high use, high percentage portions of the population.



Anticipated Participation Number: Utilizing the average percentage from Table-A above plus the 2010 census information and census estimates for 2018 and 2023 (over age 7) the following comparisons are available.

Table B –Participation Growth or Decline in Primary Service Area

	Average	2010 Population	2018 Population	2023 Population	Difference
Aerobic Exercise	15.0%	1,516	1,624	1,673	+157
Bicycle Riding	12.8%	1,288	1,379	1,420	+133
Billiards/Pool	7.3%	733	785	808	+76
Bowling	11.9%	1,201	1,287	1,325	+124
Exercise Walking	36.1%	3,638	3,898	4,014	+376
Exercise w/ Equipment	19.2%	1,933	2,071	2,133	+200
Golf	7.4%	743	796	820	+77
Pilates	1.4%	141	151	156	+15
Running/Jogging	14.8%	1,487	1,594	1,641	+154
Swimming	17.0%	1,714	1,836	1,891	+177
Table Tennis/Ping Pong	3.4%	344	368	379	+35
Tennis	4.6%	464	498	512	+48
Weight Lifting	13.0%	1,309	1,402	1,444	+135
Workout at Clubs	14.0%	1,411	1,512	1,557	+146
Yoga	10.4%	1,048	1,123	1,156	+108
Did Not Participate	21.5%	2,163	2,318	2,386	+223

Notes:

- These figures do not necessarily translate into attendance figures for various activities or programs. The “Did Not Participate” statistics refers to all 55 activities outlined in the NSGA 2017 Survey Instrument.
- The figures provided above DO NOT suggest attendance at an indoor facility, but rather the market potential for the various activities in the service area. It is also important to note that these are not unique users. In other words someone who participates in swimming may also participate in yoga and other activities.



Participation by Ethnicity and Race: The table below compares the overall rate of participation nationally with the rate for Hispanics and African Americans. Utilizing information provided by the National Sporting Goods Association's 2017 survey, the following comparisons are possible.

Table C – Comparison of National, African American and Hispanic Participation Rates

Indoor Activity	Primary Service Area	National Participation	African American Participation	Hispanic Participation
Aerobic Exercise	15.0%	15.2%	14.5%	11.4%
Bicycle Riding	12.8%	12.3%	8.0%	10.2%
Billiards/Pool	7.3%	7.1%	6.0%	6.1%
Bowling	11.9%	11.5%	11.2%	8.8%
Exercise Walking	36.1%	35.4%	29.4%	25.6%
Exercise w/ Equipment	19.2%	18.8%	15.8%	15.0%
Golf	7.4%	6.1%	2.3%	2.6%
Pilates	1.4%	1.9%	1.9%	1.8%
Running/Jogging	14.8%	14.8%	14.0%	14.9%
Swimming	17.0%	16.2%	10.2%	12.9%
Table Tennis/Ping Pong	3.4%	3.5%	2.4%	2.7%
Tennis	4.6%	4.2%	3.2%	3.6%
Weight Lifting	13.0%	12.4%	13.2%	10.5%
Workout at Clubs	14.0%	12.7%	12.0%	11.2%
Yoga	10.4%	10.0%	8.5%	9.0%
Did Not Participate	21.5%	22.8%	26.6%	26.6%

Secondary Service Part:

National Rate:

African American Rate:

Hispanic Rate:

The unique participation percentage developed for Primary Service Area.
The national percentage of individuals who participate in the given activity.
The percentage of African-Americans who participate in the given activity.
The percentage of Hispanics who participate in the given activity.

The presence of a specific race or ethnicity within a population can have an impact on the overall participation of activities. Given that there is not a significant African American or Hispanic population in the Primary Service Area these numbers become less important to determining facility components.



Summary of Sports Participation: The following chart summarizes participation for indoor activities utilizing information from the 2017 National Sporting Goods Association survey.

Table D – Sports Participation Summary

Sport	Nat'l Rank ⁵	Nat'l Participation (in millions)
Exercise Walking	1	104.5
Exercising w/ Equipment	2	55.6
Swimming	3	47.9
Aerobic Exercise	4	44.9
Running/Jogging	6	43.8
Workout @ Club	8	37.4
Weight Lifting	9	36.5
Bicycle Riding	10	36.4
Bowling	11	34.0
Yoga	13	29.6
Billiards/Pool	15	21.0
Golf	17	17.9
Tennis	22	12.3
Table Tennis/Ping Pong	25	10.2
Pilates	40	5.7

Nat'l Rank: Popularity of sport based on national survey.

Nat'l Participation: Population that participate in this sport on national survey.

This information provides popularity on a national level for the various activities.

⁵ This rank is based upon the 55 activities reported on by NSGA in their 2016 survey instrument.



Participation by Age Group: Within the NSGA survey, participation is broken down by age groups. As such B*K can identify the top 3 age groups participating in the activities reflected in this report.

Chart E – Participation by Age Group:

Activity	Largest	Second Largest	Third Largest
Exercise Walking	55-64	45-54	65-74
Exercising w/ Equipment	45-54	35-44	25-34/55-64
Swimming	35-44	45-54	12-17
Aerobic Exercise	35-44	25-34	45-54
Running/Jogging	25-34	35-44	18-24
Workout @ Club	25-34	35-44	45-54
Weight Lifting	25-34	35-44	45-54
Bicycle Riding	7-11	45-54	55-64/35-44
Bowling	25-34	35-44	45-54
Yoga	25-34	35-44	45-54
Billiards/Pool	25-34	35-44	18-24
Golf	55-64	45-54	35-44
Tennis	25-34	35-44	45-54
Table Tennis/Ping Pong	25-34	18-24	35-44
Pilates	25-34	35-44	45-54

Largest: Age group with the highest rate of participation.

Second Largest: Age group with the second highest rate of participation.

Third Largest: Age group with the third highest rate of participation.

Again, as with the previous page, the information above is a national perspective.

Sports Participation Trends: Below are listed several sports activities and the percentage of growth or decline that each has experienced nationally over the last ten years (2008-2017).

Table F – National Activity Trend (in millions)

	2008 Participation	2017 Participation	Percent Change
Yoga	13.0	29.6	+127.7%
Running/Jogging	30.9	43.8	+41.7%
Aerobic Exercising	32.2	44.9	+39.4%
Exercise Walking	96.6	104.5	+8.2%
Weight Lifting	33.9	36.5	+7.7%
Pilates ⁶	5.5	5.7	+3.6%
Exercising w/ Equipment	55.0	55.5	+0.9%
Tennis	12.6	12.3	-2.4%
Workout @ Club	39.3	37.4	-4.8%
Bicycle Riding	38.7	36.4	-5.9%
Swimming	53.5	47.9	-10.5%
Golf	23.2	17.9	-22.8%
Bowling	44.7	34.0	-23.9%

2017 Participation: The number of participants per year in the activity (in millions) in the United States.

2008 Participation: The number of participants per year in the activity (in millions) in the United States.

Percent Change: The percent change in the level of participation from 2008 to 2017.

⁶ Change from 2014-2017

Market Potential Index for Adult Participation: In addition to examining the participation numbers for various indoor activities through the NSGA 2017 Survey and the Spending Potential Index for Entertainment & Recreation, B*K can access information about Sports & Leisure Market Potential. The following information illustrates participation rates for adults in various activities.

Table G – Market Potential Index for Adult Participation in Sport Activities

Adults participated in:	Expected Number of Adults	Percent of Population	MPI
Aerobic Exercising	619	6.6%	83
Bicycling (road)	858	9.1%	90
Bowling	726	7.7%	79
Golf	988	10.5%	121
Jogging/Running	1,315	13.9%	108
Pilates	196	2.1%	74
Ping Pong	271	2.9%	76
Swimming	1,769	18.7%	116
Tennis	268	2.8%	81
Walking for Exercise	2,530	26.8%	110
Weight Lifting	960	10.2%	97
Yoga	808	8.6%	105
Zumba	230	2.4%	65

Expected # of Adults: Number of adults, 18 years of age and older, participating in the activity in Primary Service Area.

Percent of Population: Percent of the service area that participates in the activity.

MPI: Market potential index as compared to the national number of 100.

This table indicates that the overall propensity for adults to participate in the activities listed is greater than the national number of 100 in only 5 instances. In many cases when a participation number is lower than the National number there are factors impacting participation. Primary factors typically include a lack of facilities or an inability to pay for services and programs.



Table H – Market Potential Index for Adult Participation in Non-Sport Activities

Adults participated in ⁷ :	Expected Number of Adults	Percent of Population	MPI
Member of AARP	1,510	16.0%	134
Attend Adult Ed. Course	708	7.5%	96
Went to Art Gallery	741	7.8%	99
Played Billiards/Pool	539	5.7%	86
Played Bingo	352	3.7%	92
Did Birdwatching	620	6.6%	147
Played Board Games	1,596	16.9%	115
Participated in Book Club	272	2.9%	98
Played Cards	1,716	18.2%	113
Did Crossword Puzzle	1,025	10.8%	110
Danced/Went Dancing	534	5.7%	74
Participate in Gardening	1,110	11.7%	128
Went to Museum	1,181	12.5%	97
Played Musical Instrument	765	8.1%	108
Did Painting/Drawing	808	8.6%	112
Did Photo Album/Scrapbook	477	5.0%	113
Participated in Trivia	730	7.7%	116
Did Woodworking	795	8.4%	186

Expected # of Adults: Number of adults, 18 years of age and older, participating in the activity in Primary Service Area.

Percent of Population: Percent of the service area that participates in the activity.

MPI: Market potential index as compared to the national number of 100.

This table indicates that the overall propensity for adults to participate in the activities listed is greater than the national number of 100 in 11 instances. In many cases when a participation number is lower than the National number there are factors impacting participation. Primary factors typically include a lack of facilities or an inability to pay for services and programs.

In contrast to the sport-oriented activities, it would appear that the adult population within the Primary Service Area is interested in more passive recreation pursuits, which points to a more traditional senior population.

⁷ All of these activities were done in the past 12-month time span.

SECTION 4

SPACE NEEDS PROGRAM & PLANS

PROGRAM

A Senior Center program was developed based using various source materials:

- 1. A demographic profile for the Town of Chester by Ballard King & Associates
- 2. A meeting with the current director of the Council on Aging

The program was used to create very conceptual block diagram schemes for a range of one-story options, starting at 2,400 sf, the approximate size of the existing Senior Center, and incrementally “stepping up” to a 7,000 sf building. The purpose of the range analysis was to study what spaces were available at various budget levels. The block diagram provides a “footprint” to show how a building can be placed on a prospective site, where the main entries and services can be located and how staff and user parking relates to the building.

The current senior population of Chester is approximately 360 people based the Demographic Profile. While the senior population is expected to grow in the coming years, the numbers would not justify a Senior Center larger than 5,000 sf. The block diagrams with greater square footage are representative of a Regional Center that serves the surround towns of Beckett, Huntington, Blandford and others and will require more programming spaces.

The new program can be informed by deficiencies in the existing program and building and the Ballard King & Associates Demographic Profile for the Town

of Chester. Restrictions on the number and variety of programs that can be offered due to physical space limitations serve as a disincentive for many residents to participate.

Residents and town leaders agree that responding to the growing older population is important. Offices and organizations throughout Chester are affected by the shifting demographic profile of the community. Establishing improved space for COA activities and services is recognized as a priority for the community.

Town requirements for the program included the following criteria:

- Areas to be considered and provided for include, but are not limited to, areas for social gathering, reception, kitchen, rooms for special functions, administrative meeting areas, and parking.
- The design process will emphasize cost effective concepts consistent with code, regulation, and professional standard for public facilities.
- In addition, the design should be flexible to allow for future program modifications.
- Design and materials concepts and cost estimates are to consider minimizing life-cycle costs.

Administrative Accommodations

The Senior Center is currently staffed by 1 part-time employee, and multiple volunteers.

The new center will likely require additional staff including:

Program Coordinator	FT
Food Service / Chef / Kitchen Staff	FT
Custodian / Maintenance Worker	FT
Front Desk	FT
Fitness Attendant	PT
General Instructors (2)	PT

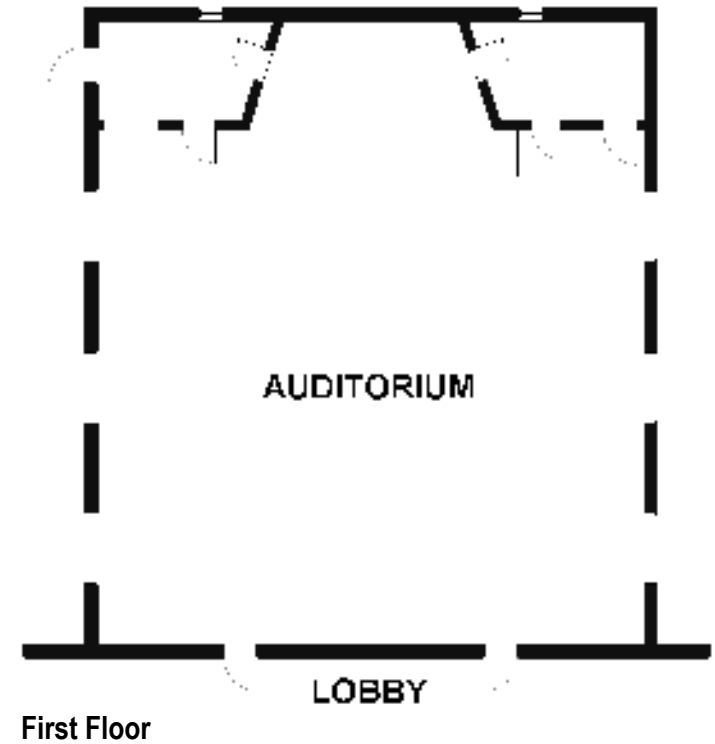
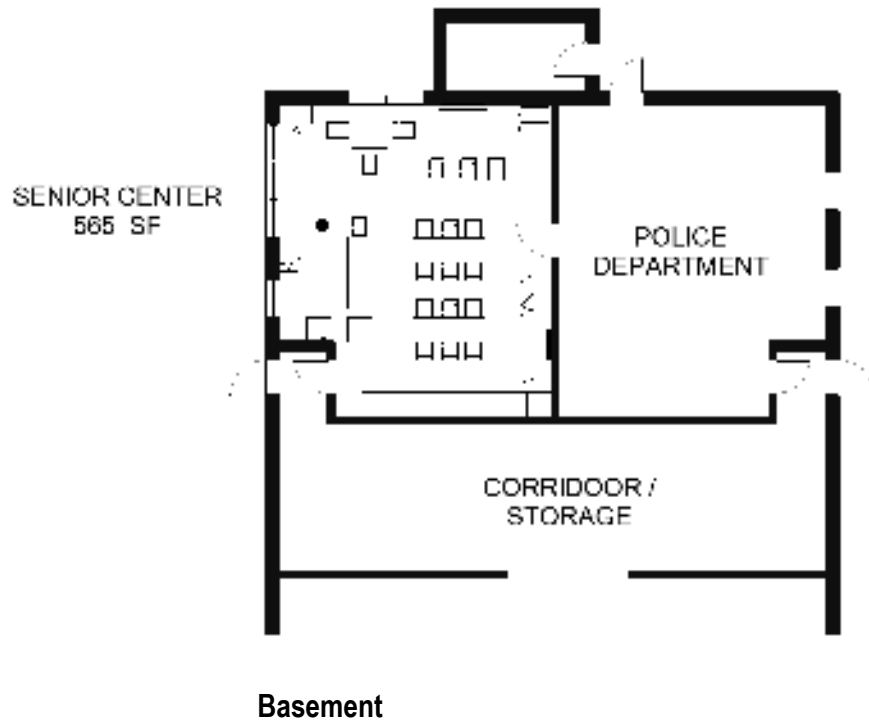
Additionally, the program will rely on volunteers to operate the larger space.

Parking Program

Parking needs are determined in a number of ways. The requirements of the Chester zoning bylaws are a benchmark. Second, occupancy per room and for the building is projected for a typical day and for a special event (holiday lunch, lecture, movie). This occupancy is then converted into vehicle use. Third, parking data from other communities is reviewed.

Parking requirements need to accommodate cars as well as vans and other means of transportation. As the population continues to age, alternatives to self-driving will be increasingly sought out. Especially given the limited public transportation options in the area, COA services will experience high demand.

EXISTING BUILDING DESCRIPTION



The current Senior Center is no longer adequate to serve the needs of the senior population of Chester. Currently there is a single function room in the basement of Town Hall which is home to all Senior Center activities. Though the auditorium on the first floor is used for larger events, it is often not large enough for hosting activities with peak turnout. Because of this, it is not possible to have activities occurring simultaneously. There are currently no administrative offices; a card table is used when needed for administrative work. There is no running water in the kitchen. No dedicated storage spaces are available for the Senior Center. Currently items are stored in the adjacent corridor which is shared with the Chester Theatre group. Medical equipment and supplies are stored in the former Men's restroom. Sunlight and views to the exterior are limited due to the few windows in the room. Given the limited space available in the building and the noted deficiencies, the existing building does not appear to be a candidate for revision or expansion.



The existing kitchen is inadequate to serve meals to large groups of seniors, and there is no running water.



Items stored in the corridor outside of the Senior Center.



The auditorium, which can be used on a temporary basis for larger gatherings and programming events.



There is very little space for storage, so unused items are dispersed around the room, making usable space that much smaller.

PROGRAM SUMMARY DESCRIPTION

Senior Center Member Usage

<i>Multi-Purpose Room</i>	This is the main room of the Senior Center program. It is divisible into two smaller rooms with a movable partition. The room serves large events, academic classes, popular speakers, movies or other presentations, fitness and dance, special events, lunches, and intergenerational opportunities. In subdivided mode, one side serves as dining space on a daily basis. Served directly by the kitchen with adequate acoustical separation. Room needs acoustical treatment, high end audio/visual and hearing assist technology.
<i>Kitchen</i>	A commercial grade kitchen which is domesticated for use by professional and volunteer staff. The kitchen becomes a program and teaching space when properly designed for usability and with proper space for an island. Suitable for classes and for preparing breakfast, lunch, and meals on wheels if desired. Appropriate storage space to enable groceries and sundries to be bulk purchased.
<i>Program Room (General)</i>	Various group meetings and classes such as bridge lessons, current events group, language or ESL classes, support groups. Can be used for cards and games and as a back-up for fitness rooms. Outfitted with technology to be used for training of new technologies as well as distance learning and other teaching opportunities requiring computer workstations. Uses would include smaller classes, events, speakers and intergenerational opportunities.
<i>Conference Room / Medical Closet</i>	A room for one-on-one meetings, family meetings, COA board meetings, various small program groups such as "current events." A medical closet conceals a sink and medical supplies which allows this room to be converted to a health and wellness space when required.
<i>Wellness Center</i>	For senior-specific smaller fitness classes such as Yoga, Tai Chi, Strength and Balance.

Senior Center Staff Usage

<i>Front Desk Reception</i>	To welcome participants, answer questions. This should be easily accessible by the Senior Center handicapped accessible vans.
<i>Offices</i>	Executive Director, Program Coordinator or Outreach Coordinator Office, SHINE office, Work Stations.

Storage Facilities

<i>Storage Rooms</i>	Administrative storage space for office supplies, copier, printers, etc.
<i>Janitor Closet</i>	Space for janitor sink and cleaning supplies as well as storage of paper towels, toilet paper and other disposable supplies.
<i>Multi-Purpose Storage</i>	Large room for storage of a portable stage, tables and chairs, mats and other equipment used in the multi-purpose room.

Restrooms

<i>Restrooms</i>	General use accessible restrooms.
<i>Companion Restroom</i>	Restroom with shower, fully accessible for use by disabled users or those requiring assistance from an aide or family member.
<i>Single User and Staff Restroom</i>	Private restrooms for single user, including staff, located such that travel distance is minimized for the disabled user.

Outdoor Facilities

<i>Outdoor Patio</i>	Generally accessible from the multi-purpose room, the patio is a place for outdoor dining and programming.
<i>Outdoor Spaces</i>	When a site allows, outdoor spaces for walking trails, outdoor games (such as boccie or croquet) or gardening.
<i>Drop-Off</i>	Vehicle drop-off space at the main entry to the building. Covered, protected entry is desirable.
<i>Parking</i>	Convenient parking for between 40 and 50 cars. Overflow parking for 10 cars for special events and surge capacity (may be on site or a shared lot), plus two vans.

PROGRAM ANALYSIS FOR SIZE AND BUDGET ANALYSIS

Exec Office of Elder Affairs Benchmarks
 Chester population over 65 500 4 psf
 Service Area population over 65 2,220 2,000
 8,880

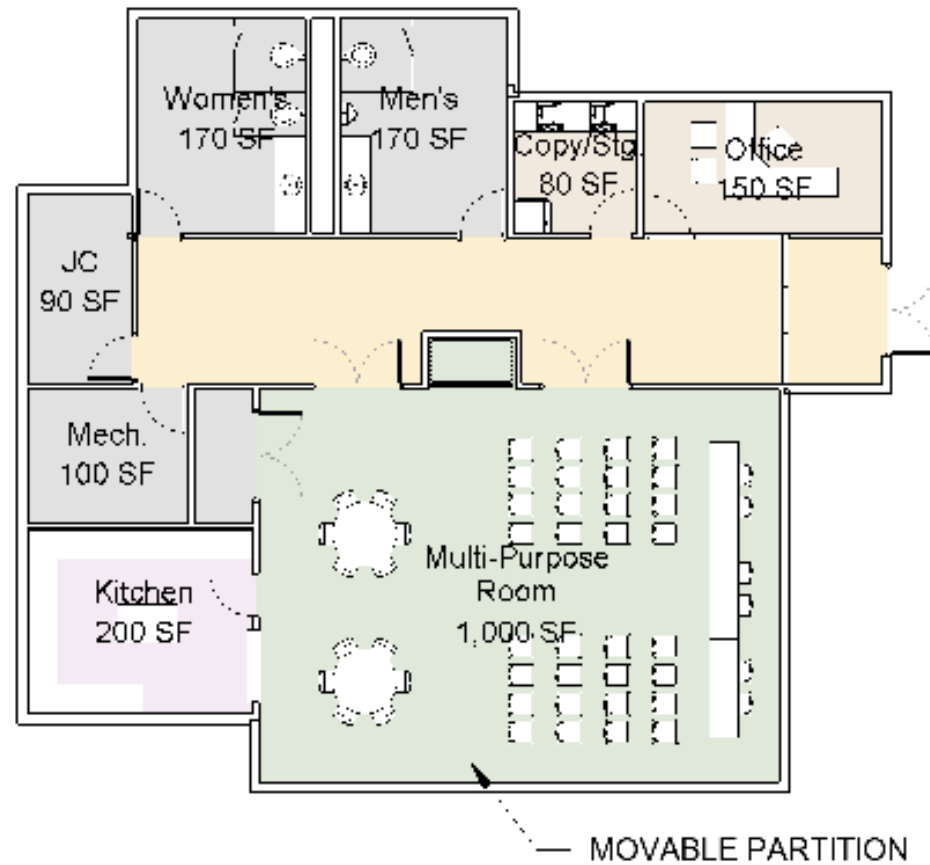
size option	1	2	3	4	5	
Existing Senior Center	"Replicate" Existing Center	3,000 sf Senior Center	5,000 sf Senior Center/Shelter	6,000 sf Regional Center	7,000 sf Regional Center	Add Supportive Care
Lobby/Reception						
Lobby / Reception & Information Area; Social Area			350	400	400	
Lobby Coat Room						
Café, Lounge, Social Area						
Administrative Offices						
Reception Desk / Receptionist			150	150	150	
Executive Director office	150	150	150	150	150	
Administrative Assistant			70	70	70	
SHINE Office			100	100	100	
Outreach Coordinator office (similar to social worker)			70	70	70	
Transportation Coordinator workstation or office						
Volunteer Coordinator workstation						
Program Coordinator workstation						
Professional Office						
Health Office/Nurses						
Waiting Area for offices or nurse						
Staff storage/kitchenette						
Administrative Storage, Copy & Supplies	80	80	80	100	100	
Program Spaces						
Library Reading & Lounge Area				300	300	
Conference Room				1,500	1,500	
Multi-Purpose Room	600	1,000	1,000	50	50	
Program Storage	25	25	50		900	
Program Room: General & Subdividable						
Program Room: Technology/Maker Space						
Program Room: Arts & Crafts						
Arts & Crafts Storage						
Wellness Center: Exercise Class Area			700	700	700	
Exercise Storage						
Game Room						
Storage						
Food Service						
Kitchen	200	200	300	300	300	
Dining Room		450	450	450	450	
Pantry Storage			100	100	100	
Walk in Cooler/Freezer						
Loading / Receiving / Storage						
Restrooms						
Women's Restroom	shared	170	200	200	230	
Men's Restroom	shared	170	200	200	230	
Men's 2nd Floor Restroom						
Women's 2nd Floor Restroom						
Companion Restroom with shower			80	80	80	
Staff Restroom						
Support Spaces						
Mechanical / Electrical / Sprinkler	shared	100	100	100	100	
Boiler Room						
Medical & Health Equipment Storage						
Custodian	shared	90	90	90	90	
Interior Furniture Storage						
Respite						
Activity Room						800
Staff Station						90
Companion Restroom with shower						
Laundry (soiled and clean)						50
Total Net Area	600	1,985	2,495	4,240	5,170	940
Grossing Factor		1.20	1.20	1.17	1.16	1.17
Total Gross Area (rounded)	750	2,400	3,000	5,000	6,000	7,000

Cost Benchmarks

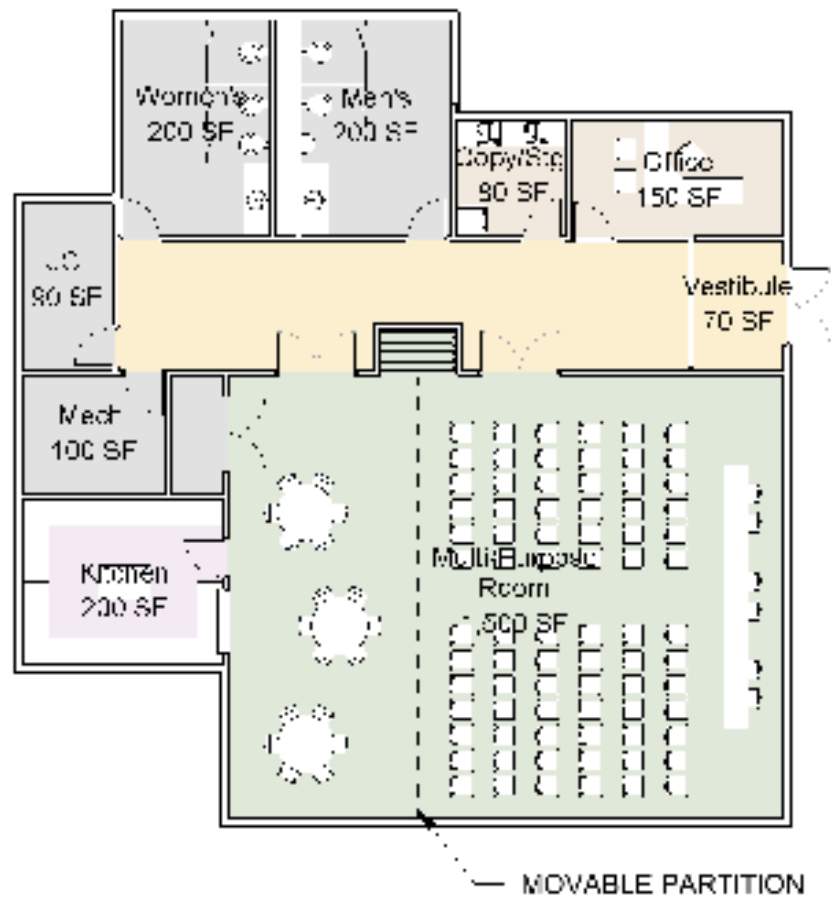
estimated construction cost range
 with grossing factor for total appropriation

\$1,200,000	\$1,500,000	\$2,500,000	\$3,000,000	\$3,500,000	\$550,000
\$1,440,000	\$1,800,000	\$3,000,000	\$3,600,000	\$4,200,000	\$660,000

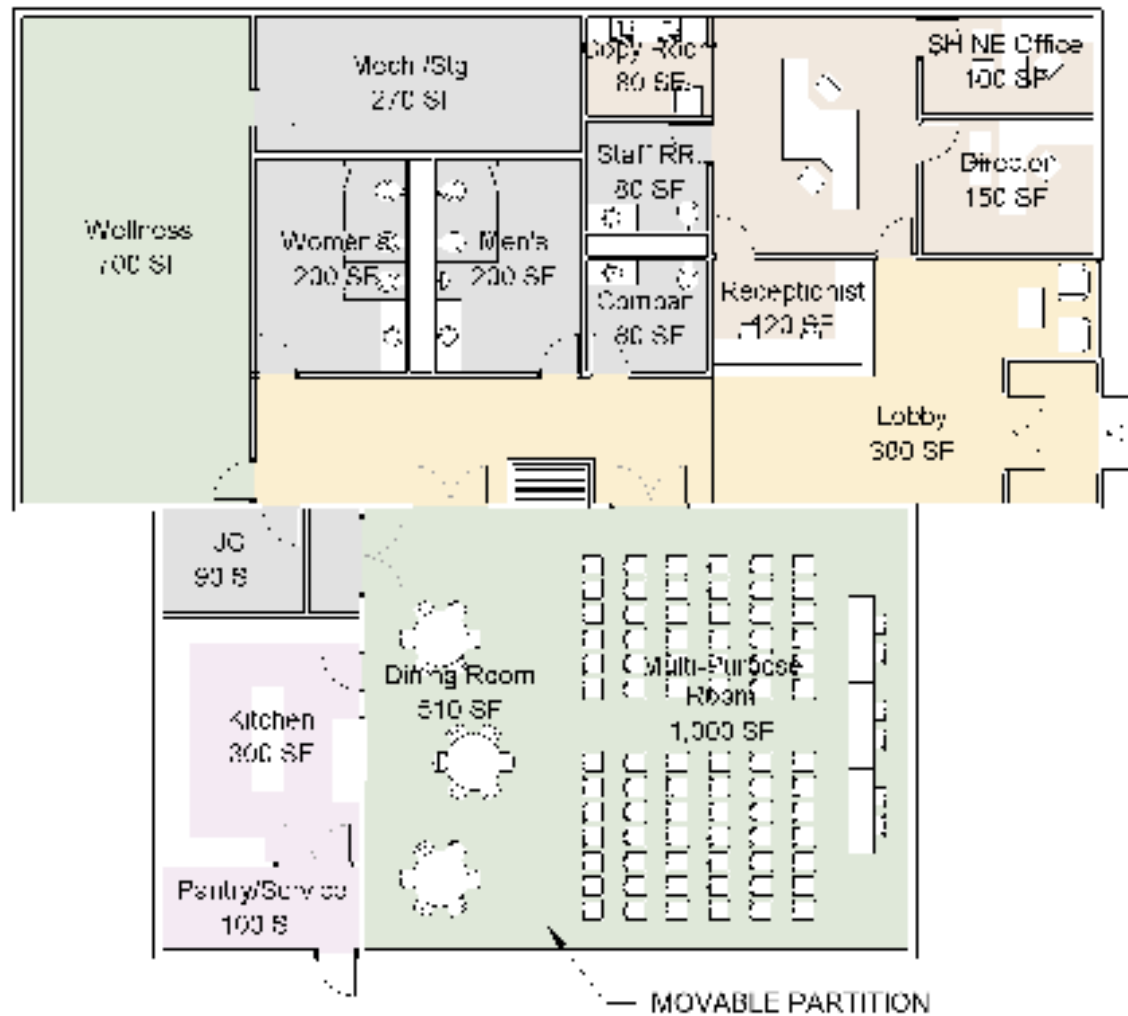
PROGRAM ANALYSIS FOR SIZE AND BUDGET ANALYSIS



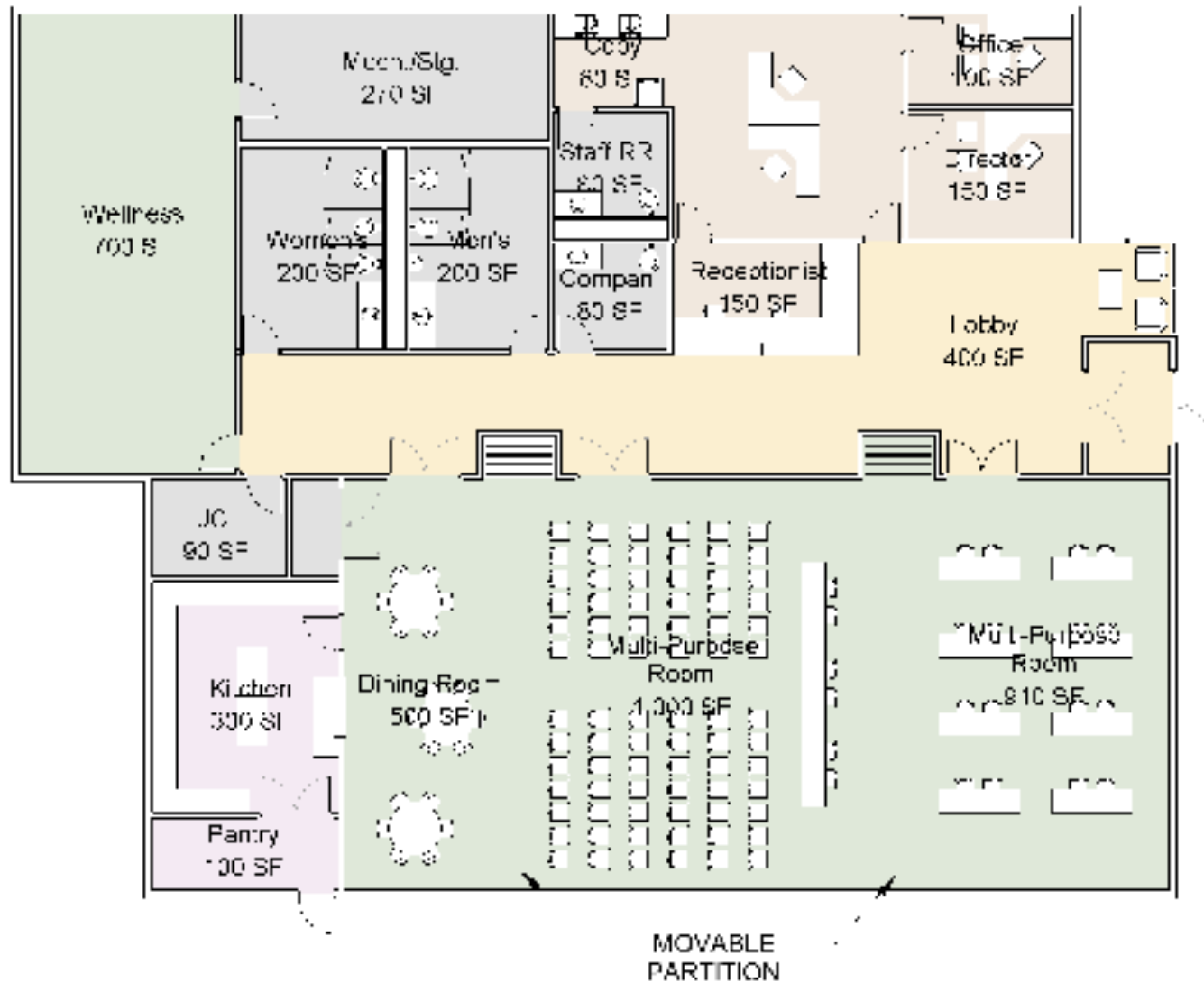
The 2,400 sf option replicates the size of the existing Senior Center while also fixing the observed deficiencies. As noted, the existing Senior Center is too small to properly serve the existing senior community, not to mention the assumed growth in the near future.



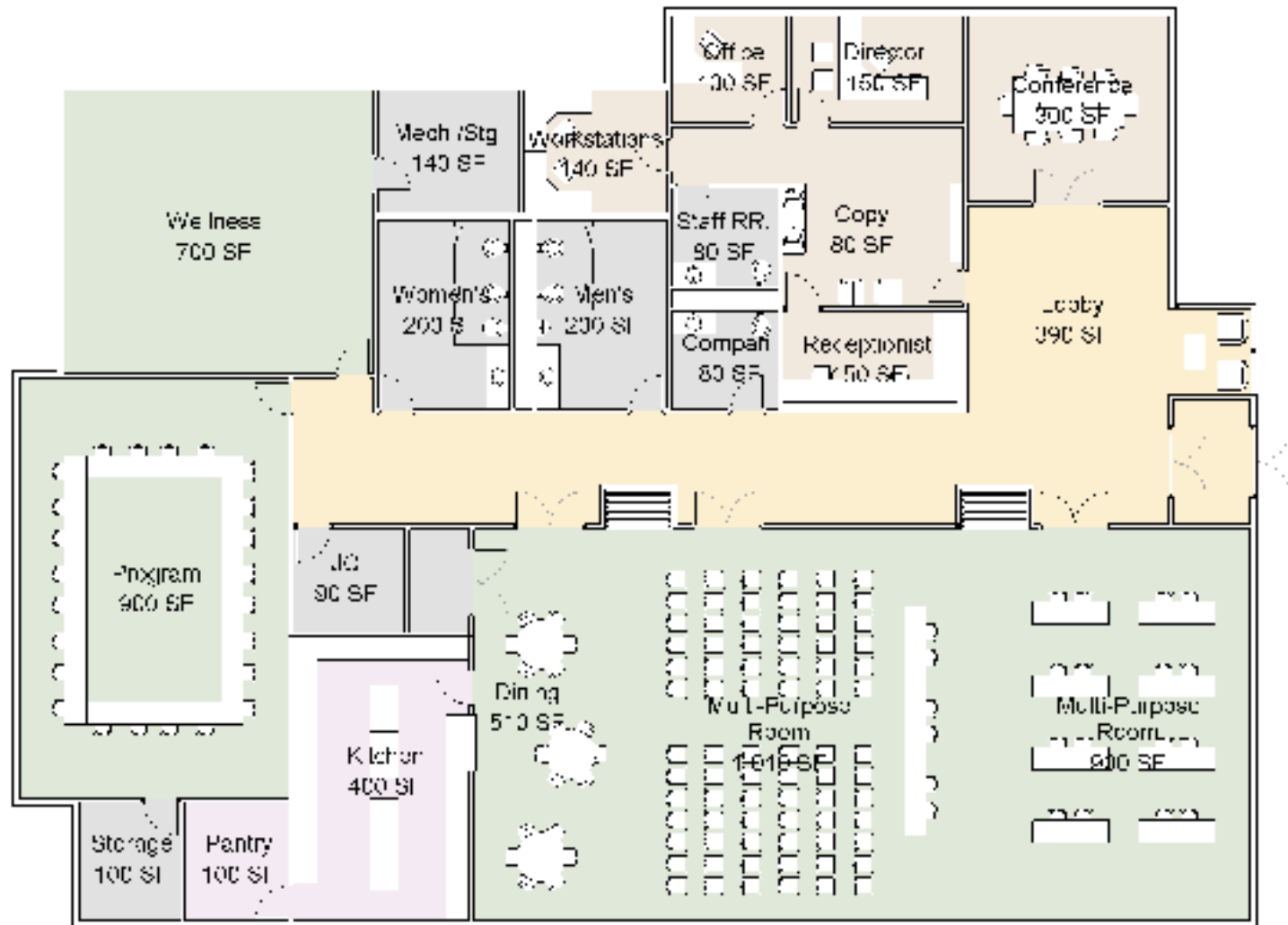
The 3,000 sf plan is similar to the previous plan, but includes a larger multi-purpose room which will allow the space to be subdivided for a more flexible space and can accommodate a greater number of seniors.



The 5,000 sf plan provides an additional program room, additional administrative offices, additional restrooms, a larger kitchen and a pantry. This building will allow the Senior Center to offer more programs (cooking and fitness classes, etc.) and services (SHINE, Outreach, etc.), and cater to a greater number of seniors. It will also be used as an emergency shelter and better accommodate a greater number of people in the event of an emergency.

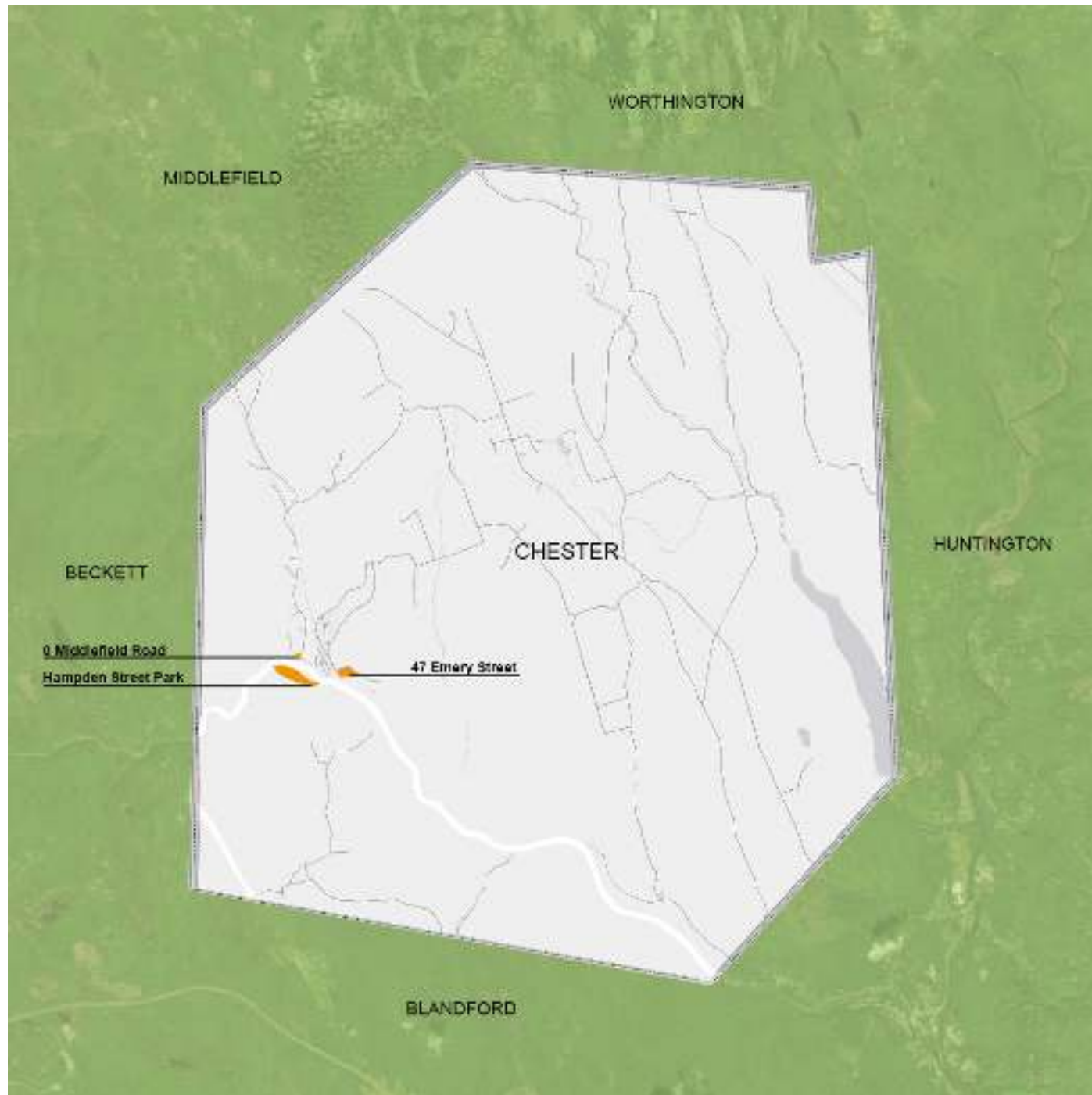


The 6,000 sf plan adds an additional module to the multi-purpose room, making this space more flexible. This size building acts as a Regional Center and attract seniors for the surrounding communities.



The 7,000 sf plan provides a larger, more flexible multi-purpose room, an additional program room, additional administrative space, a larger kitchen, and more storage. This size building acts as a Regional Center and attract seniors for the surrounding communities.

SECTION 5
SITE STUDIES



SITES CONSIDERED

The following three sites were considered to determine feasibility for the construction of a new Senior Center:

- 1. Hampden Street Park
- 2. 47 Emery Street
- 3. 0 Middlefield Road

The following topics are addressed for each site:

- Location
- Buildable Area
- Ownership
- Current Use
- Topography
- Building Layout
- Site Layout
- Parking
- Access and Egress to Site

- Zoning
- Accessibility
- Constructability
- Restrictive Conditions
- Environmental Impact
- Other Site Amenities
- Proximity to features of significance
- Collateral Impacts
- Community Context



Hampden Street Park



47 Emery Street



0 Middlefield Road

HAMPDEN STREET PARK



Hampden Street Park is an undeveloped site on the edge of the downtown area of Chester. It is nearby to several religious and municipal buildings, including Town Hall, the Chester Public Library, and two churches, as well as several restaurants and shops along Main Street. The site is just off of West Main Street (Route 20) and main travel road through Chester. To the south and northwest of the site are residential neighborhoods, with the Main Street area to the northeast.

The majority of the approximately 9-acre site is forested, with the northern edge bordered by the Walker Brook. The banks of the Walker Brook are rocky and slope steeply up to the site. The northwest edge of the site (near the intersection of Hampden Street and West Main Street) is very rocky and almost cliff-like as it meets the river. Moving down Hampden Street towards the southeast the site begins to flatten out, though the land does slope steeply from Hampden Street into the site. There is currently a walking path along with a gazebo and picnic area situated in the center of the site.

There is a 100-Year Flood Plain zone along the edge of the river. New construction, including both buildings and parking, will need to stay out of this area. In addition, effort to mitigate possible flood damage will need to be considered in the final design of any new structures.

Further geotechnical investigations, including test pits and borings, will be required, along with a careful mapping of the topography to determine if the site is in fact appropriate for the construction of a new building and parking lot.



The zoning listed for this property is Residential which allows for the construction of a new Senior Center. The existing site complies with all dimensional lot requirements of the zoning bylaws (minimum lot area, minimum frontage, etc.) and no variance will be required. The building and the parking lot will fit comfortably in the allowable lot coverage restriction.

It is assumed that utilities will be accessed from existing mains on Hampden Street, but further study will be needed to determine exactly what utilities are present, as well as capacity and how this will be affected by the new building. A septic system will be required for this site.

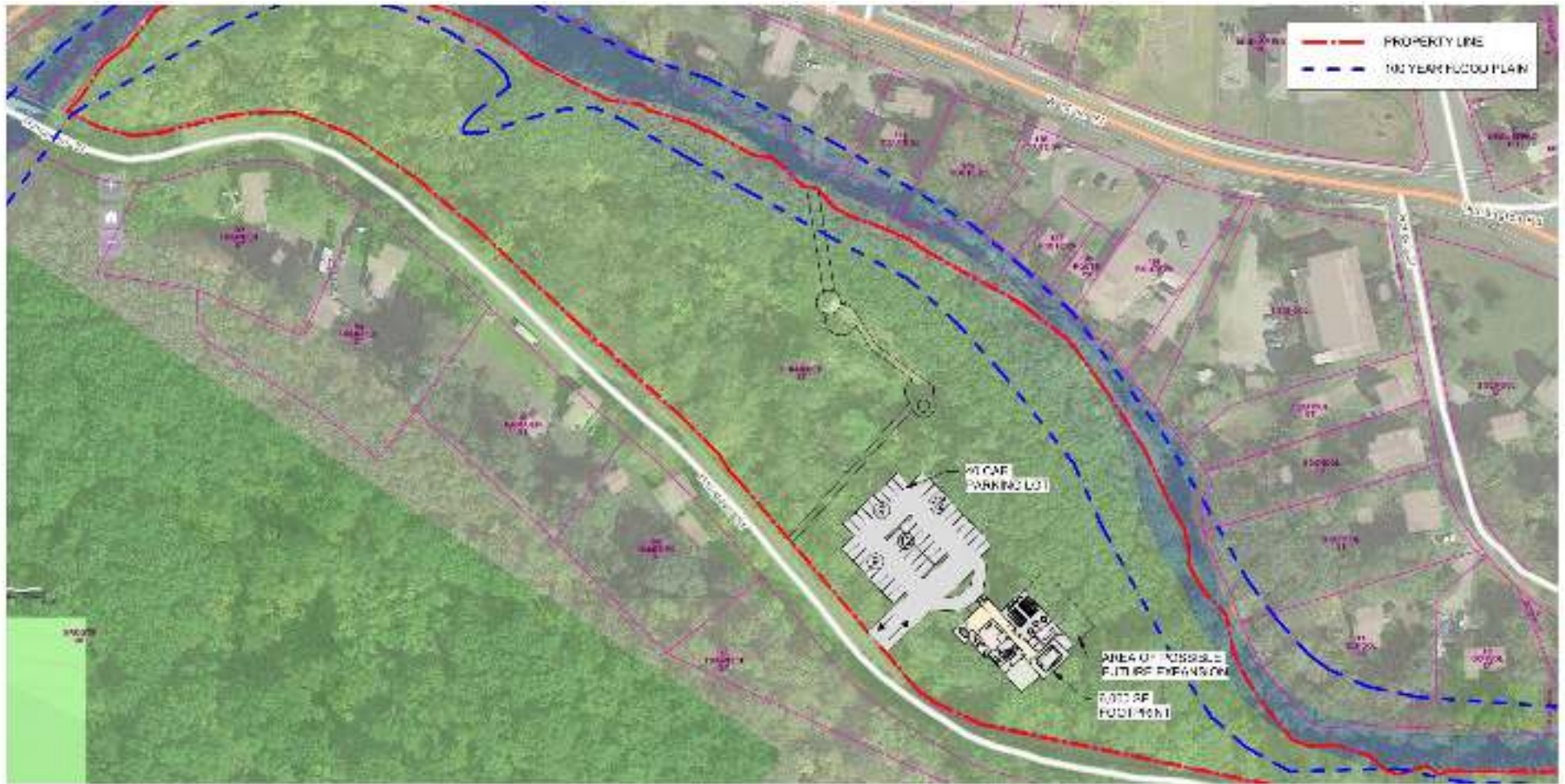
This site is heavily wooded and existing trees will need to be removed and portions of the site will need to be regraded to allow for the construction of the new building and parking lot, though both will be kept to a minimum. As the exact topography and soil conditions are unknown, additional studies and testing will be required. Hazardous materials are not anticipated on the site.

Access to the site will be from Hampden Street, which is used by the few residents on the street. The entry/exit point will be placed to avoid any interference with existing driveways. While the traffic along with road will increase, it is not assumed that this will negatively affect access to existing residences. View corridors when leaving the site are favorable in both directions.



Construction access to this site will be through a residential neighborhood. There will be no restriction to Police, Fire and EMT access to the site. The Police and Fire Departments are less than a mile from the site, with a 2-minute drive (this is not the response time).

HAMPDEN STREET PARK



The option presented located the Senior Center at the southeast corner of the site where the land flattens out. This will provide plenty of room for both the Senior Center and a 40-car parking lot, along with room for overflow parking and future expansion if desired. This option provides good street frontage which will allow the building to be highly visible to seniors approaching the site. The parking lot will be situated near the existing walking trail, and there is enough room on the remainder of the site to construct new walking trails and possibly connect the Senior Center with the Chester Library on the other side of the river. The existing slopes from the road and to the river should not preclude this site from consideration. The building will be kept away from the river bank, and careful grading will allow for a gentle slope from the road to the parking area.

47 EMERY STREET (CHESTER TOWN PARK)



47 Emery Street is the current location of the Chester Town Park and Ballfield and the Town transfer station. It is less than half a mile from the downtown area of Chester, and near several municipal and religious buildings, shops and restaurants along Main Street, and the Chester Railway Museum. There are several residences to the west of the site, and several to the east further down along Emery Street.

The approximately 9-acre site is largely occupied by the park and ballfield. The majority of the site is flat, though there is a gradual slope between the road and the ballfield. The transfer station is at the same level as the road and is separated by the ballfield by a steep, rocky, forested slope. The southern edge of the site is bordered by the West Branch of the Westfield River, and the west edge is bordered by train tracks. The banks of the river slope steeply and are very rocky.

The majority of the site falls within a 100-Year or 500-Year Flood Plain from the Westfield River. In addition, there is a 100'-0" River Bank Buffer zone along the southern portion of this site. New construction, including both buildings and parking, will need to stay out of this area. In addition, effort to mitigate possible flood damage will need to be considered in the final design of any new structures.

The zoning listed for this property is Mixed Use/Business which allows for the construction of a new Senior Center. The existing site complies with all dimensional lot requirements of the zoning bylaws (minimum lot area, minimum frontage, etc.) and no variance will be required. The building and the parking lot will fit comfortably in the allowable lot coverage restriction.

47 EMERY STREET (CHESTER TOWN PARK)



Access to the site will be from Emery Street, which is a narrow, little-used road. If this site is chosen for the new Senior Center, considerations should be made for expansion of the road to allow for increased traffic. The entry/exit point will be located in the same approximate location as the existing transfer station. While the traffic along with road will increase, it is not assumed that this will have a negative affect on the surrounding area. View corridors when leaving the site are favorable in both directions. The open site limits shading from trees and will allow for solar panels to be installed on the roof if desired.

It is assumed that utilities will be accessed from existing mains on Emery Street, but further study will be needed to determine exactly what utilities are present, as well as capacity and how this will be affected by the new building. A septic system will be required for this site.

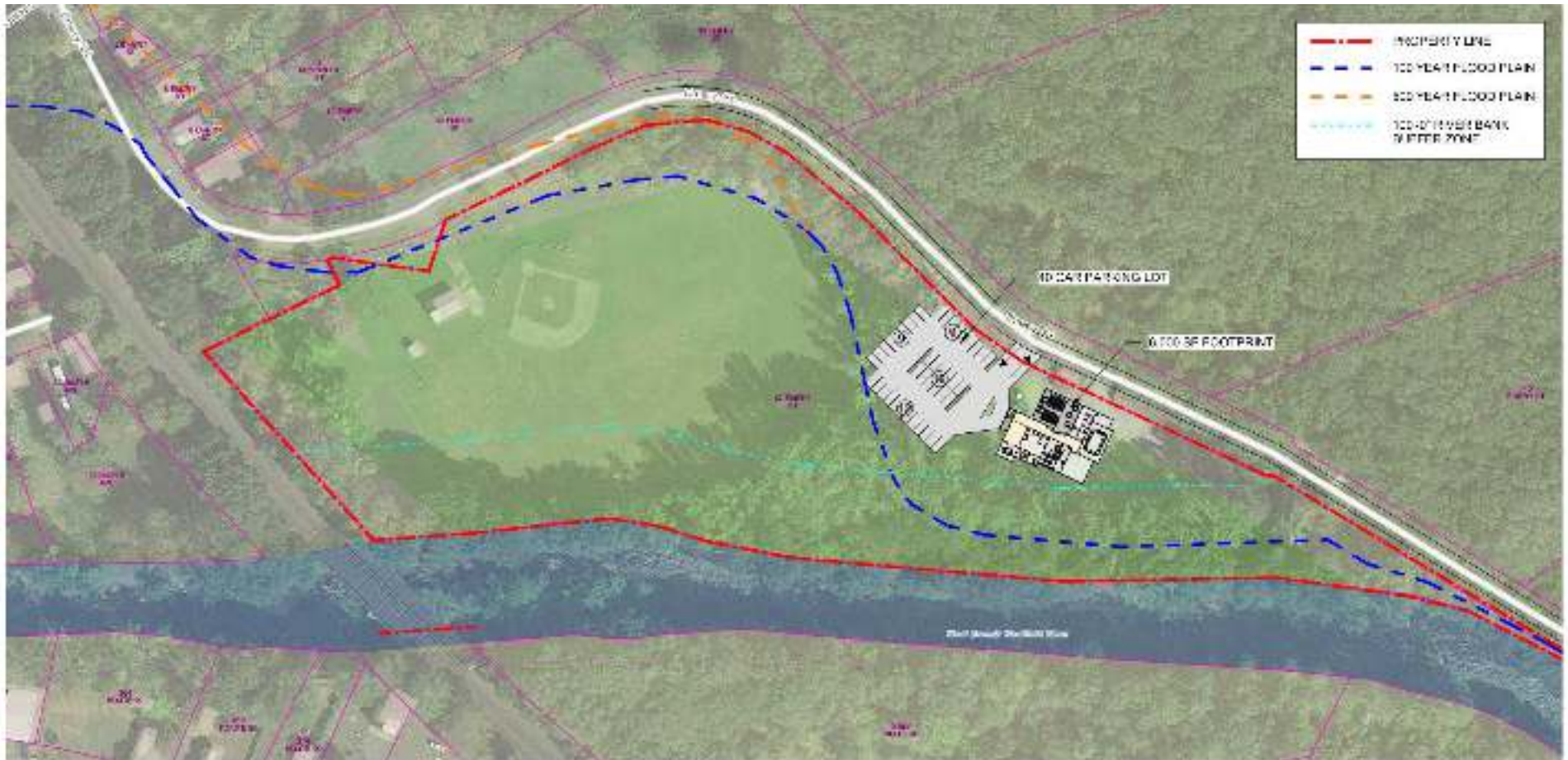
Some existing trees will need to be removed, though the building and parking lot will be located on a currently cleared portion of the site to keep this to a minimum. While the existing transfer station area is mostly flat, some minor regrading will be required. As the exact topography and soil conditions are unknown, additional studies and testing will be required. Due to the site's current use as a transfer station is it unknown whether hazardous materials are present on site. Additional testing will be required, although it is assumed that any hazardous materials found will be minimal.



Construction access to this site will be through a residential neighborhood. There will be no restriction to Police, Fire and EMT access to the site. The Police and Fire Departments are less than a mile from the site, with a 2-minute drive (this is not the response time).



47 EMERY STREET (CHESTER TOWN PARK)



The option presented located the building and parking lot on the site of the existing transfer station. This will keep the building out of both the River Bank Buffer Zone and the Flood Plains, but will not allow for any overflow parking or future building expansion if desired. The front of the building will face the street, with the parking lot off to the side. This option provides good street frontage which will allow the building to be highly visible to seniors approaching the site. This option will require moving the transfer station to another site. There will be some possible traffic and parking issue on nights or weekends when games are being played in the park, but this should not have a largely negative impact, and will allow for intergenerational interaction. Noise from the nearby train tracks will need to be considered during building design. The reuse of the transfer station site will bring some additional vitality to the park and give the area more of a community feeling.

0 MIDDLEFIELD ROAD



This is the smallest of the sites considered at approximately 1 acre and currently is an undeveloped vacant lot in a residential neighborhood in the downtown area of Chester. It is nearby to several religious and municipal buildings, including Town Hall, the Chester Public Library, and two churches, as well as several restaurants and shops along Main Street. The site is just off of West Main Street (Route 20) and main travel road through Chester. To the north, west and south, are residences, to the east is a church, and to the southeast is an unused elementary school.

The site is mostly flat with a gradual slope up to William Street. There are several trees at the west and south edges of the site and a small overgrown area in the middle.

The zoning listed for this property is Mixed Use/Business which allows for the construction of a new Senior Center. The existing site complies with all dimensional lot requirements of the zoning bylaws (minimum lot area, minimum frontage, etc.) and no variance will be required. The building and the parking lot will fit comfortably in the allowable lot coverage restriction.

It is assumed that utilities will be accessed from existing mains on William Street or Middlefield Road, but further study will be needed to determine exactly what utilities are present, as well as capacity. A septic system will be required for this site.



Construction access to this site will be through narrow roads in a residential neighborhood. There will possibly be some laydown area at the existing elementary school site. If this is not an option, the parking lot will ideally be constructed first to allow for a laydown area on the site. There will be no restriction to Police, Fire and EMT access to the site. The Police and Fire Departments are less than a mile from the site, with a 2-minute drive (this is not the response time).



A few existing trees and the small overgrown area will need to be removed and portions of the site will need to be regraded to allow for the construction of the new building and parking lot, though both will be kept to a minimum. As soil conditions are unknown, additional studies and testing will be required. Hazardous materials are not anticipated on the site. The open site limits shading from trees and will allow for solar panels to be installed on the roof if desired.



Access to the site will be from either William Street or Middlefield Road. Access from William Street will require a driveway being created between two residences. William Street is a narrow road and the views when turning on to West Main Street (Route 20) are not ideal. The increased traffic volume in the dense residential area along William Street may be detrimental. Access from Middlefield Road would be through the elementary school parking lot at 10 Middlefield Road. While the building is currently unused the parking lot is used by the Town Hall across the street, and by the church on weekends. This will require careful planning to ensure that all three buildings parking needs are met.



0 MIDDLEFIELD ROAD



Option 1 locates the 3,000 sf Senior Center and a 40-car parking lot entirely on the 0 Middlefield road site. This will allow for minimal future building expansion, if desired, but there will be no room for overflow parking. There will be no road frontage and the building will not be easily seen from William Street, Middlefield Road, or West Main Street. Access for this option is from William Street.



Option 2 locates the 6,000 sf Senior Center to the west of the elementary school where there is currently an underused and dilapidated playground and basketball court. The 40-car parking lot is located to the rear of the building on the 0 Middlefield Road site. Access for this option is from Middlefield Road through the driveway at the elementary school. This option provides good frontage for the building on West Main Street, and the parking lot is hidden from the main streets, but presumes that the elementary school site is available for use. This option will not allow for future building expansion, but there will be room for overflow parking on the 0 Middlefield Road site.

0 MIDDLEFIELD ROAD



Option 3 locates the 6,000 sf Senior Center on the 0 Middlefield Road site and the 40-car parking lot to the rear of elementary school site. This allows for a larger building and also reuses the area of the existing driveway and parking lot, though it will need to be repaved and reconfigured. While the building still will not have frontage on a main road, it will be more visible from West Main Street. There will also be room for green space on the Middlefield Road site. This option will allow for both future building expansion and overflow parking, but presumes that the elementary school site is available for use.



Option 4 locates the 6,000 sf Senior Center to the west of the elementary school where there is currently an underused and dilapidated playground and basketball court. The 40-car parking lot is located at the rear of the elementary school site and makes use of the area of the existing driveway and parking lot, though it will need to be repaved and reconfigured. This option provides frontage on West Main Street where the building will be highly visible, and pushes the parking lot to the rear of the site. Access is from Middlefield Road. There will be minimal room for future expansion, but plenty of room for overflow parking and green space on the 0 Middlefield Road site. This option presumes that the elementary school site is available for use.

SITE CRITERIA RANKING

RANKING OF FACTORS

Factors all have equal weight

	Factor	Hampden Street Park	47 Emery Street	0 Middlefield Road	Description
1	Site Area	1	2	3	site is sufficient for building and expansion
2	One Story Option	1	1	1	is the site large enough for a one story building
3	Location (proximity)	2	3	1	ease of getting to the site for most residents
4	Access by other than car	3	3	3	pedestrian, bike, public transit
5	Visibility of building	3	2	1	is building visible from public way
6	Timing	1	1	3	are other factors impeding ability to proceed
7	Traffic	2	1	3	ranks traffic surrounding site
8	Traffic Access & Egress	1	3	2	entry and exit into the site from road
9	Parking	1	3	2	sufficient amount of parking
10	Proximity of Parking	1	1	1	location of parking relative to building
11	Overflow Parking	1	2	3	ability to handle special events
12	Requires Land Purchase	no	no	no	does Town own the land
13	Deed Restriction	no	no	no	is use of the property in some way restricted
14	Sewer	no	no	no	sewer connection at site
15	Typography	3	1	2	grade change for building or parking lot
16	Soils	?	?	?	soil suitable for typical foundations
17	Water Table	?	?	?	abnormal water table considerations impact constructability
18	Environmental	3	2	1	environmental considerations that may prevent development
	Wetland	na	na	na	
	Flood Plain	on site	on site	na	
	Vernal Pool	na	na	na	
	Habitat restrictions	maybe	no	no	
	Hazardous Materials	no	maybe	no	study hazmat in existing buildings in phase 2
19	Site Construction Cost				does the site impact the construction cost
	Building Demolition	no	no	no	
	Septic System	yes	yes	yes	a new septic system is needed at each site
20	Collateral Costs				are there other expenses required to make this site viable
		no	maybe	no	Demolish existing buildings, remove hazardous materials
		yes	yes	no	Secure river bank
	Replace Parking lot	no	no	maybe	existing parking lot at adjacent school site
21	Collateral Benefits	no	yes	yes	does development on the site spur/create other benefits
22	Multi-Generational	3	1	2	ability to interact with other age groups
23	Other Outdoor Activities	1	2	3	is the site near other outdoor activities (present or future)
24	Other Indoor Activities	2	3	1	is the site near or connected to other indoor activities
Total Score		29	31	32	

Passing Scores

	Hampden Street Park	47 Emery Street	0 Middlefield Road
Number of 1's	8	6	6
Number of 2's	3	5	4
Number of 3's	5	5	6
	16	16	16

SECTION 6
SITE DATA MATRIX

SITE DATA MATRIX SUMMARY

Data Category	Hampden Street Park	note	47 Emery Street	note	0 Middlefield Road	note
0 Zoning & Dimensional Data						
District	Residential		Mixed-Use / Business	Flood Plain Overlay Area	Mixed-Use / Business	Route 20 Overlay Area
flood plain district	yes	River at North edge of site	yes	River at South edge of site	no	
water resource protection district	yes		yes		no	
municipal building an allowed use	yes		yes		yes	
deed restriction	no		no		no	
Dimensional Restrictions						
actual lot area from GIS map	9.00	acres	9.00	acre	1.00	acres
actual square foot lot area from GIS map	392,040	sf	392,040	sf	43,560	sf
minimum lot area	10,000 sf		8,000 sf		8,000 sf	
minimum lot frontage of road	100 feet		50 feet		50 feet	
front yard setback	25 feet		15 feet		15 feet	
rear yard setback	30 feet		20 feet		20 feet	
side yard setback	10 feet		10 feet		10 feet	
allowable lot coverage for structures	30%		60%		60%	
allowable buildable area in sf	118,000	sf	235,200	sf	26,100	sf
proposed buildable footprint (coverage)	7,000	sf maximum	7,000	sf maximum	7,000	sf maximum
footprint available for expansion based on coverage	111,000	sf	228,200	sf	19,100	sf
allowable lot coverage structures and parking	na		na		na	
allowable lot coverage in sf	na		na		na	
actual lot coverage for building & 40 cars	24,000	sf	24,000	sf	24,000	sf
actual lot coverage structures and parking	24,000	sf	24,000	sf	24,000	sf
min lot area req'd for building & parking in zone	na		na		na	
max building height (stories)	2 1/2 stories		3 stories		3 stories	
max building height (feet)	35 feet	to highest point	40 feet	to highest point	40 feet	to highest point
accessory buildings on site (stories)	na		na		na	
accessory buildings on site (height)	na		na		na	
Parking Requirements						
handicapped parking required	2 spaces		2 spaces		2 spaces	
by zoning: number of spaces required	"Any building hereafter constructed for business...use shall...provid[e] an off-street parking area equal to twice the floor area of the building to be constructed" - Town of Chester Zoning Bylaw, Section 5.0					
width of spaces	9 feet	minimum	9 feet	minimum	9 feet	minimum
depth of spaces	19 feet	minimum	19 feet	minimum	19 feet	minimum
aisle width	24 feet	minimum	24 feet	minimum	24 feet	minimum
driveway width	11-20 feet	One Way	11-20 feet	One Way	11-20 feet	One Way
	22-30 feet	Two Way	22-30 feet	Two Way	22-30 feet	Two Way
entrance and exit points	greater than 60 feet to any intersection		greater than 60 feet to any intersection		greater than 60 feet to any intersection	

SITE DATA MATRIX SUMMARY

Data Category		Hampden Street Park	note	47 Emery Street	note	0 Middlefield Road	note
0 Zoning & Dimensional Data							
	District	Residential		Mixed-Use / Business	Flood Plain Overlay Area	Mixed-Use / Business	Route 20 Overlay Area
	flood plain district	yes	River at North edge of site	yes	River at South edge of site	no	
	water resource protection district	yes		yes		no	
	municipal building an allowed use	yes		yes		yes	
	deed restriction	no		no		no	
Dimensional Restrictions							
	actual lot area from GIS map	9.00	acres	9.00	acre	1.00	acres
	actual square foot lot area from GIS map	392,040	sf	392,040	sf	43,560	sf
	minimum lot area	10,000 sf		8,000 sf		8,000 sf	
	minimum lot frontage of road	100 feet		50 feet		50 feet	
	front yard setback	25 feet		15 feet		15 feet	
	rear yard setback	30 feet		20 feet		20 feet	
	side yard setback	10 feet		10 feet		10 feet	
	allowable lot coverage for structures	30%		60%		60%	
	allowable buildable area in sf	118,000	sf	235,200	sf	26,100	sf
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	allowable lot coverage structures and parking	na		na		na	
	allowable lot coverage in sf	na		na		na	
	actual lot coverage for building & 40 cars	24,000	sf	24,000	sf	24,000	sf
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	accessory buildings on site (stories)	na		na		na	
	accessory buildings on site (height)	na		na		na	
Parking Requirements							
	handicapped parking required	2 spaces		2 spaces		2 spaces	
	by zoning: number of spaces required	"Any building hereafter constructed for business...use shall...provide an off-street parking area equal to twice the floor area of the building to be constructed" - Town of Chester Zoning Bylaw, Section 5.0					
	width of spaces	9 feet	minimum	9 feet	minimum	9 feet	minimum
	depth of spaces	19 feet	minimum	19 feet	minimum	19 feet	minimum
	aisle width	24 feet	minimum	24 feet	minimum	24 feet	
	driveway width	11-20 feet	One Way	11-20 feet	One Way	11-20 feet	One Way
		22-30 feet	Two Way	22-30 feet	Two Way	22-30 feet	Two Way
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	water resource protection district	yes		yes		no	
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	deed restriction	no		no		no	
Dimensional Restrictions							
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	rear yard setback	30 feet		20 feet		20 feet	
	side yard setback	10 feet		10 feet		10 feet	
	allowable lot coverage for structures	30%		60%		60%	
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	driveway width	11-20 feet	One Way	11-20 feet	One Way	11-20 feet	One Way
		22-30 feet	Two Way	22-30 feet	Two Way	22-30 feet	Two Way
	entrance and exit points	greater than 60 feet to any intersection		greater than 60 feet to any intersection		greater than 60 feet to any intersection	

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Data Category		Hampden Street Park	note	47 Emery Street	note	0 Middlefield Road	note
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	District	Residential		Mixed-Use / Business	Flood Plain Overlay Area	Mixed-Use / Business	Route 20 Overlay Area
	flood plain district	yes	River at North edge of site	yes	River at South edge of site	no	
	water resource protection district	yes		yes		no	
	municipal building an allowed use	yes		yes		yes	
	deed restriction	no		no		no	
Dimensional Restrictions							
	actual lot area from GIS map	9.00	acres	9.00	acre	1.00	acres
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	driveway width	11-20 feet	One Way	11-20 feet	One Way	11-20 feet	One Way
		22-30 feet	Two Way	22-30 feet	Two Way	22-30 feet	Two Way
	entrance and exit points	greater than 60 feet to any intersection		greater than 60 feet to any intersection		greater than 60 feet to any intersection	

SECTION 7
COST ESTIMATES

ESTIMATED PROJECT COSTS

Cost Estimate

The Chester Senior Center cost estimate was developed for a Massachusetts public construction project under Chapter 149 regulations. These construction costs will be higher than those for private construction in Chester. The cost model was developed for various building sizes, from 2,400 to 7,000 sf in area. Sites used to provide a reasonable total concept of construction costs included Hampden Street Park, 47 Emery Street, and Middlefield Road. We do not know if any of these will be ultimately considered for the Senior Center site, but by taking an average, they provide a reasonable guidance for the Town as to cost expectations.

The total project costs range from an average of \$3.0M for the 2,400 sf, smallest option, to \$5.2M for the 7,000 sf option.

The baseline for construction costs is Spring 2020. Current construction cost escalation is estimated to be 4% annually. Therefore, compound this rate to the year the project is to be continued.

Total Project Cost

In addition to construction cost, the Town has to fund other costs that are required to make the Senior Center operational. This is what is referred to as the Total Project Cost. Included in the Total Project Cost are:

- Utility company back charges during construction;
- An Owner's contingency for unforeseen conditions or owner changes;
- Owner's site representation and project administration;
- Owner's administration, legal fees, advertising and permitting costs;
- Architectural and Engineering fees and other professional fees such as the Owner's Project Manager;
- Testing, printing, site surveys, geotechnical borings and reports;
- Third party testing and commissioning;
- Owner furnished and installed products, furnishings, equipment; loose case goods, and similar items; and
- Cost of moving to the new building.

For planning phase work the Total Project Cost multiplier to the Chester Senior Center is projected to be twenty-five percent. In other words, for each dollar construction cost, the total project cost comes out to be \$1.25.

The Town may also incur additional costs that are not in the Total Project Cost Estimate such as the Owner's insurance, administration, interest expense, legal costs for bonding, utility company back charges prior to construction, construction of swing space and temporary program facilities, program related phasing, and relocation work beyond the boundary of the Project.

TOTAL PROJECT COST WORKSHEET SAMPLE

HARD COST				
HazMat	HazMat Abatement			
General Contractor	Construction Cost Estimate			
	Emergency Power Generator			
Senior Center Furniture, Fixtures & Equipment	Utility Backcharge			
	Furniture			
	Audio Visual Equipment			
	IT network, telephone/data/cable			
	Security design, equipment, installation			
Hard Cost Subtotal				\$0
SOFT COST				
Permits & Approvals	Conservation Commission			
	Planning Board Site Plan Approval			
Architecture & Engineering	Architect & Engineer Fees		0%	
	FF&E Specification & Purchasing		0%	
	Geotechnical Engineer		\$0	
	Site Survey		\$0	
Testing & Inspections	Concrete, Steel, Soil & Other Inspections			
Project Management	Owner's Project Manager		0%	
	Commissioning Agent		\$0	
Moving & Relocation				
Advertising & Bidding	Public Bidding (Document Posting Website)			
Legal	Town Attorney Allowance			
Other	Builders Risk Insurance			
Soft Cost Subtotal				\$0
CONTINGENCY				
Contingency	Owner's Contingency on hard costs		0%	\$0
	Owner's Contingency on soft costs		0%	
Project Total				\$0

Cost Models

The cost models developed for the senior center options and site scenarios are as follows:

Chester Senior Center
April 25, 2019

PRELIMINARY COST ESTIMATE RANGES FOR BUILDING AND SITE

the benchmark construction start date for these estimates is Spring 2020

size option		1	2	3	4	5	
	Existing Senior Center	"Replicate" Existing Center	3,000 sf Senior Center	5,000 sf Senior Center/Shelter	6,000 sf Regional Center	7,000 sf Regional Center	Add Supportive Care
Total Gross Area (rounded)	750	2,400	3,000	5,000	6,000	7,000	1,100
Cost Benchmarks							
estimated building construction cost		\$1,773,000	\$1,963,000	\$2,790,000	\$3,218,000	\$3,611,000	\$550,000
estimated average site costs for yet to be determined location		\$740,000	\$740,000	\$740,000	\$740,000	\$740,000	in base bldg
Add for TOTAL PROJECT COST (see accompanying chart)		1.2	1.2	1.2	1.2	1.2	1.2
Final Amount for Project Cost Funding		\$3,015,000	\$3,243,000	\$4,236,000	\$4,749,000	\$5,221,000	\$660,000

Daedalus Cost Data

The raw cost data as prepared by Daedalus is contained in the following pages. This data was analyzed and averaged to reach the \$460 per square foot cost average used for the various schemes.



INTRODUCTION

Project Description:

The project consists of a new Senior Center building in Chester, MA
concrete foundations and slab on grade, wood framed structure
fiber cement exterior facade siding, aluminum windows, asphalt shingles pitch roofing
interior program fitout and MEP systems
site preparation, bulk earthwork, site utilities, exterior site improvements

Project Assumptions:

The project will be by a General Contractor under a Lump Sum Contract in a single construction phase
Our costs assume that there will be competitive bidding in all trades and sub-trades i.e. at least four (4) bids
per trade or sub-trade
Unit rates are based on current dollars escalated to mid-point of construction
Subcontractor's markups are included in each unit rate. These markups cover field and home office overhead
and subcontractor's profit
Operation during normal business hours
No occupancy of Project zone during construction
Lay-down/storage area, jobsite shed and trailers, and construction site entrance will be located adjacent
to Project area
Temporary electrical and water site utility connections will be available. General Conditions value includes
utility connections and consumption costs
Noise and vibration disturbances are anticipated and will be minimized or avoided during normal business hours
Design and Pricing Contingency markup is an allowance for unforeseen design issues, design detail development
and specification clarifications during the design period
General Conditions includes supervision, general facilities to support Project, and site office overheads that are not
attributable to the direct trade costs
Project Requirements value includes scaffolding, staging and access, temporary protection, and cleaning
Fee markup is calculated on a percentage basis of direct trade construction costs
Anticipated start of construction is Spring 2020
An escalation projection has been included from now to the anticipated start of construction and is carried at a rate
of 4% per year. Escalation during construction duration has been included in the unit rate details



Construction Cost Estimate Exclusions:

Unforeseen Conditions Contingency
Audio visual and food service equipment
Utility company back charges during construction
Owner's site representation and project administration
Owner's administration; legal fees, advertising, permitting, Owner's insurance, administration, interest expense
Architectural/Engineering; Designer and other Professional fees, testing, printing, surveying.
Project costs; utility company back charges prior to construction, construction of swing space and temporary
program facilities, program related phasing, relocation
Site or existing condition surveys and investigations
Work beyond the boundary of the Project
Third Party testing and commissioning
Owner furnished and installed products; furnishings, equipment, artwork, loose case goods, and similar items

INDEPENDENT COST ESTIMATE



MAIN SUMMARY

		Hampden Street Park		47 Emery Street		0 Middlefield Road Option 1		0 Middlefield Road Option 2		0 Middlefield Road Option 3		0 Middlefield Road Option 4	
		6,000 GSF		6,000 GSF		3,000 GSF		6,000 GSF		6,000 GSF		6,000 GSF	
Direct Trade Details													
31-Earthwork		44,600 GSF	\$101,440	37,600 GSF	\$138,346	37,000 GSF	\$89,768	40,000 GSF	\$125,551	41,000 GSF	\$105,721	51,500 GSF	\$117,454
New Senior Center Building		6,000 GSF	\$2,473,743	6,000 GSF	\$2,473,743	3,000 GSF	\$1,509,119	6,000 GSF	\$2,473,743	6,000 GSF	\$2,473,743	6,000 GSF	\$2,473,743
32-Exterior Improvements			\$194,380		\$179,990		\$204,120		\$389,080		\$203,530		\$368,655
33-Utilities			\$256,120		\$310,760		\$356,680		\$319,570		\$298,645		\$294,370
Direct Trade Details SubTotal			\$3,025,683		\$3,102,839		\$2,159,687		\$3,307,944		\$3,081,639		\$3,254,222
Design and Pricing Contingency	10.00%		\$302,600		\$310,300		\$216,000		\$330,800		\$308,200		\$325,500
Direct Trade Cost Total			\$3,328,283		\$3,413,139		\$2,375,687		\$3,638,744		\$3,389,839		\$3,579,722
General Conditions, Project Requirements, Overhead	8.00%		\$266,300		\$273,100		\$190,100		\$291,100		\$271,200		\$286,400
Performance Bonds	1.10%		\$39,600		\$40,600		\$28,300		\$43,300		\$40,300		\$42,600
Insurance	1.20%		\$43,700		\$44,800		\$31,200		\$47,700		\$44,500		\$47,000
Profit	2.50%		\$83,300		\$85,400		\$59,400		\$91,000		\$84,800		\$89,500
Estimated Construction Cost Total			\$3,761,183		\$3,857,039		\$2,684,687		\$4,111,844		\$3,830,639		\$4,045,222
Escalation from now to Bid Spring 2020 @4% per year	4.40%		\$165,500		\$169,800		\$118,200		\$181,000		\$168,600		\$178,000
Estimated Construction Cost Total at Bid Opening			\$3,926,683		\$4,026,839		\$2,802,887		\$4,292,844		\$3,999,239		\$4,223,222



Chester Senior Center
Chester, MA

BUILDING DIRECT TRADE COST SUMMARY

DESCRIPTION	2,400 GSF		3,000 GSF		5,000 GSF		6,000 GSF		7,000 GSF	
	Cost	Cost/GSF	Cost	Cost/GSF	Cost	Cost/GSF	Cost	Cost/GSF	Cost	Cost/GSF
03-CONCRETE	\$114,100	\$47.54	\$122,000	\$40.67	\$164,700	\$32.94	\$188,800	\$31.47	\$209,300	\$29.90
04-MASONRY	\$15,000	\$6.25	\$15,000	\$5.00	\$18,300	\$3.66	\$20,400	\$3.40	\$21,600	\$3.09
05-METALS	\$20,570	\$8.57	\$22,820	\$7.61	\$28,930	\$5.79	\$42,385	\$7.06	\$50,290	\$7.18
06-WOOD, PLASTICS AND COMPOSITES	\$207,160	\$86.32	\$237,513	\$79.17	\$361,688	\$72.34	\$423,240	\$70.54	\$491,578	\$70.23
07-THERMAL AND MOISTURE PROTECTION	\$212,800	\$88.67	\$229,000	\$76.33	\$301,100	\$60.22	\$339,700	\$56.62	\$373,200	\$53.31
08-OPENINGS	\$203,900	\$84.96	\$203,900	\$67.97	\$235,200	\$47.04	\$251,300	\$41.88	\$264,500	\$37.79
09-FINISHES	\$125,037	\$52.10	\$138,613	\$46.20	\$211,782	\$42.36	\$242,280	\$40.38	\$278,213	\$39.74
10-SPECIALTIES	\$54,900	\$22.88	\$57,800	\$19.27	\$67,150	\$13.43	\$106,650	\$17.78	\$107,650	\$15.38
11- EQUIPMENT	\$40,000	\$16.67	\$40,000	\$13.33	\$80,000	\$16.00	\$80,000	\$13.33	\$100,000	\$14.29
12-FURNISHINGS	\$10,650	\$4.44	\$10,650	\$3.55	\$12,300	\$2.46	\$13,850	\$2.31	\$14,450	\$2.06
21-FIRE SUPPRESSION	\$18,000	\$7.50	\$22,500	\$7.50	\$37,500	\$7.50	\$45,000	\$7.50	\$52,500	\$7.50
22-PLUMBING	\$84,150	\$35.06	\$101,650	\$33.88	\$140,350	\$28.07	\$147,350	\$24.56	\$153,350	\$21.91
23-HVAC	\$149,000	\$62.08	\$178,000	\$59.33	\$280,000	\$56.00	\$328,000	\$54.67	\$377,000	\$53.86
26-ELECTRICAL	\$72,000	\$30.00	\$90,000	\$30.00	\$150,000	\$30.00	\$180,000	\$30.00	\$210,000	\$30.00
31-EARTHWORK	\$36,196	\$15.08	\$39,674	\$16.53	\$55,955	\$23.31	\$64,788	\$10.80	\$72,641	\$10.38
Building Direct Trade Cost Total	\$1,363,463	\$568.11	\$1,509,119	\$503.04	\$2,144,954	\$428.99	\$2,473,743	\$412.29	\$2,776,271	\$396.61

INDEPENDENT COST ESTIMATE

Sitework Direct Trade Cost Details

ELEMENT	UNIT	UNIT RATE	Hampden Street Park		47 Emery Street		0 Middlefield Road Option 1 37,000 GSF		0 Middlefield Road Option 2 40,000 GSF		0 Middlefield Road Option 3 41,000 GSF		0 Middlefield Road Option 4 51,500 GSF	
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost
31-EARTHWORK														
<i>Site Clearing</i>														
Relocate transfer station						excl.								
Clear and grub	ACRE			\$10,000		\$2,500		\$5,000						
Demo playground and basketball court	LS	\$10,000.00							1	\$10,000			1	\$10,000
Demo driveway and parking lot	SF	\$1.50							15,600	\$23,400	12,100	\$18,150	11,400	\$17,100
Construction fence	LF	\$16.00	850	\$13,600	1,000	\$16,000	1,000	\$16,000	1,200	\$19,200	1,100	\$17,600	950	\$15,200
Double construction gate	EA	\$2,500.00	1	\$2,500	1	\$2,500	1	\$2,500	1	\$2,500	1	\$2,500	1	\$2,500
Construction entrance	LS	\$7,500.00	1	\$7,500	1	\$7,500	1	\$7,500	1	\$7,500	1	\$7,500	1	\$7,500
Wash down/re-fueling	SF	\$2.50	1,500	\$3,750	1,500	\$3,750	1,500	\$3,750	1,500	\$3,750	1,500	\$3,750	1,500	\$3,750
Temp signs	LS	\$1,500.00	1	\$1,500	1	\$1,500	1	\$1,500	1	\$1,500	1	\$1,500	1	\$1,500
Haybale and erosion control netting	LF	\$14.00	850	\$11,900	1,000	\$14,000	1,000	\$14,000	1,200	\$16,800	1,100	\$15,400	950	\$13,300
Haybales at stockpile topsoil areas	LS	\$2,500.00	1	\$2,500	1	\$2,500	1	\$2,500	1	\$2,500	1	\$2,500	1	\$2,500
<i>Site Earthwork</i>														
Hazardous material mitigation	AL					\$50,000								
Remove & stockpile topsoil	CY	\$8.00	867	\$6,936	731	\$5,848	719	\$5,752	474	\$3,792	562	\$4,496	780	\$6,240
Cuts and fills for new surfacing	CY	\$12.00	954	\$11,452	921	\$11,046	1,082	\$12,978	1,398	\$16,772	1,126	\$13,517	1,071	\$12,852
Site grade cut and fill	CY	\$10.00	2,162	\$21,622	1,331	\$13,312	902	\$9,018	586	\$5,857	915	\$9,153	1,583	\$15,832
Rough and fine grade for new surfacing	SF	\$0.50	16,360	\$8,180	15,780	\$7,890	18,540	\$9,270	23,960	\$11,980	19,310	\$9,655	18,360	\$9,180
31-EARTHWORK TOTAL				\$101,440		\$138,346		\$89,768		\$125,551		\$105,721		\$117,454
32-EXTERIOR IMPROVEMENTS														
<i>Paving and Surfacing</i>														
Asphalt paving	SF	\$4.75	13,960	\$66,310	13,380	\$63,555	15,140	\$71,915	20,760	\$98,610	16,110	\$76,523	15,160	\$72,010
Patch existing pavement at street	LOC	\$3,000.00	1	\$3,000	1	\$3,000	1	\$3,000	1	\$3,000	1	\$3,000	1	\$3,000
Curbing	LF	\$40.00	550	\$22,000	540	\$21,600	825	\$33,000	1,285	\$51,400	710	\$28,400	700	\$28,000
Parking spaces	EA	\$35.00	40	\$1,400	40	\$1,400	40	\$1,400	50	\$1,750	40	\$1,400	40	\$1,400
Handicap parking spaces	EA	\$75.00	4	\$300	4	\$300	4	\$300	4	\$300	4	\$300	4	\$300
Crosswalks, misc.	AL	\$2,000.00	1	\$2,000	1	\$2,000	1	\$2,000	1	\$2,000	1	\$2,000	1	\$2,000
Sidewalk	SF	\$5.00	2,150	\$10,750	2,150	\$10,750	3,150	\$15,750	2,950	\$14,750	2,950	\$14,750	2,950	\$14,750
Unit pavers @ Outdoor patio and entrance	SF	\$20.00	250	\$5,000	250	\$5,000	250	\$5,000	250	\$5,000	250	\$5,000	250	\$5,000
Concrete pad	AL	\$5,000.00	1	\$5,000	1	\$5,000	1	\$5,000	1	\$5,000	1	\$5,000	1	\$5,000
<i>Exterior Improvements</i>														
New playground and basketball court	LS	\$150,000.00							1	\$150,000			1	\$150,000
Site pipe bollard	AL	\$5,000.00	1	\$5,000	1	\$5,000	1	\$5,000	1	\$5,000	1	\$5,000	1	\$5,000
Trash/recycle receptacles	EA	\$600.00	2	\$1,200	2	\$1,200	2	\$1,200	2	\$1,200	2	\$1,200	2	\$1,200
Benches	EA	\$1,500.00	4	\$6,000	4	\$6,000	4	\$6,000	4	\$6,000	4	\$6,000	4	\$6,000
Bike racks	AL	\$2,500.00	1	\$2,500	1	\$2,500	1	\$2,500	1	\$2,500	1	\$2,500	1	\$2,500
Misc. site improvement in addition to above				\$25,000		\$25,000		\$25,000		\$25,000		\$25,000		\$25,000

INDEPENDENT COST ESTIMATE



Chester Senior Center
Chester, MA

Sitework Direct Trade Cost Details

ELEMENT	UNIT	UNIT RATE	Hampden Street Park		47 Emery Street		0 Middlefield Road Option 1 37,000 GSF		0 Middlefield Road Option 2 40,000 GSF		0 Middlefield Road Option 3 41,000 GSF		0 Middlefield Road Option 4 51,500 GSF	
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost
54 Plantings	SF	\$1.75	22,240	\$38,920	15,820	\$27,685	15,460	\$27,055	10,040	\$17,570	15,690	\$27,458	27,140	\$47,495
55 32-EXTERIOR IMPROVEMENTS TOTAL				\$194,380		\$179,990		\$204,120		\$389,080		\$203,530		\$368,655
56														
57														
58 33-UTILITIES														
59														
60 <i>Water Distribution</i>														
61 6" T, S, & G, street connection	EA	\$9,500.00	1	\$9,500	1	\$9,500	1	\$9,500	1	\$9,500	1	\$9,500	1	\$9,500
62 6" gate	EA	\$1,200.00	1	\$1,200	1	\$1,200	1	\$1,200	1	\$1,200	1	\$1,200	1	\$1,200
63 6" CLDI	LF	\$80.00	100	\$8,000	50	\$4,000	200	\$16,000	200	\$16,000	200	\$16,000	200	\$16,000
64 2" Domestic water	LF	\$45.00	30	\$1,350	30	\$1,350	30	\$1,350	30	\$1,350	30	\$1,350	30	\$1,350
65 Hydrant and gate	EA	\$2,600.00	2	\$5,200	2	\$5,200	2	\$5,200	2	\$5,200	2	\$5,200	2	\$5,200
66 <i>Sanitary Sewerage</i>														
67 Sewer MH	EA	\$4,000.00	2	\$8,000	2	\$8,000	2	\$8,000	2	\$8,000	2	\$8,000	2	\$8,000
68 Oil water separator	EA	\$12,000.00	1	\$12,000	1	\$12,000	1	\$12,000	1	\$12,000	1	\$12,000	1	\$12,000
69 Drain pipe	LF	\$55.00	100	\$5,500	50	\$2,750	200	\$11,000	200	\$11,000	200	\$11,000	200	\$11,000
70 New septic system	AL	\$75,000.00			1	\$75,000	1	\$75,000						
71 <i>Storm Drainage</i>														
72 Storm drainage system base on hard finish area	GSF	\$4.50	22,360	\$100,620	21,780	\$98,010	21,540	\$96,930	29,960	\$134,820	25,310	\$113,895	24,360	\$109,620
73 <i>Gas Service</i>														
74 New service line				\$0		\$0		\$0		\$0		\$0		\$0
75 Trenching and backfill only for new service line; allow	LF	\$35.00	100	\$3,500	50	\$1,750	200	\$7,000	200	\$7,000	200	\$7,000	200	\$7,000
76 <i>Electrical Utilities</i>														
77 Primary electrical service	LF	\$70.00	100	\$7,000	50	\$3,500	200	\$14,000	200	\$14,000	200	\$14,000	200	\$14,000
78 Pad mounted transformer														
79 Transformer pad allow	EA	\$2,500.00	1	\$2,500	1	\$2,500	1	\$2,500	1	\$2,500	1	\$2,500	1	\$2,500
80 125KW emergency generator	EA	\$58,000.00	1	\$58,000	1	\$58,000	1	\$58,000	1	\$58,000	1	\$58,000	1	\$58,000
81 400A secondary electrical service allow	LF	\$160.00	50	\$8,000	25	\$4,000	50	\$8,000	50	\$8,000	50	\$8,000	50	\$8,000
82 Telecommunications service allow	LF	\$70.00	75	\$5,250	50	\$3,500	150	\$10,500	150	\$10,500	150	\$10,500	150	\$10,500
83 Site lighting fixtures and circuitry	LS	\$15,000.00	1	\$15,000	1	\$15,000	1	\$15,000	1	\$15,000	1	\$15,000	1	\$15,000
84 Site demolition allow	LS	\$5,500.00	1	\$5,500	1	\$5,500	1	\$5,500	1	\$5,500	1	\$5,500	1	\$5,500
85 33-UTILITIES TOTAL				\$256,120		\$310,760		\$356,680		\$319,570		\$298,645		\$294,370
86														
87														
88														

INDEPENDENT COST ESTIMATE



Chester Senior Center
Chester, MA

Building Direct Trade Cost Details

ELEMENT	UNIT	UNIT RATE	2,400 GSF		3,000 GSF		5,000 GSF		6,000 GSF		7,000 GSF	
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost
03-CONCRETE												
Strip footing	LF	\$60.00	250	\$15,000	250	\$15,000	305	\$18,300	340	\$20,400	360	\$21,600
Isolated footing	EA	\$1,100.00	14	\$15,400	15	\$16,500	20	\$22,000	23	\$25,300	26	\$28,600
Foundation wall	SF	\$45.00	1,000	\$45,000	1,000	\$45,000	1,220	\$54,900	1,360	\$61,200	1,440	\$64,800
Pier/pilaster	EA	\$800.00	14	\$11,200	15	\$12,000	20	\$16,000	23	\$18,400	26	\$20,800
Slab on grade	SF	\$10.00	2,400	\$24,000	3,000	\$30,000	5,000	\$50,000	6,000	\$60,000	7,000	\$70,000
Miscellaneous; pads	LS	\$3,500.00	1	\$3,500	1	\$3,500	1	\$3,500	1	\$3,500	1	\$3,500
03-CONCRETE TOTAL				\$114,100		\$122,000		\$164,700		\$188,800		\$209,300
04-MASONRY												
Split face concrete block watertable	SF	\$30.00	500	\$15,000	500	\$15,000	610	\$18,300	680	\$20,400	720	\$21,600
04-MASONRY TOTAL				\$15,000		\$15,000		\$18,300		\$20,400		\$21,600
05-METALS												
WF roof framing at Multipurpose Room, Program Room	LOC	\$5,000.00	1	\$5,000	1	\$5,000	1	\$5,000	2	\$10,000	3	\$15,000
Steel support for operable partitions	LF	\$150.00	30	\$4,500	35	\$5,250	35	\$5,250	70	\$10,500	70	\$10,500
Miscellaneous metals to interior	GSF	\$2.50	2,400	\$6,000	3,000	\$7,500	5,000	\$12,500	6,000	\$15,000	7,000	\$17,500
Miscellaneous metals for exterior façade	SF	\$1.50	3,380	\$5,070	3,380	\$5,070	4,120	\$6,180	4,590	\$6,885	4,860	\$7,290
05-METALS TOTAL				\$20,570		\$22,820		\$28,930		\$42,385		\$50,290
06-WOOD, PLASTICS AND COMPOSITES												
<i>Rough Carpentry</i>												
Exterior wall stud assembly	SF	\$6.50	3,380	\$21,970	3,380	\$21,970	4,120	\$26,780	4,590	\$29,835	4,860	\$31,590
Interior wall stud framing	SF	\$5.00	2,930	\$14,650	2,725	\$13,625	4,830	\$24,150	5,355	\$26,775	6,475	\$32,375
Prefabricated pitched roof trusses assembly	SF	\$26.00	3,840	\$99,840	4,800	\$124,800	8,000	\$208,000	9,600	\$249,600	11,200	\$291,200
Rough carpentry/blocking; interior partitions and ceilings	SF	\$1.50	2,950	\$4,425	2,795	\$4,193	4,955	\$7,433	5,570	\$8,355	6,775	\$10,163
Install doors and frames	OPEN	\$175.00	13	\$2,275	13	\$2,275	20	\$3,500	22	\$3,850	26	\$4,550
Exterior soffit	SF	\$25.00	400	\$10,000	400	\$10,000	500	\$12,500	600	\$15,000	600	\$15,000
<i>Interior Architectural Woodwork</i>												
Copy/Storage; work/counter top	LF	\$200.00	10	\$2,000	10	\$2,000	10	\$2,000	10	\$2,000	10	\$2,000
Corridor; wainscot, chair rail	LF	\$95.00	120	\$11,400	110	\$10,450	125	\$11,875	175	\$16,625	200	\$19,000
Kitchen; counter, cabinets	LF	\$550.00	40	\$22,000	50	\$27,500	50	\$27,500	50	\$27,500	70	\$38,500
Kitchen; serving counter and opening	LF	\$1,200.00	6	\$7,200	6	\$7,200	6	\$7,200	6	\$7,200	6	\$7,200
Reception; custom wood cabinets, plam countertop	LF	\$450.00					20	\$9,000	25	\$11,250	25	\$11,250



Chester Senior Center
Chester, MA

BUILDING DIRECT TRADE COST SUMMARY

DESCRIPTION	2,400 GSF		3,000 GSF		5,000 GSF		6,000 GSF		7,000 GSF	
	Cost	Cost/GSF	Cost	Cost/GSF	Cost	Cost/GSF	Cost	Cost/GSF	Cost	Cost/GSF
03-CONCRETE	\$114,100	\$47.54	\$122,000	\$40.67	\$164,700	\$32.94	\$188,800	\$31.47	\$209,300	\$29.90
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10-SPECIALTIES	\$54,900	\$22.88	\$57,800	\$19.27	\$67,150	\$13.43	\$106,650	\$17.78	\$107,650	\$15.38
11- EQUIPMENT	\$40,000	\$16.67	\$40,000	\$13.33	\$80,000	\$16.00	\$80,000	\$13.33	\$100,000	\$14.29
12-FURNISHINGS	\$10,650	\$4.44	\$10,650	\$3.55	\$12,300	\$2.46	\$13,850	\$2.31	\$14,450	\$2.06
21-FIRE SUPPRESSION	\$18,000	\$7.50	\$22,500	\$7.50	\$37,500	\$7.50	\$45,000	\$7.50	\$52,500	\$7.50
22-PLUMBING	\$84,150	\$35.06	\$101,650	\$33.88	\$140,350	\$28.07	\$147,350	\$24.56	\$153,350	\$21.91
23-HVAC	\$149,000	\$62.08	\$178,000	\$59.33	\$280,000	\$56.00	\$328,000	\$54.67	\$377,000	\$53.86
26-ELECTRICAL	\$72,000	\$30.00	\$90,000	\$30.00	\$150,000	\$30.00	\$180,000	\$30.00	\$210,000	\$30.00
31-EARTHWORK	\$36,196	\$15.08	\$39,674	\$16.53	\$55,955	\$23.31	\$64,788	\$10.80	\$72,641	\$10.38
Building Direct Trade Cost Total	\$1,363,463	\$568.11	\$1,509,119	\$503.04	\$2,144,954	\$428.99	\$2,473,743	\$412.29	\$2,776,271	\$396.61
Add Contingency, Burdens, Markups	\$410,000	\$170.83	\$454,000	\$151.33	\$645,000	\$129.00	\$744,000	\$124.00	\$835,000	\$119.29
Building Only Estimated Construction Cost Total	\$1,773,463	\$738.94	\$1,963,119	\$654.37	\$2,789,954	\$557.99	\$3,217,743	\$536.29	\$3,611,271	\$515.90

INDEPENDENT COST ESTIMATE



Chester Senior Center
Chester, MA

Building Direct Trade Cost Details

ELEMENT	UNIT	UNIT RATE	2,400 GSF		3,000 GSF		5,000 GSF		6,000 GSF		7,000 GSF	
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost
91 Interior soffit; allow	SF	\$20.00	210	\$4,200	270	\$5,400	440	\$8,800	530	\$10,600	620	\$12,400
92 <i>Flooring and Ceiling Finishes</i>												
93 Kitchen, Pantry, Service	SF	\$36.50	200	\$7,300	200	\$7,300	400	\$14,600	400	\$14,600	500	\$18,250
94 Mech, JC	SF	\$2.75	190	\$523	190	\$523	360	\$990	360	\$990	230	\$633
95 Multi-Purpose, Dining Room	SF	\$17.50	1,000	\$17,500	1,500	\$26,250	1,510	\$26,425	2,410	\$42,175	2,410	\$42,175
96 Program, Wellness	SF	\$15.00					700	\$10,500	700	\$10,500	1,600	\$24,000
97 Restrooms	SF	\$30.00	340	\$10,200	400	\$12,000	560	\$16,800	560	\$16,800	560	\$16,800
98 Vestibule	SF	\$50.00	80	\$4,000	80	\$4,000	80	\$4,000	80	\$4,000	80	\$4,000
99 Wellness	SF	\$15.00					700	\$10,500	700	\$10,500	700	\$10,500
100 Remainder	SF	\$12.50	590	\$7,375	630	\$7,875	690	\$8,625	790	\$9,875	920	\$11,500
101 <i>Wall Finishes</i>												
102 Restrooms	SF	\$22.50	500	\$11,250	580	\$13,050	820	\$18,450	820	\$18,450	820	\$18,450
103 Paint GWB walls	SF	\$1.15	8,360	\$9,614	7,850	\$9,028	12,330	\$14,180	13,850	\$15,928	16,350	\$18,803
104 Paint interior door	LEAF	\$150.00	13	\$1,950	13	\$1,950	20	\$3,000	22	\$3,300	26	\$3,900
105 Misc. painting; interior, exterior	GSF	\$1.50	2,400	\$3,600	3,000	\$4,500	5,000	\$7,500	6,000	\$9,000	7,000	\$10,500
106 09-FINISHES TOTAL				\$125,037		\$138,613		\$211,782		\$242,280		\$278,213
107												
108												
109 10-SPECIALTIES												
110												
111 Visual display boards; bulletin board	AL	\$3,000.00	1	\$3,000	1	\$3,000	1	\$3,000	1	\$3,000	1	\$3,000
112 Code-required signage	GSF	\$1.00	2,400	\$2,400	3,000	\$3,000	5,000	\$5,000	6,000	\$6,000	7,000	\$7,000
113 <i>Toilet Compartments</i>												
114 Phenolic resin, overhead braced	STALL	\$1,150.00	1	\$1,150	3	\$3,450	3	\$3,450	3	\$3,450	3	\$3,450
115 ADA	STALL	\$1,450.00	2	\$2,900	2	\$2,900	2	\$2,900	2	\$2,900	2	\$2,900
116 Urinal screen	EA	\$850.00	1	\$850	1	\$850	1	\$850	1	\$850	1	\$850
117 Corner guards	LS	\$1,000.00	1	\$1,000	1	\$1,000	1	\$1,000	1	\$1,000	1	\$1,000
118 Operable partition; Multi-Purpose	LF	\$1,100.00	30	\$33,000	30	\$33,000	35	\$38,500	70	\$77,000	70	\$77,000
119 <i>Toilet and Bath Accessories</i>												
120 Toilet accessories; gang toilet	EA	\$5,000.00	2	\$10,000	2	\$10,000	2	\$10,000	2	\$10,000	2	\$10,000
121 Toilet accessories; single user	EA	\$700.00					2	\$1,400	2	\$1,400	2	\$1,400
122 Utility shelf/ mop & broom holder; Janitor	SET	\$150.00	1	\$150	1	\$150	1	\$150	1	\$150	1	\$150
123 Recessed fire extinguisher and cabinet	EA	\$450.00	1	\$450	1	\$450	2	\$900	2	\$900	2	\$900
124 10-SPECIALTIES TOTAL				\$54,900		\$57,800		\$67,150		\$106,650		\$107,650
125												
126												
127 11- EQUIPMENT												
128												
129 Food service equipment; Kitchen, Pantry	GSF	\$200.00	200	\$40,000	200	\$40,000	400	\$80,000	400	\$80,000	500	\$100,000
130 11- EQUIPMENT TOTAL				\$40,000		\$40,000		\$80,000		\$80,000		\$100,000
131												

INDEPENDENT COST ESTIMATE



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ELEMENT	UNIT	UNIT RATE	2,400 GSF		3,000 GSF		5,000 GSF		6,000 GSF		7,000 GSF	
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost
12-FURNISHINGS												
Roller shades, manual shade operators	SF	\$7.50	420	\$3,150	420	\$3,150	640	\$4,800	680	\$5,100	760	\$5,700
Multipurpose, Program, Lounge	SF	\$12.50	600	\$7,500	600	\$7,500	600	\$7,500	700	\$8,750	700	\$8,750
12-FURNISHINGS TOTAL				\$10,650		\$10,650		\$12,300		\$13,850		\$14,450
21-FIRE SUPPRESSION												
Sprinkler system	GSF	\$7.50	2,400	\$18,000	3,000	\$22,500	5,000	\$37,500	6,000	\$45,000	7,000	\$52,500
21-FIRE SUPPRESSION TOTAL				\$18,000		\$22,500		\$37,500		\$45,000		\$52,500
22-PLUMBING												
Front end equipment	GSF	\$4.00	2,400	\$9,600	3,000	\$12,000	5,000	\$20,000	6,000	\$24,000	7,000	\$28,000
Kitchen service	RMS	\$10,000.00	1	\$10,000	1	\$10,000	1	\$10,000	1	\$10,000	1	\$10,000
<i>Plumbing Fixtures and piping</i>												
- Water Closet	EA	\$5,950.00	3	\$17,850	5	\$29,750	7	\$41,650	7	\$41,650	7	\$41,650
- Urinal	EA	\$5,900.00	1	\$5,900	1	\$5,900	1	\$5,900	1	\$5,900	1	\$5,900
- Lavatory	EA	\$5,900.00	2	\$11,800	2	\$11,800	4	\$23,600	4	\$23,600	4	\$23,600
- Janitor Closet	EA	\$6,600.00	1	\$6,600	1	\$6,600	1	\$6,600	1	\$6,600	1	\$6,600
- Drinking Fountain	EA	\$9,600.00	1	\$9,600	1	\$9,600	1	\$9,600	1	\$9,600	1	\$9,600
Natural Gas Piping	GSF	\$2.00	2,400	\$4,800	3,000	\$6,000	5,000	\$10,000	6,000	\$12,000	7,000	\$14,000
Miscellaneous				\$8,000		\$10,000		\$13,000		\$14,000		\$14,000
22-PLUMBING TOTAL				\$84,150		\$101,650		\$140,350		\$147,350		\$153,350
23-HVAC												
VFR heating and cooling system	GSF	\$27.50	2,400	\$66,000	3,000	\$82,500	5,000	\$137,500	6,000	\$165,000	7,000	\$192,500
Kitchen exhaust and makeup air	RMS	\$25,000.00	1	\$25,000	1	\$25,000	1	\$25,000	1	\$25,000	1	\$25,000
ERV ventilation system	GSF	\$12.50	2,400	\$30,000	3,000	\$37,500	5,000	\$62,500	6,000	\$75,000	7,000	\$87,500
Bathroom heating and cooling	RMS	\$2,500.00	2	\$5,000	2	\$5,000	4	\$10,000	4	\$10,000	4	\$10,000
Controls & Instrumentation	GSF	\$5.00	2,400	\$12,000	3,000	\$15,000	5,000	\$25,000	6,000	\$30,000	7,000	\$35,000
Miscellaneous				\$11,000		\$13,000		\$20,000		\$23,000		\$27,000
23-HVAC TOTAL				\$149,000		\$178,000		\$280,000		\$328,000		\$377,000

INDEPENDENT COST ESTIMATE



Chester Senior Center
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Building Direct Trade Cost Details

ELEMENT	UNIT	UNIT RATE	2,400 GSF		3,000 GSF		5,000 GSF		6,000 GSF		7,000 GSF	
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost
173 26-ELECTRICAL												
174												
175 Electrical system	GSF	\$30.00	2,400	\$72,000	3,000	\$90,000	5,000	\$150,000	6,000	\$180,000	7,000	\$210,000
176 26-ELECTRICAL TOTAL				\$72,000		\$90,000		\$150,000		\$180,000		\$210,000
177												
178												
179 31-EARTHWORK												
180												
181 <i>New Building Earthwork</i>	GSF		2,400		3,000		5,000		6,000		7,000	
182 Rough and fine grade for new slab	SF	\$1.50	2,400	\$3,600	3,000	\$4,500	5,000	\$7,500	6,000	\$9,000	7,000	\$10,500
183 Structural fill	CY	\$25.00	196	\$4,889	244	\$6,111	407	\$10,185	489	\$12,222	570	\$14,259
184 Gravel below slab	CY	\$35.00	98	\$3,422	122	\$4,278	204	\$7,130	244	\$8,556	285	\$9,981
185 Continuous footings	LF	\$35.00	250	\$8,750	250	\$8,750	305	\$10,675	340	\$11,900	360	\$12,600
186 Perimeter foundation drain	LF	\$20.00	375	\$7,500	375	\$7,500	460	\$9,190	510	\$10,200	540	\$10,800
187 Spread footings	EA	\$500.00	14	\$7,000	15	\$7,500	20	\$10,000	23	\$11,500	26	\$13,000
188 Backfill selected excavated material behind wall	CY	\$15.00	69	\$1,035	69	\$1,035	85	\$1,275	94	\$1,410	100	\$1,500
189 31-EARTHWORK TOTAL				\$36,196		\$39,674		\$55,955		\$64,788		\$72,641
190												
191												
192												

