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# The New Belmont Senior Community Center



## Schematic Design Phase

Catlin  
Architecture  
[www.catlinarchitecture.com](http://www.catlinarchitecture.com)

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# Town of Belmont

## Senior Community Center Schematic Design Phase

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3. Program - Floor Plans - Elevations
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5. Costs Estimate

## EXECUTIVE SUMMARY

### Objectives

The objectives of the schematic design were:

to develop a Senior Center planning program to address the growing needs of the Town of Belmont's older citizens

to analyze the former Kendall School site on Beech Street and explore site development options

to develop schematic site and building plans and elevations to establish the approximate costs for the proposed Senior Center

to explore green design opportunities and determine if LEED certification is desirable

### Major Design Issues

#### Program Development

A space program of approximately 18,350 gross square feet, focusing on senior community needs was developed. The program assumes the possibility of future expansion.

The program elements include: a large multi-purpose room with a small stage for large gatherings and meals programs; a lounge/library with adjacent coffee bar; classrooms including an arts classroom, crafts classroom and computer lab/classroom; a card/conference room, a fitness room; a games room; a health room; administrative and counseling space; storage rooms; toilet rooms and a commercial kitchen. Outdoor program elements include: landscaped parking area for +/- 60 vehicles, a drop-off for the main entry, a separate service area, and terrace / porch areas. Parking includes handicap accessible parking for six vehicles.

#### Schematic Design

Based upon the program and visits to other senior centers, schematic floor plans and elevations were developed.

### Site Development

The primary goal in the development of the site was to maximize parking and minimize the mass of a municipal building in a residential neighborhood.

The major development constraint of the site is its size and accommodating adequate parking. The site is approximately 54,040 square feet, or 1.24 acres. Typically, a site of two to three acres is recommended to accommodate 90 parking spaces and a 10,000 square foot building, setbacks, outdoor areas, drives and buffers. However, considering the density of the Town of Belmont, the Kendall School site is a very good opportunity considering the adjacent large park/playground facility.

More than 7 site development options were explored in the process of identifying the preferred building location and parking configuration. The various scenarios yielded between 54 and 65 parking spaces.

See site development options attached for evaluation of each option.

### Estimated Construction Costs

The estimated construction cost (bricks and mortar) for the proposed schematic 18,350 square foot Senior Center (including parking areas) is:

$18,350 \text{ sf} \times \$190 / \text{sf} = \$3.486 \text{ million}^*$

\*(Costs assume present dollars, normal foundations and a level site adjacent to a public way.)

### Construction Fall 2005

Escalation costs related to a construction start of Fall 2005 are estimated to be approximately 5% of the base building construction estimate or \$87,126 for a total base building cost of \$3,645,274 (\$198.64/sf)

The LEED option for Geothermal and Rain Water Harvest would add approximately \$58,800 with a combined payback of an estimated FOUR years. With these

two options factored into the costs the base building cost would be \$3,704,074. (\$201.85/sf) See attached documentation.

**LEED (Leadership in Environmental and Energy Design) Sustainable High Performance Design.**

The project as presently budgeted would be able to be LEED certified. The required points for certification ranges from 26 to 32 points. (See attached). It would be the first senior community center to receive such an honored designation. There would be additional engineering and application costs associated with certification which are estimated to be \$45,000. These cost include a greater degree of calculations on the part of the engineers and consultants, oversight during construction to effect compliance, building commissioning to verify that the systems meet LEED design standards, and the application fees for submission for certification.

**Conclusion**

The schematic design and corresponding construction cost estimate provide a benchmark against which planning and budgeting decisions can be made.

There are many potential variables that can affect the ultimate scope and cost of the building: site conditions; escalation costs; additional funding sources; unknown subsurface conditions; change in program scope.

## Belmont Senior Community Center Schematic Design

### Site Development Options

#### Assumptions / needs

- Building size: 12,000 to 20,000 s.f.
- Two Stories
- Maximize Number of Parking Spaces
- Recreation Parking After Hours
- Future Building Expansion Potential
- Minimize Impact on Neighborhood
- Save Old Beech Tree
- Develop Sunny/Shaded Outdoor Space
- Pedestrian / Vehicular Safety
- Clear Vehicular Access / Circulation

#### **Option A**

##### Advantages

- Much of parking hidden behind building.
- Parking adjacent to recreation fields provides convenient and safe after hours parking for users of Town fields
- Expansion potential towards Beech Street
- Outdoor space with Beech Tree adjacent to primary activity room, facing south.

##### Disadvantages

- Large building mass faces Beech Street
- Two entrances compromise control / security
- Awkward vehicular circulation / drop off.
- Two way traffic lanes.

#### **Option B**

##### Advantages

- Expansion potential towards Beech Street and parking in front
- Reduced building mass faces Beech Street for more residential scale

Direct access to Town fields; back of building faces fields (although fence is located along right field border of baseball diamond)

Appropriate placement of outdoor space relative to solar orientation  
One way in, one way out circulation from / to Beech Street improves parking lot safety.

##### Disadvantages

Beech tree is located in parking area and reduces number of spaces  
Parking remote from recreation fields, reduces convenience for after hours parking for users of Town fields  
Limited outdoor space adjacent to main activity room.

#### **Option C**

##### Advantages

Appropriate placement of outdoor space relative to solar orientation  
One way in, one way out circulation from / to Beech Street improves parking lot safety.  
Parking adjacent to recreation fields provides convenient and safe after hours parking for users of Town fields  
Beech Tree is incorporated in outdoor space.  
Expansion potential along Beech Street

##### Disadvantages

Building is an island surrounded by parking /  
Majority of parking remote from front door. Significant travel distances are inappropriate for elders who have mobility issues.

## **Belmont Senior Community Center Schematic Design**

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### **Option D**

#### **Advantages**

Reduced building mass faces Beech Street for more residential scale  
Appropriate placement of outdoor space relative to solar orientation  
One way in, one way out circulation from / to Beech Street improves parking lot safety.  
Some parking adjacent to recreation fields provides convenient and safe after hours parking for users of Town fields

#### **Disadvantages**

Building surrounded by parking  
Awkward diagonal placement of building on-site.  
Half of parking remote from front door. Significant travel distances are inappropriate for elders who have mobility issues. If second entrance considered, two entrances compromise control / security.  
Tenuous connection between Beech Tree and outdoor space

### **Option E**

#### **Advantages**

Reduced building mass faces Beech Street for more residential scale  
Direct access to Town fields; back of building faces fields (although fence is located along right field border of baseball diamond)  
Appropriate placement of outdoor space relative to solar orientation

#### **Disadvantages**

No expansion potential  
Beech Tree is located in parking area and reduces number of spaces and precludes exit access to Beech Street  
Parking remote from recreation fields, reduces convenience for after

hours parking for users of Town fields

Limited outdoor space adjacent to main activity room.

Awkward parking and drive layout.

### **Option F**

#### **Advantages**

Appropriate placement of outdoor space relative to solar orientation  
Outdoor space with Beech Tree adjacent to primary activity room, facing south.  
One way in, one way out circulation from / to Beech Street improves parking lot safety.

#### **Disadvantages**

Two entrances compromise control / security  
Greater building mass facing street.  
Building surrounded by parking and drive.  
Access drive goes past outdoor space and service area.

### **Option F**

#### **Advantages**

Appropriate placement of outdoor space relative to solar orientation  
Outdoor space with Beech Tree adjacent to primary activity room, facing south.  
One way in, one way out circulation from / to Beech Street improves parking lot safety.

#### **Disadvantages**

Two entrances compromise control / security  
Greater building mass facing street.  
Building surrounded by parking and drive.

## **Belmont Senior Community Center Schematic Design**

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### **Option G**

#### **Advantages**

Appropriate placement of outdoor space relative to solar orientation

Outdoor space with Beech Tree adjacent to primary activity room, facing south.

One way in, one way out circulation from / to Beech Street improves parking lot safety.

Parking adjacent to recreation fields provides convenient and safe after hours parking for users of Town fields

Fragmented building mass faces Beech Street for more residential scale

Greater mass of building facing parking and town fields address larger scale of open space

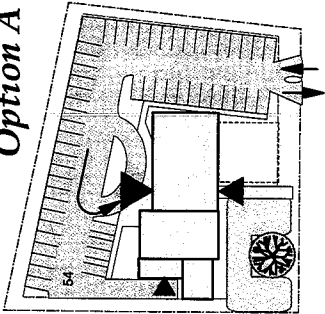
Second floor expansion potential to northwest

#### **Disadvantages**

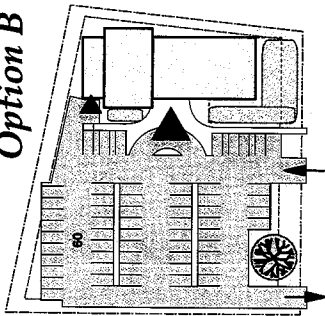
Building more remote from Town Fields

### **Preferred Development Option G**

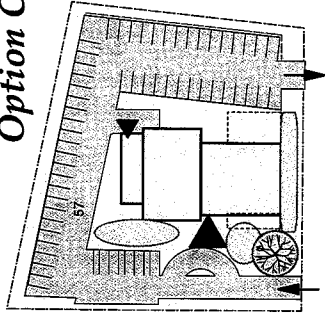
Option A



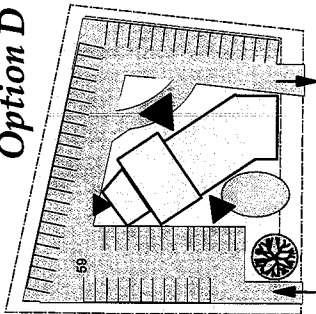
Option B



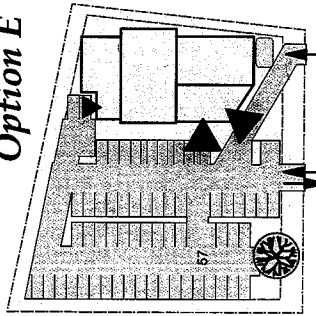
Option C



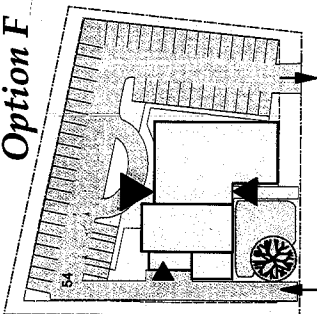
Option D



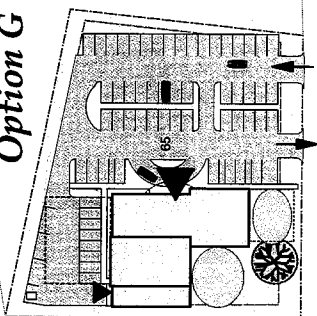
Option E



Option F



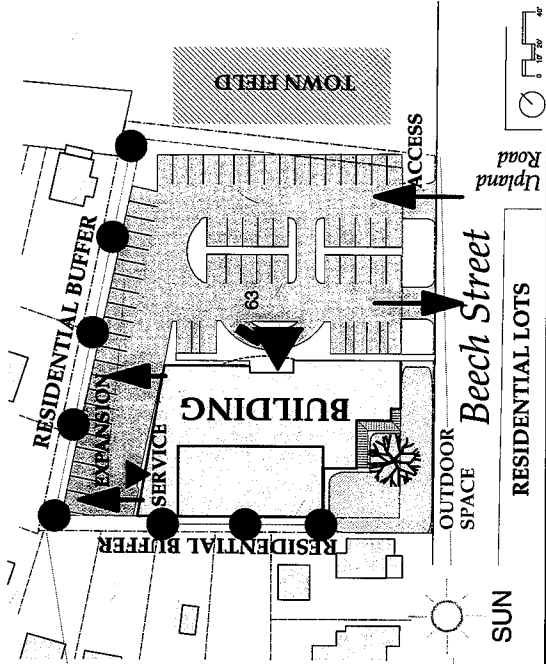
Option G

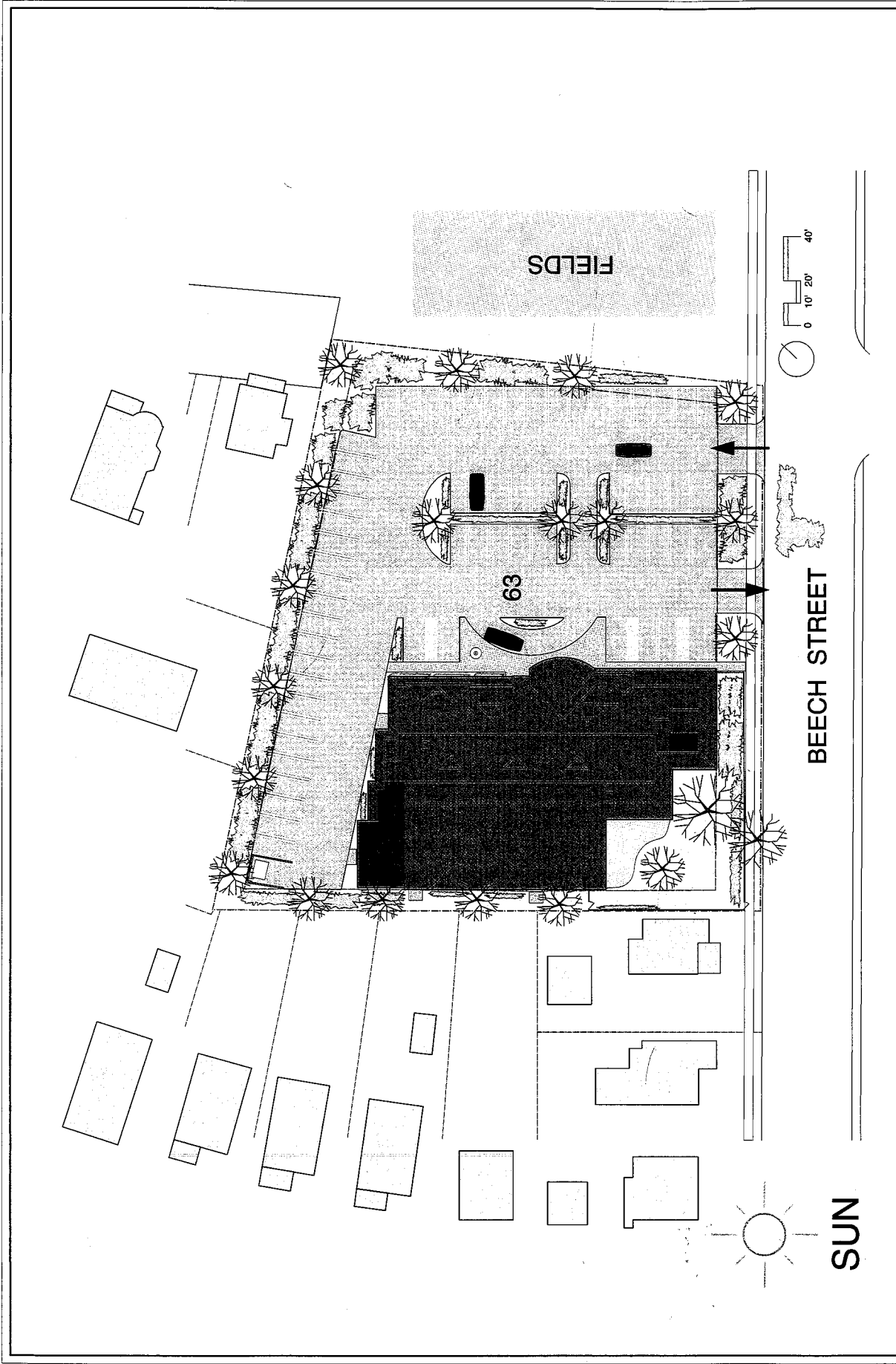


# SITE DEVELOPMENT ASSUMPTIONS

- Approx. 12,000 to 20,000 SF Building
- Two Stories
- Maximize Parking Spaces (+/- 60)
- Recreation Parking After Hours
- Future Bldg. Expansion Potential
- Minimize Impact on Neighborhood
- Save Beech Tree
- Develop Sunny/Shaded Outdoor Space
- Pedestrian / Vehicle Safety
- Clear Vehicular Access / Circulation

## Option G - Preferred Site Development





CatlinArchitecture  
617-269-1440

BELMONT SENIOR CENTER  
PRELIMINARY PROPOSED SITE PLAN - Preliminary Program 4/12/04

# PROGRAM LIST

## ENTRANCE 600 nsf

Lobby / Entry - 600 sf

## ADMIN. 1110 nsf

Recept. - 60 sf  
 Director - 160 sf  
 Staff Office Copy- 770 sf  
 Friends - 120

## SOC. SERVICES 270 nsf

Health /Counseling - 150 sf  
 Counseling - 120 sf

## SUPPORT 2100 nsf

Multi-Purpose Stor. - 450 sf  
 Arts & Crafts Stor. - 300 sf  
 Games Storage - 40 sf  
 Computer Stor. - 150 sf  
 Medical Equip. Stor.- 200 sf  
 Janitor - 120 sf  
 Exterior Stor. - 50 sf  
 Elev. Machine Rm. - 50 sf  
 Unfinished Stor. - 740 sf

## PROGRAM AREAS

### 8,380 nsf

Multi-Purpose / Din. - 3800 sf  
 Lounge / Library- 700 sf  
 Computer Lab - 400 sf  
 Classroom-Arts - 470 sf  
 Classroom-Crafts- 590 sf  
 Classroom - 570 sf  
 Game Room - 800 sf  
 Card / Conference - 400 sf  
 Fitness Area / Rm - 450 sf  
 Cafe - 200 sf

## RESTROOMS 779 nsf

Men's Rooms - 295 sf  
 Women's Rooms - 364 sf  
 Companion Toilet - 60 sf  
 HC Toilet / Shower - 60 sf

## FOOD SERVICE 700 nsf

Kitchen w/ cooler/frzr - 540 sf  
 Office /Pantry - 100 sf  
 Receiving - 60 sf

## SITE IMPROVEMENTS

ACCESS DRIVES

DROP-OF AREA

PARKING - 64 spaces

SERVICE YARD

## OUTDOOR

RECREATION SPACE

FUTURE EXPANSION

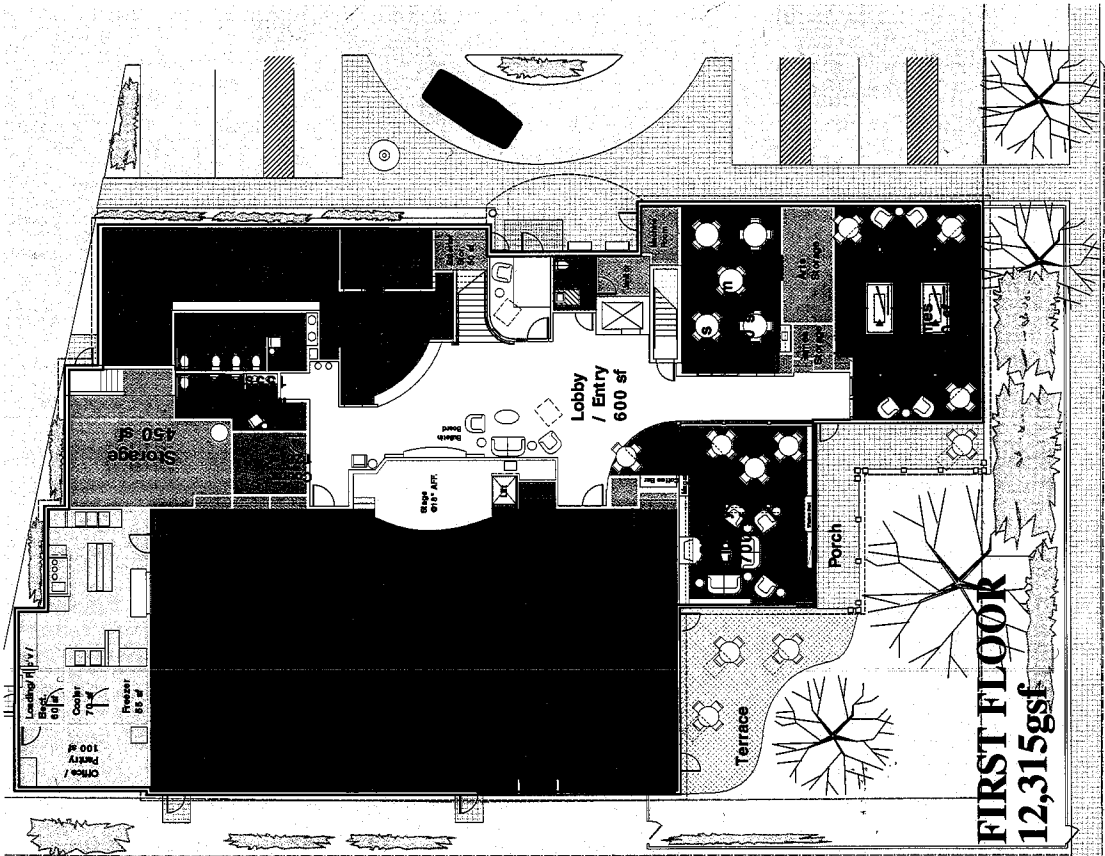
SPACE PROS

*PRELIMINARY*

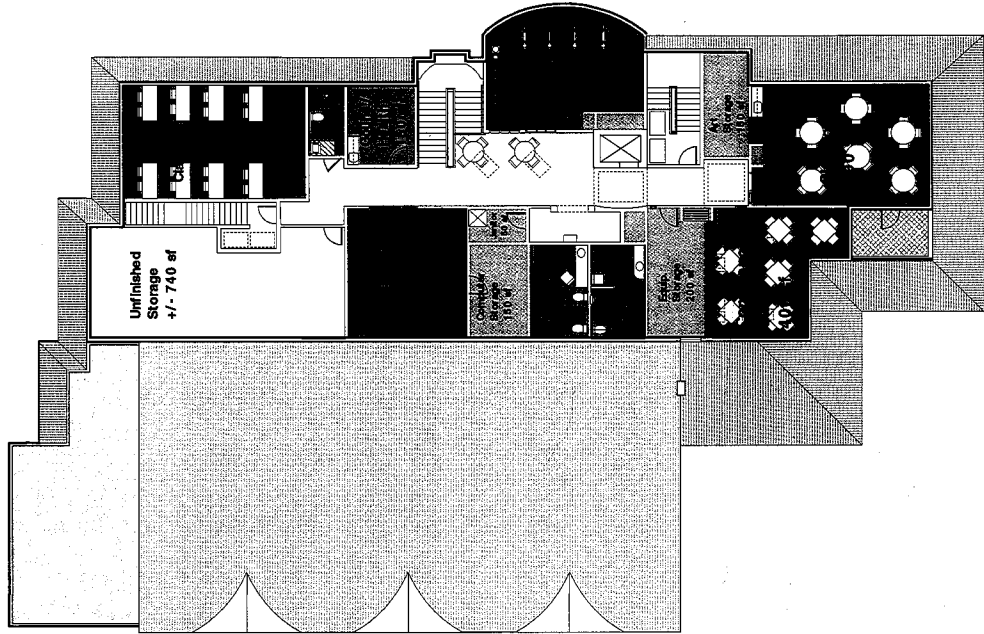
SENIOR CENTER: GROSS SQUARE FEET = NET SQUARE FEET x 1.3 = 13,939 nsf x 1.3 = +/- 18,351 gsf  
 18,351 sf x \$190 / sf = \$3,471,364 + \$173,568 (5% escalation) = \$3,644,932

**BELMONT SENIOR CENTER**  
 PROGRAM LIST - Preliminary Program 4/12/04

**GALLIN**  
 ARCHITECTURE  
 350 Dorchester Ave.  
 Boston, MA 02127  
 Tel: 617 269-1040  
 www.gallinarch.com



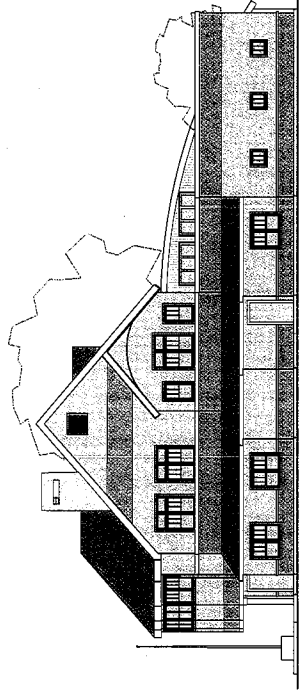
**FIRST FLOOR**  
12,315gsf



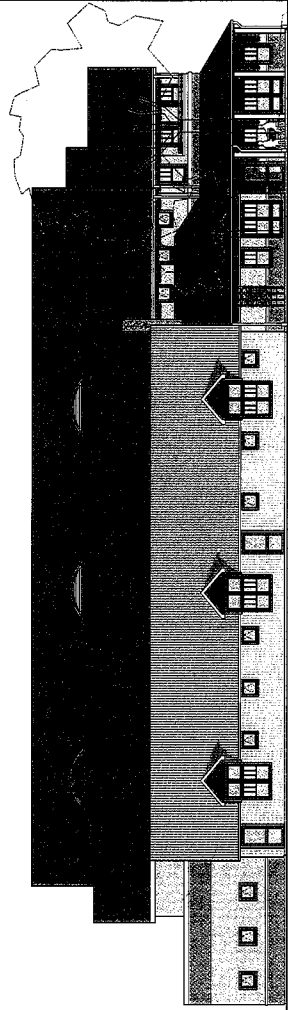
**SECOND FLOOR**  
6,032 gsf  
(incl. unfin. stor.)

**BELMONT SENIOR CENTER**  
SCHEMATIC PLANS - 6/2/04

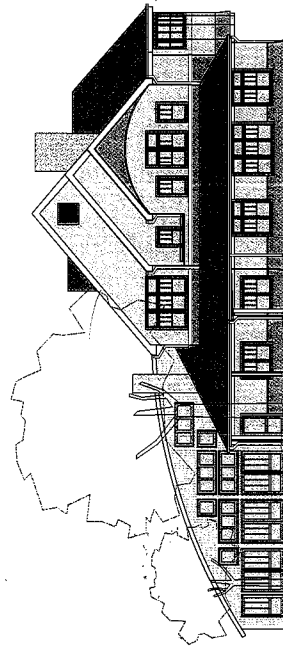
**CatlinArchitecture**  
617-269-1440



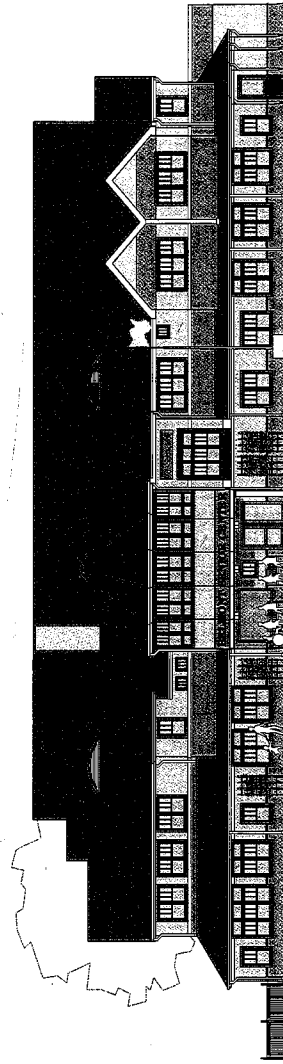
NORTHWEST ELEVATION



SOUTHWEST ELEVATION



BEECH STREET ELEVATION  
(Southeast)



NORTHEAST ELEVATION  
(Facing Parking and Fields)



BELMONT SENIOR CENTER  
SCHEMATIC ELEVATIONS - 6/1/04

CatlinArchitecture  
617-269-1440



# Version 2.1 Project Checklist

Belmont Senior Center, Belmont, MA

Yes ? No

Schematic proposal 6.18.04

## 5 9 Sustainable Sites

<input checked="" type="checkbox"/>				Prereq 1	<b>Erosion &amp; Sedimentation Control</b>
			<input checked="" type="checkbox"/>	Credit 1	<b>Site Selection</b>
			<input checked="" type="checkbox"/>	Credit 2	<b>Urban Redevelopment</b>
			<input checked="" type="checkbox"/>	Credit 3	<b>Brownfield Redevelopment</b>
				Credit 4.1	<b>Alternative Transportation, Public Transportation Access</b>
<input checked="" type="checkbox"/>				Credit 4.2	<b>Alternative Transportation, Bicycle Storage &amp; Changing Rooms</b>
<input checked="" type="checkbox"/>				Credit 4.3	<b>Alternative Transportation, Alternative Fuel Vehicles</b>
<input checked="" type="checkbox"/>				Credit 4.4	<b>Alternative Transportation, Parking Capacity and Carpooling</b>
			<input checked="" type="checkbox"/>	Credit 5.1	<b>Reduced Site Disturbance, Protect or Restore Open Space</b>
			<input checked="" type="checkbox"/>	Credit 5.2	<b>Reduced Site Disturbance, Development Footprint</b>
<input checked="" type="checkbox"/>				Credit 6.1	<b>Stormwater Management, Rate and Quantity</b>
			<input checked="" type="checkbox"/>	Credit 6.2	<b>Stormwater Management, Treatment</b>
			<input checked="" type="checkbox"/>	Credit 7.1	<b>Landscape &amp; Exterior Design to Reduce Heat Islands, Non-Roof</b>
			<input checked="" type="checkbox"/>	Credit 7.2	<b>Landscape &amp; Exterior Design to Reduce Heat Islands, Roof</b>
<input checked="" type="checkbox"/>				Credit 8	<b>Light Pollution Reduction</b>

Yes ? No

## 3 1 1 Water Efficiency

<input checked="" type="checkbox"/>				Credit 1.1	<b>Water Efficient Landscaping, Reduce by 50%</b>
<input checked="" type="checkbox"/>				Credit 1.2	<b>Water Efficient Landscaping, No Potable Use or No Irrigation</b>
			<input checked="" type="checkbox"/>	Credit 2	<b>Innovative Wastewater Technologies</b>
<input checked="" type="checkbox"/>				Credit 3.1	<b>Water Use Reduction, 20% Reduction</b>
			<input checked="" type="checkbox"/>	Credit 3.2	<b>Water Use Reduction, 30% Reduction</b>

Yes ? No

## 5 2 10 Energy & Atmosphere

<input checked="" type="checkbox"/>				Prereq 1	<b>Fundamental Building Systems Commissioning</b>
<input checked="" type="checkbox"/>				Prereq 2	<b>Minimum Energy Performance</b>
<input checked="" type="checkbox"/>				Prereq 3	<b>CFC Reduction in HVAC&amp;R Equipment</b>
4	<input checked="" type="checkbox"/>		5	Credit 1	<b>Optimize Energy Performance (1 to 10 possible points)</b>
			<input checked="" type="checkbox"/>	Credit 2.1	<b>Renewable Energy, 5%</b>
			<input checked="" type="checkbox"/>	Credit 2.2	<b>Renewable Energy, 10%</b>
			<input checked="" type="checkbox"/>	Credit 2.3	<b>Renewable Energy, 20%</b>
			<input checked="" type="checkbox"/>	Credit 3	<b>Additional Commissioning</b>
<input checked="" type="checkbox"/>				Credit 4	<b>Ozone Depletion</b>
			<input checked="" type="checkbox"/>	Credit 5	<b>Measurement &amp; Verification</b>
			<input checked="" type="checkbox"/>	Credit 6	<b>Green Power</b>

**7 6 Materials & Resources**

			<input checked="" type="checkbox"/>	Prereq 1 <b>Storage &amp; Collection of Recyclables</b>
			<input checked="" type="checkbox"/>	Credit 1.1 <b>Building Reuse, Maintain 75% of Existing Shell</b>
			<input checked="" type="checkbox"/>	Credit 1.2 <b>Building Reuse, Maintain 100% of Shell</b>
			<input checked="" type="checkbox"/>	Credit 1.3 <b>Building Reuse, Maintain 100% Shell &amp; 50% Non-Shell</b>
<input checked="" type="checkbox"/>				Credit 2.1 <b>Construction Waste Management, Divert 50%</b>
<input checked="" type="checkbox"/>				Credit 2.2 <b>Construction Waste Management, Divert 75%</b>
			<input checked="" type="checkbox"/>	Credit 3.1 <b>Resource Reuse, Specify 5%</b>
			<input checked="" type="checkbox"/>	Credit 3.2 <b>Resource Reuse, Specify 10%</b>
<input checked="" type="checkbox"/>				Credit 4.1 <b>Recycled Content, Specify 5% (post-consumer + ½ post-Industrial)</b>
<input checked="" type="checkbox"/>				Credit 4.2 <b>Recycled Content, Specify 10% (post-consumer + ½ post-Industrial)</b>
<input checked="" type="checkbox"/>				Credit 5.1 <b>Local/Regional Materials, 20% Manufactured Locally</b>
<input checked="" type="checkbox"/>				Credit 5.2 <b>Local/Regional Materials, of 20% Above, 50% Harvested Locally</b>
			<input checked="" type="checkbox"/>	Credit 6 <b>Rapidly Renewable Materials</b>
<input checked="" type="checkbox"/>				Credit 7 <b>Certified Wood</b>

Yes ? No

**9 6 Indoor Environmental Quality**

				Prereq 1 <b>Minimum IAQ Performance</b>
				Prereq 2 <b>Environmental Tobacco Smoke (ETS) Control</b>
<input checked="" type="checkbox"/>				Credit 1 <b>Carbon Dioxide (CO<sub>2</sub>) Monitoring</b>
			<input checked="" type="checkbox"/>	Credit 2 <b>Ventilation Effectiveness</b>
<input checked="" type="checkbox"/>				Credit 3.1 <b>Construction IAQ Management Plan, During Construction</b>
			<input checked="" type="checkbox"/>	Credit 3.2 <b>Construction IAQ Management Plan, Before Occupancy</b>
<input checked="" type="checkbox"/>				Credit 4.1 <b>Low-Emitting Materials, Adhesives &amp; Sealants</b>
<input checked="" type="checkbox"/>				Credit 4.2 <b>Low-Emitting Materials, Paints</b>
<input checked="" type="checkbox"/>				Credit 4.3 <b>Low-Emitting Materials, Carpet</b>
<input checked="" type="checkbox"/>				Credit 4.4 <b>Low-Emitting Materials, Composite Wood &amp; Agrifiber</b>
<input checked="" type="checkbox"/>				Credit 5 <b>Indoor Chemical &amp; Pollutant Source Control</b>
<input checked="" type="checkbox"/>				Credit 6.1 <b>Controllability of Systems, Perimeter</b>
			<input checked="" type="checkbox"/>	Credit 6.2 <b>Controllability of Systems, Non-Perimeter</b>
			<input checked="" type="checkbox"/>	Credit 7.1 <b>Thermal Comfort, Comply with ASHRAE 55-1992</b>
			<input checked="" type="checkbox"/>	Credit 7.2 <b>Thermal Comfort, Permanent Monitoring System</b>
<input checked="" type="checkbox"/>				Credit 8.1 <b>Daylight &amp; Views, Daylight 75% of Spaces</b>
			<input checked="" type="checkbox"/>	Credit 8.2 <b>Daylight &amp; Views, Views for 90% of Spaces</b>

Yes ? No

**1 4 Innovation & Design Process**

			<input checked="" type="checkbox"/>	Credit 1.1 <b>Innovation in Design: Provide Specific Title</b>
			<input checked="" type="checkbox"/>	Credit 1.2 <b>Innovation in Design: Provide Specific Title</b>
			<input checked="" type="checkbox"/>	Credit 1.3 <b>Innovation in Design: Provide Specific Title</b>
			<input checked="" type="checkbox"/>	Credit 1.4 <b>Innovation in Design: Provide Specific Title</b>
<input checked="" type="checkbox"/>				Credit 2 <b>LEED™ Accredited Professional</b>

Yes ? No

**30 36 Project Totals (pre-certification estimates)**

Certified 26-32 points Silver 33-38 points Gold 39-51 points Platinum 52-69 points

## Heidi Sokol

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**From:** Richard Moore  
**Sent:** Wednesday, June 23, 2004 4:47 PM  
**To:** catlin, john  
**Cc:** Heidi Sokol  
**Subject:** Belmont Sr. Ctr updates



Geo Payback Analyses 2.tif

hello john,

attached is the latest cost analyses for geothermal energy. the payback has dropped to 2.5 years w/the updated utility rates\* which makes this an extremely attractive option. no response yet from Aqua-Flo Rainwater Harvester engineer. please confirm if carl orio (Northeast Geo) should plan on presenting at the Selectman Mtg next monday (6.28.04.) if no advise is given by friday i'll assume otherwise.

\* these rates were received from heidi. it was assumed that the standard fuel type for heating town bldgs is gas. confirm if these rates are actual "Town of Belmont" charges as opposed to Belmont At-Large rates. this could effect payback analyses.

the following are recommendations for the project:

- 1 refer to the save beech (?) tree as the "Legacy Tree"
- 2 confirm if "Town of Belmont" pays "Demand Charges for Electricity" during peak times. if so the Geo Payback Analyses will even be better.
- 3 Daylighting Opportunities exist for the "Great Room." use daylight modeling to confirm if the space would benefit from dormers/monitors for additional daylight.

richard moore

Richard Moore AIA LEED AP  
Environmental Consulting  
20 East Milton Road  
Brookline MA 02445 USA  
V/F: 617 566 7567  
E: [rm.architect@verizon.net](mailto:rm.architect@verizon.net)

Water Energy Distributors Inc. - Atkinson NH 603-362-4666

Belmont Senior Cntr PRELIMw/TRAN

06/22/2004 page 4/5

	Oil/Electric/Oil	GeoExchange
Heating	\$19,714	\$6,426
Heat Maint.	\$2,000	\$1,250
Cooling	\$2,313	\$1,097
Chill Maint.	\$2,250	\$1,125
Hot Water	\$741	\$242
<b>Total</b>	<b>\$27,019</b>	<b>\$10,139</b>

**Table 5 - Estimated First Year Comparative Energy Costs for the Senior Center**

..Saving \$16,879 in your first year is a good investment....and you don't pay taxes on this "income"!

**WHAT ABOUT CASH ? -**

Your ground source heat pump installation would typically cost \$41,000 more than an oil heating/electric cooling/oil hot water. If it were added to a 20 year mortgage at 5.50% your monthly mortgage payment is increased by about \$282

As inflation increases the yearly energy costs, your savings will grow proportionately.

Look at a typical cash flow for the first ten years, table 6:

Source/Years	1	2	3	4	In the 10th Year	
					5	10
<b>Oil/Electric/Oil</b>						
Heating	\$19,714	\$20,306	\$20,915	\$21,542	\$22,189	\$25,723
Cooling (full capacity)	\$2,313	\$2,359	\$2,407	\$2,455	\$2,504	\$2,764
Hot Water	\$741	\$764	\$787	\$810	\$835	\$967
Maintenance Total	\$4,250	\$4,378	\$4,509	\$4,644	\$4,783	\$5,545
<b>total....</b>	<b>\$27,019</b>	<b>\$27,806</b>	<b>\$28,617</b>	<b>\$29,451</b>	<b>\$30,310</b>	<b>\$35,000</b>
<b>Ground Source Heat Pump</b>						
Heating	\$6,426	\$6,555	\$6,686	\$6,819	\$6,956	\$7,680
Cooling (full capacity)	\$1,097	\$1,119	\$1,141	\$1,164	\$1,187	\$1,311
Hot Water	\$242	\$247	\$251	\$256	\$262	\$289
Maintenance Total	\$2,375	\$2,446	\$2,520	\$2,595	\$2,673	\$3,099
<b>total....</b>	<b>\$10,139</b>	<b>\$10,366</b>	<b>\$10,598</b>	<b>\$10,835</b>	<b>\$11,078</b>	<b>\$12,378</b>
Annual Savings	\$16,879	\$17,440	\$18,019	\$18,616	\$19,233	\$22,622
Increased Mortgage	(\$3,384)	(\$3,384)	(\$3,384)	(\$3,384)	(\$3,384)	(\$3,384)
<b>Net Cash Saved</b>	<b>\$13,495</b>	<b>\$14,056</b>	<b>\$14,635</b>	<b>\$15,232</b>	<b>\$15,848</b>	<b>\$19,237</b>

**Table 6 - Estimated Annual Cash Savings for the Senior Center**

RICHARD

MOORE

AIA

ARCHITECT

John Catlin AIA  
John Catlin & Associates Architects Inc.  
250 Dorchester Avenue  
Boston, MA 02127

DATE: 6.18.04

**RE: RAINWATER HARVESTER COST BENEFIT ANALYSES FOR THE BELMONT SENIOR CENTER**

Estimated annual toilet flush load	81,030 gal
Estimated annual irrigation load	200,000 gal (estimated)
Belmont Water/Sewer rate:	\$11.08/100 cubic feet
Estimated annual toilet/irrigation water cost:	\$4,163

Rainwater Harvester System

Estimated roof collection area:	13,400 SF
Estimated hard landscape collection area:	27,250 SF
Surface collectable rainwater*:	20 gal/SF/year
Total 9-month collectable rainwater:	542,000 gal/year
Schematic Aqua-Flo System storage tank:	1,000 gal
Schematic Aqua-Flo System cost**:	\$50,000
Simple Payback***:	12 years
LEED credits earned:	4 Water Use Reduction points

Stormwater Retention System

EPA's stormwater process & equip. cost:	\$???
---	-------

Geo-bleed Water Retention System

Geothermal system's retention pond cost:	\$???
--	-------

\*Base on Boston Annual Rainwater of 41.5 inches @ 75% collection efficiency

\*\* Does not include building plumbing/landscape irrigation systems

\*\*\* Does not include Stormwater/Geo-bleed Water Retention Systems offset costs

RICHARD

MOORE

AIA

ARCHITECT

John Catlin AIA  
John Catlin & Associates Architects Inc.  
250 Dorchester Avenue  
Boston, MA 02127

DATE: 6.18.04

**RE: SOLAR PV PAYBACK ANALYSES FOR THE BELMONT SENIOR CENTER, BELMONT, MA**

Estimated annual electricity use*:	105,000 kWh
Belmont Municipal kWh rate:	\$.0792/kWh
Estimated annual electricity cost:	\$8,316
Schematic PV System size:	20 kWh
Schematic PV System cost:	\$200,000 (estimated)
Electricity load supplied by PV:	7%
Electricity savings supplied by PV:	\$582/year
Simple Payback:	344 years
LEED credits earned:	1 Renewable Energy point

\*Estimated electrical load based on 17,500 sq ft @ 6 kWh

# A.M. Fogarty & Assoc., Inc.

175 Derby St., Suite 5, Hingham, MA 02043  
 TEL: (781) 749-7272 • FAX: (781) 740-2652  
 ptim@amfogarty.com

*"Construction Cost Consultants"*

## Belmont Senior Center Belmont, MA

June 18, 2004

### GRAND SUMMARY

SITE	\$561,412
BASE ESTIMATE	\$2,996,736
TOTAL CONSTRUCTION COST	\$3,558,148

Additional Escalation (2.5%)	\$87,126.00
total	\$3,645,274.00
total gross square footage	18,351
cost/square foot	\$198.64
Geothermal Option	\$41,000.00
Escalation (5%)	\$2,050.00
Total Geothermal Option	\$43,050.00
Rain Water Option	\$15,000.00
Escalation (5%)	\$750.00
Total Rain Water Option	\$15,750.00
<b>Grand total</b>	<b>\$3,704,074.00</b>

PROJECT: Belmont Senior Center  
 LOCATION: Belmont, MA  
 CLIENT: Catlin Architecture  
 DATE: 18-Jun-04

No.: 04065

Construction Schedule: Calendar Months

SITE

SUMMARY	DIVISION TOTAL	PERCENT OF PROJECT
DIVISION 1 - GENERAL CONDITIONS	26,431	5%
DIVISION 2 - SITEWORK	426,229	76%
DIVISION 3 - CONCRETE	0	0%
DIVISION 4 - UNIT MASONRY	0	0%
DIVISION 5 - METALS	0	0%
- MISCELLANEOUS METALS	0	0%
DIVISION 6 - WOOD AND PLASTICS	0	0%
DIVISION 7 - THERMAL MOISTURE PROTECTION		
- WATERPROOFING, DAMPROOFING, & CAULKING	0	0%
- INSULATION	0	0%
- ROOFING AND FLASHING	0	0%
DIVISION 8 - DOORS AND WINDOWS	0	0%
- ALUM. ENTRANCES AND STOREFRONTS	0	0%
- ALUMINUM WINDOWS	0	0%
- GLASS & GLAZING	0	0%
DIVISION 9 - FINISHES		
- GYPSUM DRYWALL	0	0%
- TILE	0	0%
- ACOUSTICAL TILE	0	0%
- WOOD FLOORING	0	0%
- RESILIENT FLOORING	0	0%
- CARPET	0	0%
- PAINTING & WALL COVERING	0	0%
DIVISION 10 - SPECIALTIES	0	0%
DIVISION 11 - EQUIPMENT	0	0%
DIVISION 12 - FURNISHINGS	0	0%
DIVISION 13 - SPECIAL CONSTRUCTION	0	0%
DIVISION 14 - CONVEYING SYSTEMS	0	0%
DIVISION 15 - MECHANICAL		
- FIRE PROTECTION	0	0%
- PLUMBING	0	0%
- HVAC	0	0%
DIVISION 16 - ELECTRICAL	0	0%
<b>SUBTOTAL</b>	<b>452,660</b>	
OVERHEAD & PROFIT 10%	45,266	8%
<b>SUBTOTAL</b>	<b>497,926</b>	
DESIGN CONTINGENCY 10%	49,793	9%
<b>SUBTOTAL</b>	<b>547,719</b>	
ESCALATION (1 YEAR) 2.5%	13,693	2%
<b>TOTAL</b>	<b>561,412</b>	<b>100%</b>

Belmont Senior Center - Site

6/18/2004

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
<b>DIVISION 1 - GENERAL CONDITIONS</b>				
General Conditions (5% of project total)	1	LS		26,431
				26,431
<b>DIVISION 2 - SITEWORK</b>				
<b>02100 SITE PREPARATION</b>				
Tree protection	1	LS	750.00	750
Site clearing (pavement, trees, loam, ect.)	54,000	SF	0.65	35,100
Construction fence	940	LF	9.75	9,165
Construction entrance	1	EA	2,500.00	2,500
Erosion control (drainage only)	1	LS	2,000.00	2,000
Site preparation	1	LS	5,000.00	5,000
*excludes removal of building structures				
<b>02200 EARTHWORK</b>				
Site grading	6,000	SY	0.65	3,900
8" Gravel at paving	700	CY	18.75	13,125
Site cut and fill	1	LS	10,000.00	10,000
<b>02480 PLANTING</b>				
Trees - 3 1/2" cal.	12	EA	825.00	9,900
Misc. planting	1	LS	15,000.00	15,000
Loam and seed	1,285	SY	4.50	5,783
<b>02513 PAVING AND CURBING</b>				
Granite Curbing - straight	1,152	LF	29.00	33,408
Granite Curbing - curve	244	LF	31.00	7,564
Terrace - brick pavers	622	SF	14.50	9,019
Conc. pavement - sidewalk	1,180	SF	3.30	3,894
Conc. entry pavement	1,981	SF	3.50	6,934
Bit. pavement - main parking & entry drive	2,758	SY	13.75	37,923
Parking lot striping	1	LS	2,000.00	2,000
HC pavement marking	1	LS	750.00	750
Misc. pavement markings-dump/loading	1	LS	1,000.00	1,000
Dumpster pad	1	EA	1,500.00	1,500
Condenser pad	4	EA	950.00	3,800
*excludes replacement of street curbing				

## Belmont Senior Center - Site

6/18/2004

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
<b>02700 SEWERAGE AND DRAINAGE</b>				
Sewer:				
8" PVC	300	LF	38.00	11,400
Sewer manhole	1	EA	2,100.00	2,100
Street connection	1	LS	3,000.00	3,000
Drainage:				
Catch basin	5	EA	2,200.00	11,000
Drywells (on site containment)	3	EA	5,000.00	15,000
Drainage manhole	1	EA	2,300.00	2,300
10,000 Cistern	1	EA	8,500.00	8,500
Drain line	600	LF	36.00	21,600
Roof drainage tie in	1	LS	10,000.00	10,000
<b>02800 UTILITIES</b>				
Water:				
Fire line - 6"	300	LF	48.00	14,400
Water line - 4"	300	LF	42.00	12,600
Fire hydrant	1	EA	1,750.00	1,750
Connection	1	LS	3,000.00	3,000
Gate valve	2	EA	750.00	1,500
Gas service	by utility company			
Electrical Service:				
Elec. duct bank (conc. & excav.)	300	LF	34.00	10,200
Transformer pad	1	EA	1,200.00	1,200
Parking lighting	6	EA	2,200.00	13,200
Bollard lighting	5	EA	850.00	4,250
*primary cabling and transformer provided by utility company				
<b>02811 LANDSCAPING IRRIGATION</b>				
Sprinkler system	11,500	SF	0.65	7,475
Pump chamber	1	EA	3,600.00	3,600
<b>02825 ORNAMENTAL FENCES</b>				
Metal picket fence - 4'	200	LF	165.00	33,000
Metal gate - 3'	2	EA	1,200.00	2,400
<b>02900 SITE IMPROVEMENTS</b>				
Site sign	1	EA	3,500.00	3,500
Traffic/parking sign	8	EA	155.00	1,240
Benches	3	EA	1,000.00	3,000
Misc. improvements	1	LS	5,000.00	5,000

Belmont Senior Center - Site

6/18/2004

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
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426,229

PROJECT: Belmont Senior Center  
 LOCATION: Belmont, MA  
 CLIENT: Catlin Architecture  
 DATE: 18-Jun-04

NO. OF SQ. FT.: 18,351  
 COST PER SQ. FT.: \$163.30  
 \*SF Includes Unfinished Storage Room

No.: 04065  
 Construction Schedule: Calendar Months

SUMMARY	DIVISION TOTAL	PERCENT OF PROJECT	COST PER SF
DIVISION 1 - GENERAL CONDITIONS	141,088	5%	7.69
DIVISION 2 - SITEWORK	17,748	1%	0.97
DIVISION 3 - CONCRETE	117,809	4%	6.42
DIVISION 4 - UNIT MASONRY	0	0%	0.00
DIVISION 5 - METALS	0	0%	0.00
- MISCELLANEOUS METALS	7,363	0%	0.40
DIVISION 6 - WOOD AND PLASTICS	417,983	14%	22.78
DIVISION 7 - THERMAL MOISTURE PROTECTION			
- WATRPRF,DAMPRF,& CAULKING	46,682	2%	2.54
- INSULATION	28,755	1%	1.57
- ROOFING AND FLASHING	138,916	5%	7.57
DIVISION 8 - DOORS AND WINDOWS	65,100	2%	3.55
- ALUM. ENTRANCES AND STOREFRONTS	11,200	0%	0.61
- ALUMINUM WINDOWS	61,750	2%	3.36
- GLASS & GLAZING	6,000	0%	0.33
DIVISION 9 - FINISHES			
- GYPSUM DRYWALL	164,517	5%	8.96
- TILE	0	0%	0.00
- ACOUSTICAL TILE	33,030	1%	1.80
- WOOD FLOORING	2,590	0%	0.14
- RESILIENT FLOORING	45,372	2%	2.47
- CARPET	29,160	1%	1.59
- PAINTING & WALL COVERING	66,762	2%	3.64
DIVISION 10 - SPECIALTIES	55,559	2%	3.03
DIVISION 11 - EQUIPMENT	45,950	2%	2.50
DIVISION 12 - FURNISHINGS	1,800	0%	0.10
DIVISION 13 - SPECIAL CONSTRUCTION	0	0%	0.00
DIVISION 14 - CONVEYING SYSTEMS	62,000	2%	3.38
DIVISION 15 - MECHANICAL			0.00
- FIRE PROTECTION	87,878	3%	4.79
- PLUMBING	111,467	4%	6.07
- HVAC	330,318	11%	18.00
DIVISION 16 - ELECTRICAL	319,441	11%	17.41
<b>SUBTOTAL</b>	<b>2,416,236</b>		<b>131.67</b>
OVERHEAD & PROFIT 10%	241,624	8%	13.17
<b>SUBTOTAL</b>	<b>2,657,859</b>		<b>144.83</b>
DESIGN CONTINGENCY 10%	265,786	9%	14.48
<b>SUBTOTAL</b>	<b>2,923,645</b>		<b>159.32</b>
ESCALATION (1 year) 2.5%	73,091	2%	3.98
<b>TOTAL</b>	<b>2,996,736</b>	<b>100%</b>	<b>\$163.30</b>

Belmont Senior Center

6/18/2004

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
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DIVISION 1 - GENERAL CONDITIONS

General Conditions (5% of project total)	1	LS		141,088
				141,088

DIVISION 2 - SITEWORK

02200 EARTHWORK

Foundation excavation	600	CY	6.50	3,900
Foundation backfill	500	CY	5.00	2,500
12" Gravel base	456	CY	20.50	9,348
Misc. foundation excavation	1	LS	2,000.00	2,000
*excludes ledge removal				
*excludes premiums due to poor soil conditions				
				17,748

DIVISION 3 - CONCRETE

03300 CAST IN PLACE CONCRETE

Footing 1x2	40	CY	315.00	12,600
12" Foundation 4' high	80	CY	505.00	40,400
Column footing (4'x4' @ 33 EA)	18	CY	370.00	6,660
5" Slab on grade - first flr	12,315	SF	3.25	40,024
Elev. mat	4.5	CY	350.00	1,575
Elev. pit wall	5	CY	510.00	2,550
Ext. pier footing	15	EA	600.00	9,000
Mech. pads	1	LS	2,000.00	2,000
Misc. concrete	1	LS	3,000.00	3,000
				117,809

DIVISION 4 - UNIT MASONRY

04100 UNIT MASONRY

NOT USED

0

DIVISION 5 - METALS

NOT USED

Belmont Senior Center				6/18/2004
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL

0

## 05500 MISCELLANEOUS METALS

Elev. at ladder	1	EA	975.00	975
Elev. framing	1	EA	1,800.00	1,800
Misc. bldg. metals	18,351	SF	0.25	4,588
				7,363

## DIVISION 6 - WOOD AND PLASTICS

## 06100 ROUGH CARPENTRY

2x6 Ext. wall framing	11,218	SF	3.20	35,898
5/8" Ext. ply sheathing	11,218	SF	1.90	21,314
TJI Floor framing	6,032	SF	2.85	17,191
3/4 T&G Subfloor	6,032	SF	2.10	12,667
Second floor support beam and bearing colur	522	LS	20.00	10,440
Multi purpose arched roof framing	4,680	SF	12.00	56,160
Low roof sloped framing	2,340	SF	5.50	12,870
Flat roof framing	1,154	SF	5.00	5,770
Main roof framing	8,142	SF	6.00	48,852
Parapet framing	140	LF	8.00	1,120
3/4 Roof sheathing	16,316	SF	2.00	32,632
Strapping	18,351	SF	0.65	11,928
Dormer framing	7	EA	650.00	4,550
Overhand soffit framing	884	SF	2.25	1,989
Ext. soffit framing	364	LF	6.50	2,366
Interior blocking	18,351	SF	0.15	2,753
Fireplace enclosure	1	LS	3,500.00	3,500
Stage 2x4 knee wall	192	SF	3.00	576
Stage 3/4" ply	296	SF	2.10	622
Stage framing 2x4	296	SF	4.50	1,332
Stage stair	1	EA	900.00	900
Interior Stair	2	FLTS	2,800.00	5,600
Tyvek	11,218	SF	0.24	2,692
Misc. rough carpentry	18,351	SF	1.00	18,351

## 06200 FINISH CARPENTRY

Interior:				
Column cover	6	EA	500.00	3,000
Stage trim	1	LS	2,500.00	2,500
Window trim	2,082	LF	2.95	6,142
Fireplace mantel	1	LS	1,500.00	1,500

Belmont Senior Center				6/18/2004
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Interior trim	18,351	SF	0.50	9,176
Casework:				
Coffee base/wall cab	6	LF	450.00	2,700
Library bookcases	28	LF	350.00	9,800
Lav counter - solid surface	20	LF	240.00	4,800
Arts & crafts	10	LF	250.00	2,500
Art room storage	1	LS	2,500.00	2,500
Misc. casework	1	LS	7,500.00	7,500
Exterior: (PVC Trim 'Aztec')				
Rake trim	178	LF	22.00	3,916
Soffit and fascia	364	LF	23.00	8,372
Window and door trim	2,082	LF	3.95	8,224
Porch box beam	62	LF	25.00	1,550
Dormer trim	7	EA	450.00	3,150
Radial trim	120	LF	40.00	4,800
Second floor band	156	LF	12.00	1,872
Watertable trim	242	LF	15.00	3,630
Columns	13	EA	275.00	3,575
Bead board porch ceiling	884	SF	6.00	5,304
Parapet trim	140	LF	10.00	1,400
Misc. ext. finish carpentry	1	LS	8,000.00	8,000
				417,983

### DIVISION 7 - THERMAL MOISTURE PROTECTION

#### 07100 WATERPROOFING, DAMPPROOFING, & CAULKING

Foundation dampproofing	2,152	SF	1.35	2,905
Elevator pit waterproofing	1	LS	3,000.00	3,000
Misc. sealant	18,351	SF	0.40	7,340

#### 07460 SIDING AND TRIM

Cedar shingle	7,776	SF	4.30	33,437
*inc. woven outside corner				
				46,682

#### 07200 - INSULATION

2" Rigid insulation - foundation	2,152	SF	2.10	4,519
5 1/2" Batt insul.	11,218	SF	0.45	5,048
3" Rigid roof insul. At ml roof (nailable)	4,680	SF	4.10	19,188

6/18/2004

## Belmont Senior Center

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
				28,755

## 07500 ROOFING

Membrane roofing and Insul.	1,072	SF	6.00	6,432
Deck roofing and pavers	112	SF	38.00	4,256
Membrane flashing	1	LS	300.00	300
Asphalt roofing - 30 yr	10,482	SF	3.10	32,494
Ice and water shield - 3' wide	5,000	SF	2.10	10,500
Ridge vent	116	LF	8.00	928

## 07600 FLASHING, SHEET METAL AND ACCESSORIES

Metal roofing	4,680	SF	10.50	49,140
Corrugated metal siding	1,281	SF	8.50	10,889
Soffit vent	350	LF	2.50	875
Parapet cap	140	LF	20.00	2,800
Alum. gutter	364	LF	18.00	6,552
Alum. downspout	250	LF	15.00	3,750
Misc. flashing	1	LS	10,000.00	10,000
				138,916

## DIVISION 8 - DOORS AND WINDOWS

## 08111 STEEL DOORS, FRAMES AND HARDWARE

## Interior Doors:

Off/conf/meeting rm - sgl	6	EA	1,200.00	7,200
MP/classrm - sgl	8	EA	1,200.00	9,600
Storage - sgl	8	EA	525.00	4,200
Storage - dbl	1	EA	700.00	700
Kitchen - sgl	1	EA	1,300.00	1,300
Toilet rm - sgl	4	EA	725.00	2,900
Prv. toilet - sgl	2	EA	725.00	1,450
Greenhouse - sgl	1	EA	1,800.00	1,800
Stair - sgl	3	EA	1,950.00	5,850
JC - sgl	2	EA	1,800.00	3,600
Interior H.M. Frame	252	SF	25.00	6,300

## Exterior:

Storage - sgl	1	EA	900.00	900
Mech/elec - sgl	1	EA	900.00	900
Egress - sgl	8	EA	1,900.00	15,200

Belmont Senior Center

6/18/2004

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
<b>08311 ACCESS DOORS AND FRAMES</b>				
Access doors	1	LS	1,000.00	1,000
<b>08331 OVERHEAD COILING DOORS</b>				
OH open grate door @ Lounge - 8'	1	EA	2,200.00	2,200
				65,100
<b>08411 ALUMINUM ENTRANCES AND STOREFRONTS</b>				
Alum. storefront	100	SF	50.00	5,000
Alum. Entry door - sgl	1	EA	3,100.00	3,100
Alum. Vest. door - sgl	1	EA	3,100.00	3,100
				11,200
<b>08550 WOOD WINDOWS</b>				
Wood windows	1,625	SF	38.00	61,750
				61,750
<b>08800 GLASS AND GLAZING</b>				
Int. wood door glazing	1	LS	3,000.00	3,000
Misc. glazing	1	LS	3,000.00	3,000
*Window glazing carried w/windows				
				6,000
<b>DIVISION 9 - FINISHES</b>				
<b>0925 GYPSUM BOARD ASSEMBLIES</b>				
Plumb partition	654	SF	6.00	3,924
Int. partition	12,954	SF	6.25	80,963
2 Hr. partition	1,842	SF	9.50	17,499
1 lyr 5/8" at ext.	11,500	SF	1.55	17,825
Shaft wall	768	SF	10.00	7,680
FRP liner panels - kitchen	880	SF	2.00	1,760

Belmont Senior Center				6/18/2004
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
GWB ceiling/soffit - 20%	3,670	SF	4.50	16,515
Misc. gyp	18,351	SF	1.00	18,351
*Joint compound and tape finish - Level 4				-----
				164,517
09300 TILE		N/A		-----
				0
09510 ACOUSTICAL CEILINGS				
2'x2' ACT - 80%	14,680	SF	2.25	33,030
				-----
				33,030
09550 WOOD FLOORING				
Stage @ MP Room	259	SF	10.00	2,590
				-----
				2,590
09650 RESILIENT FLOORING				
Linoleum	775	SY	52.00	40,300
Seamless vinyl	64	SY	48.00	3,072
Vinyl base	1	LS	2,000.00	2,000
				-----
				45,372
09680 CARPETING				
Carpet	872	SY	30.00	26,160
Carpet stair finish	2	FLTS	1,500.00	3,000
				-----
				29,160
09900 PAINTING & WALL COVERING				
Int. painting	18,351	GSF	2.00	36,702
Ext. painting	12,024	SF	2.50	30,060
*Excludes wall covering				

Belmont Senior Center				6/18/2004
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
				66,762
DIVISION 10 - SPECIALTIES				
10155 TOILET COMPARTMENTS				
Std. toilet partition	4	EA	800.00	3,200
HC toilet partition	4	EA	900.00	3,600
Urinal screen	1	EA	225.00	225
10200 LOUVERS AND VENTS				
Louvers & vents	1	LS	1,000.00	1,000
10305 MANUFACTURED FIREPLACES				
Gas fireplace	1	EA	4,500.00	4,500
10350 FLAGPOLES				
Alum. Flagpole	1	EA	2,800.00	2,800
10400 MISCELLANEOUS SPECIALTIES				
Under counter refrigerator	1	EA	450.00	450
Coffee station		By Owner		
Misc. specialties	1	LS	5,000.00	5,000
10440 SIGNS				
Int. bldg signage	1	LS	1,500.00	1,500
10522 FIRE EXTINGUISHERS, CABINETS AND ACCESSORIES				
Fire extinguishers and cabinets	4	EA	275.00	1,100
10651 OPERABLE PANEL PARTITIONS				
Oper. Part @ MP room - 14'	728	SF	38.00	27,664
10800 TOILET ACCESSORIES				

6/18/2004

Belmont Senior Center

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Paper towel dispenser/disposal	6	EA	140.00	840
Toilet tissue dispenser	10	EA	35.00	350
Grab bars	12	EA	80.00	960
Shower grab bars	2	EA	80.00	160
Soap dispenser	6	EA	45.00	270
Tilt mirror	8	EA	120.00	960
Janitor shelf	2	EA	200.00	400
Sanitary Nap. Dispenser	2	EA	150.00	300
Sanitary Nap. disposal	6	EA	30.00	180
Coat hooks	1	LS	100.00	100
				55,559

DIVISION 11 - EQUIPMENT

11400 KITCHEN EQUIPMENT

Kitchen equipment	1	LS	45,000.00	45,000
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11458 DISAPPEARING STAIRS

Disappearing stairs	1	FLT	950.00	950
				45,950

DIVISION 12 - FURNISHINGS

12000 ENTRY MATS

Entry mats	1	LS	1,800.00	1,800
*Window Treatment with FF&E				1,800

DIVISION 13 - SPECIAL CONSTRUCTION

0  
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0

DIVISION 14 - CONVEYING SYSTEMS

14240 HYDRAULIC ELEVATOR

6/18/2004

Belmont Senior Center

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Passenger elevator	2	STOP	25,000.00	50,000
14420 WHEELCHAIR LIFT				
Wheelchair lift	1	EA	12,000.00	12,000
				-----
				62,000

DIVISION 15 - MECHANICAL

15300 FIRE PROTECTION

Wet System	18,351	SF	2.50	45,878
Dry system	12,000	SF	3.50	42,000
*Excludes fire pump				
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				87,878

15400 PLUMBING

Art/craft sink	2	EA	2,700.00	5,400
Toilet	10	EA	2,700.00	27,000
Urinal	3	EA	2,700.00	8,100
Lav	8	EA	2,700.00	21,600
Shower	1	EA	2,700.00	2,700
Drinking fountain	3	EA	2,700.00	8,100
Floor drain	4	EA	450.00	1,800
Hose bib	2	EA	350.00	700
Wall hydrant	4	EA	260.00	1,040
Kitchen plumbing	1	LS	5,000.00	5,000
Gas piping	1	LS	2,500.00	2,500
Misc. Plumbing	18,351	SF	1.50	27,527
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				111,467

15500 HVAC

HVAC	18,351	SF	18.00	330,318
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				330,318

DIVISION 16 - ELECTRICAL

16000 ELECTRICAL