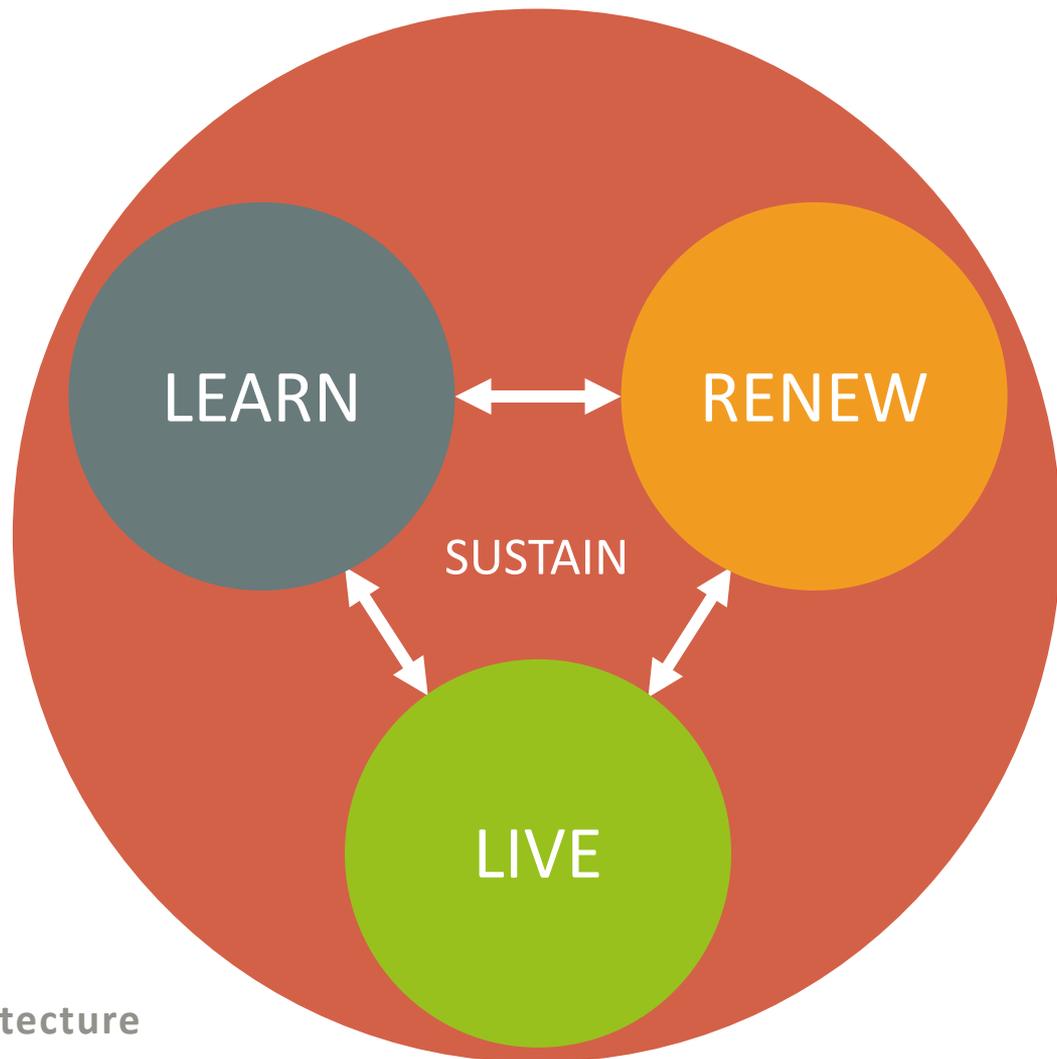


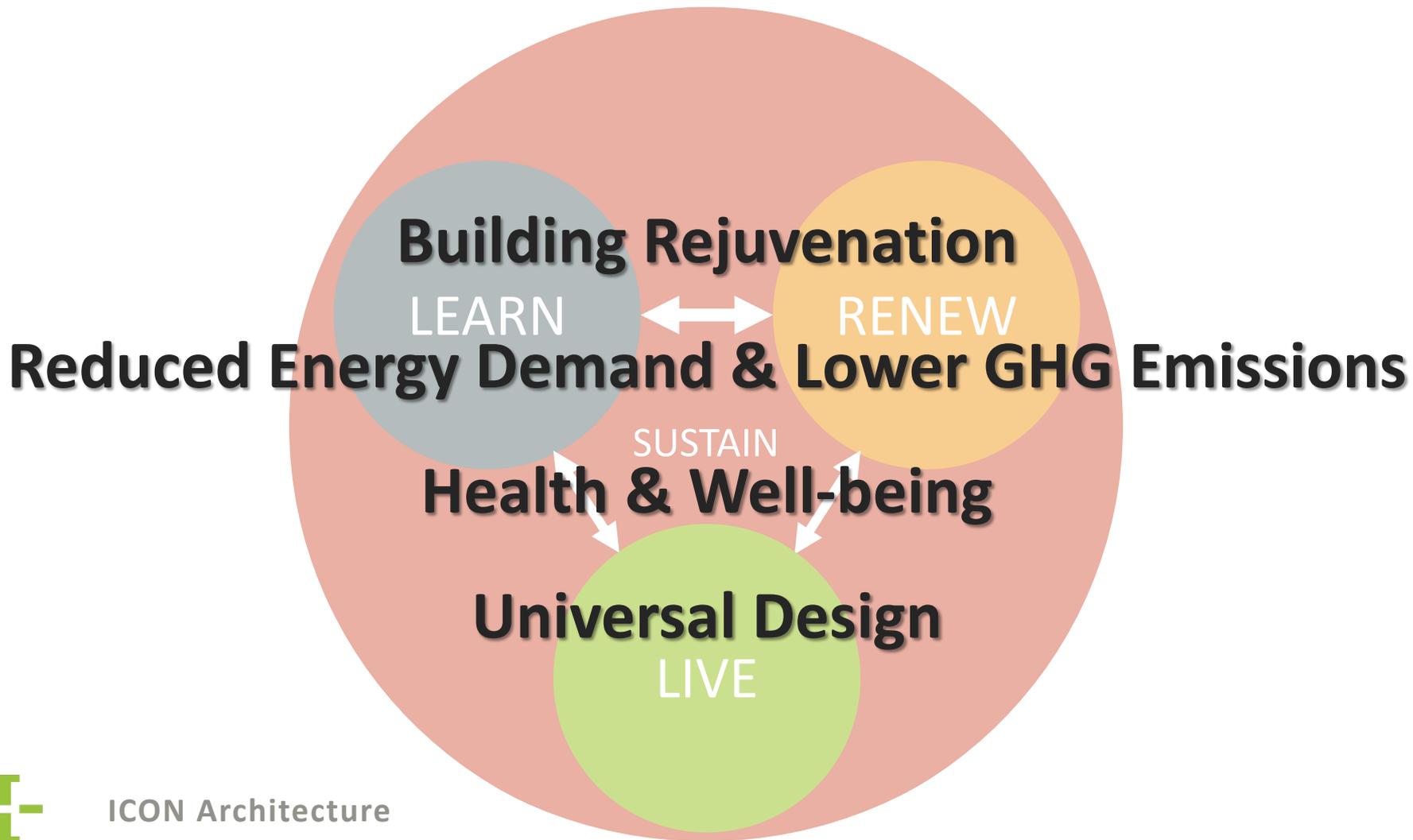


## FAIRBANK COMMUNITY CENTER

**Town of Sudbury**

March 2, 2020





**Building Rejuvenation**

LEARN

RENEW

SUSTAIN

**Health & Well-being**

**Universal Design**

LIVE

**Reduced Energy Demand & Lower GHG Emissions**



CITY HALL CAMPUS  
CITY OF FITCHBURG, MA



ONE CANAL  
BOSTON, MA



SIMPKINS SCHOOL RESIDENCES  
SOUTH YARMOUTH, MA



PERFORMING ARTS CENTER  
CITY OF NASHUA, NH



KARPOVICH READING ROOM  
SPRINGFIELD, MA



## A Feasibility Study Is:

- Analysis – space program, costs, schedule, site and environmental conditions
- Assessment – existing conditions - site and building survey, evaluate pros and cons of alternate plans
- Identification – risks and opportunities
- Determination – practicality/viability of proposed plan

## What It Is Not:

- A design
- An architect's opinion of what the program and client goals should be
- A comprehensive review of building codes, which is part of the design process
- A lofty, unattainable proposal



## Capital Project

- Owner
- Architects
- General Contractor

General Contractor (GC)

Construction Manager (CM)

Owner's Project Manager (OPM)

Commissioning (Cx)

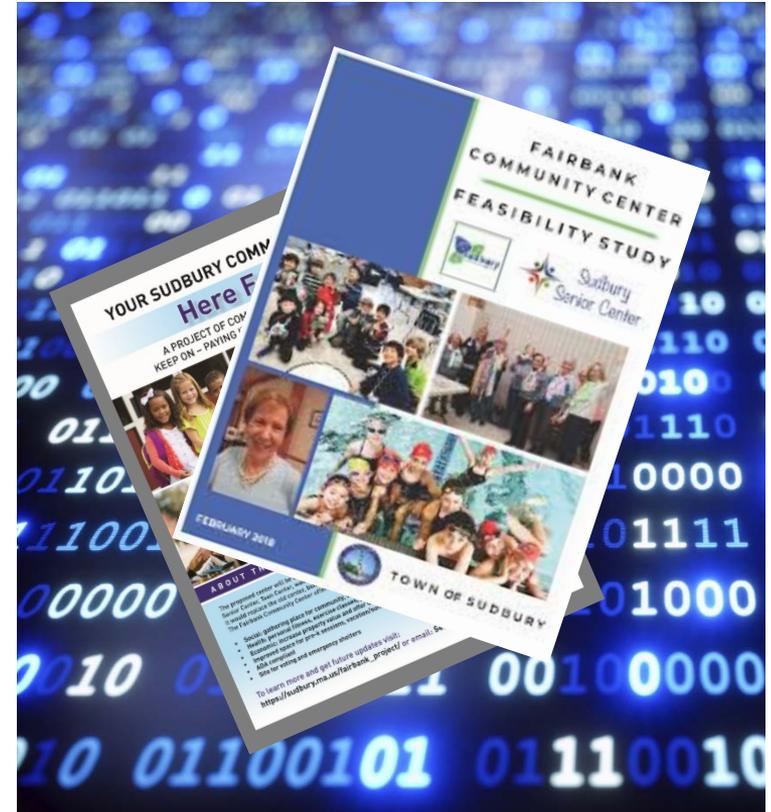
Estimated Construction Cost (ECC)

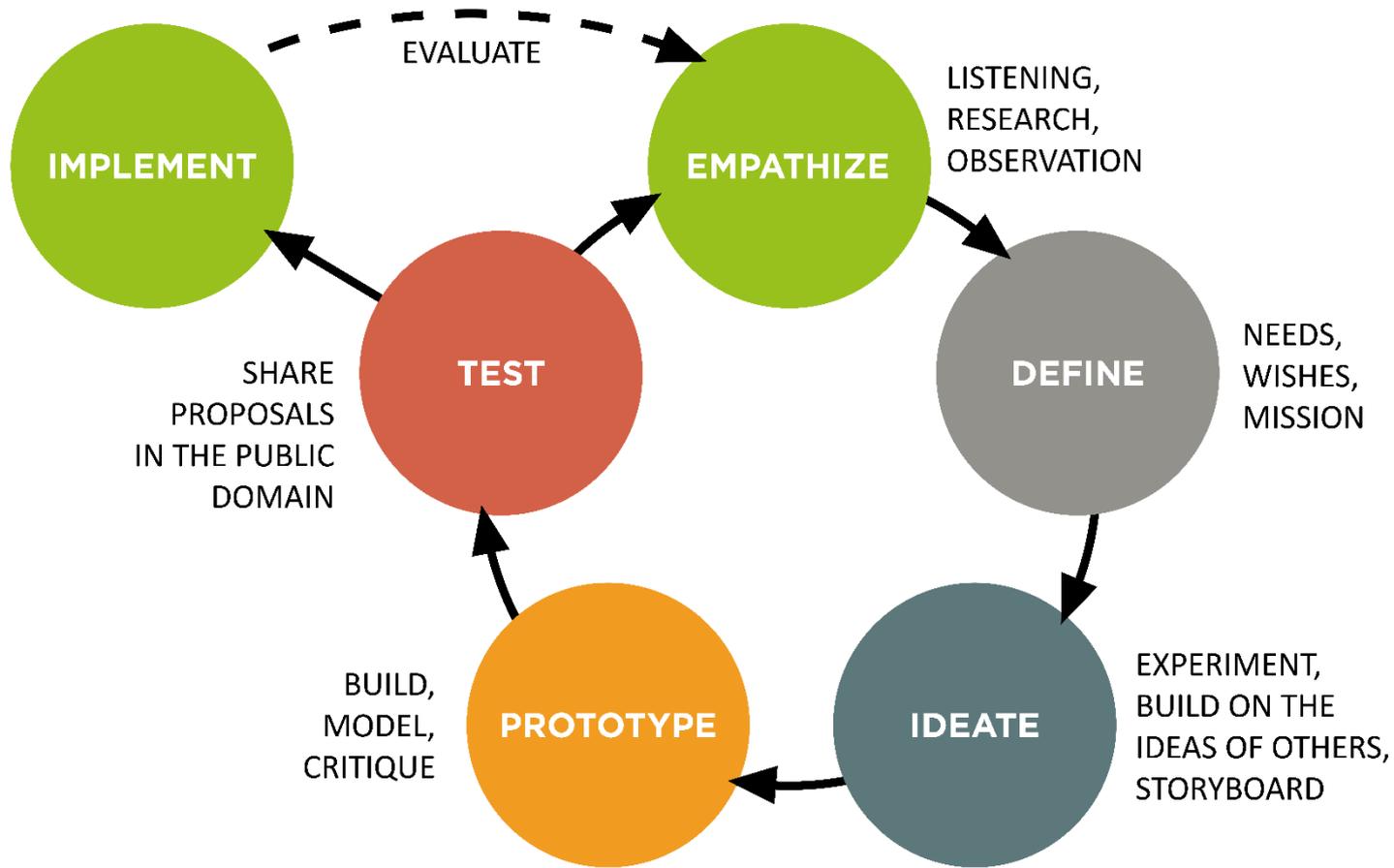
Total Project Cost (TPC)



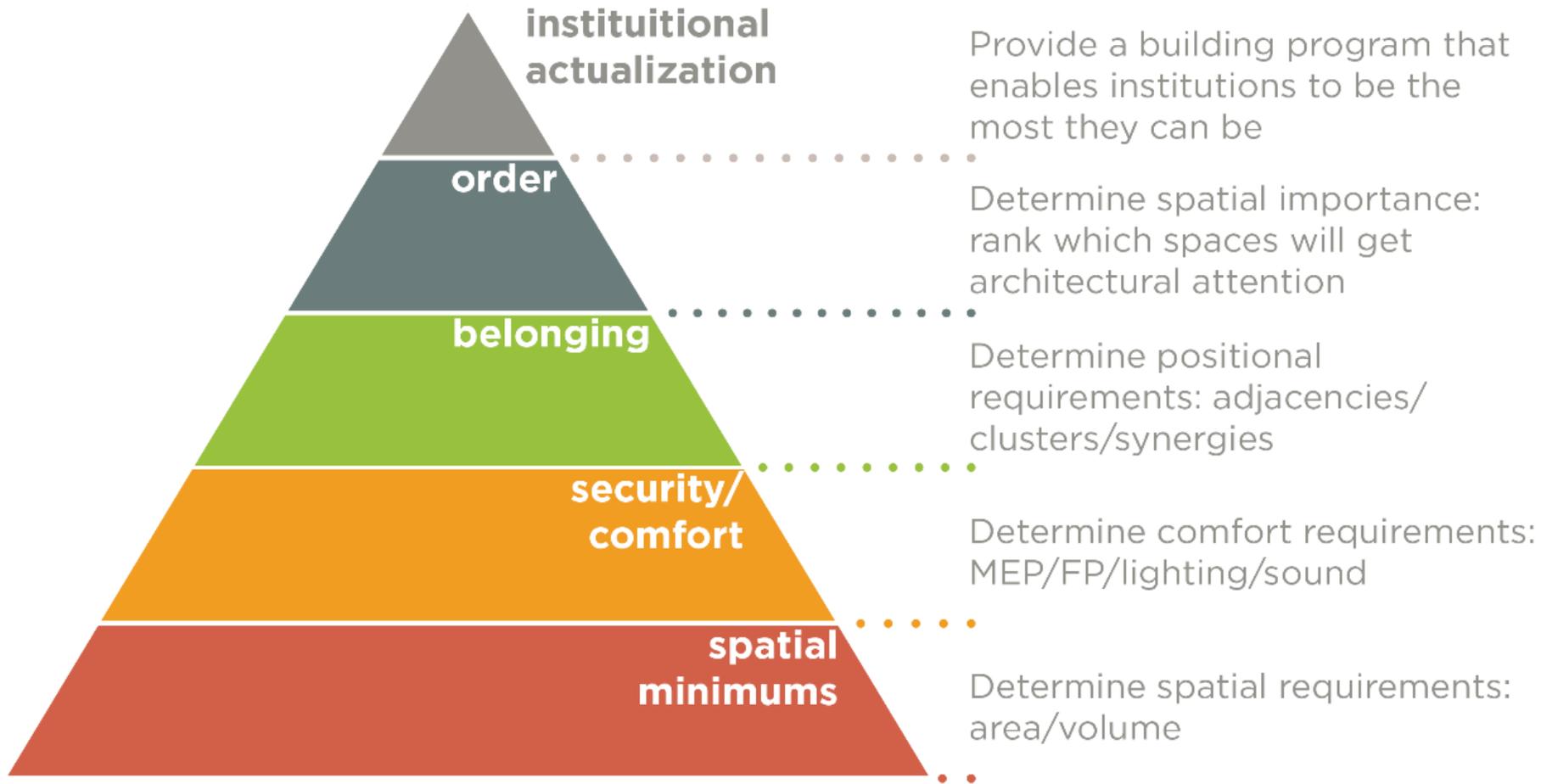
## Assess practicality of a new Fairbank Community Center

- Survey existing conditions
- Collaborate with stakeholders to determine needs
- Investigate programmatic efficiencies
- Rationally identify strengths and weaknesses
- Study multiple site and planning options
- Publish consensus program solution
- Establish cost parameters
- Deliver statement of probable costs and conceptual program diagrams





CLIENT APPROACH



PROGRAMMING MEETINGS/PROCESS



- Existing space isn't high quality
- Existing building is very deep - limited daylighting possibilities
- Already multiple additions
- High performing envelope becomes more challenging and expensive
- 15% cost difference between renovation and new; however, less risk
- Site Issues



WHY NOT RENOVATION OR ADAPTIVE REUSE?



- Library/Community Center – Providence, RI
  - 65,000 GSF - \$560/SF
- Community Center – Connecticut
  - 35,000 GSF – \$550/SF
- Community Center – Massachusetts
  - 50,0000 GSF - \$525/SF

The current proposal would have been priced at \$23.5M two and half years ago.  
(Roughly 14% escalation)



For Sudbury Community Center:

- Range \$515 - \$525/GSF
- Gymnasia \$385/GSF

Cost/GSF includes:

- Site demolition
- Robust wall assemblies (durability)
- Commercial or catering kitchen
- Audio/Visual integration within (some) program rooms
- Multiple cladding options – brick, curtain wall, etc.
- Site work (playing courts, gardens, parking, etc.)
- VRF HVAC system - individual control/comfort

This is a medium-sized building, and there are limited economies of scale; smaller buildings cost more.

Add 30% to the Estimated Cost of Construction (ECC) for Total Project Cost (TPC).

The TPC includes:

- Owner's contingency
- Furniture, Fixtures and Equipment (FF+E)
- Design team fees
- Utility fees
  - However, there are typically some rebates
- Specialty consultants
  - Hazmat
  - Geotech
  - Survey



## SUDBURY FAIRBANK COMMUNITY CENTER - FINAL BUILDING PROGRAM SUMMARY

Proposed and Existing Building Program Summary	Existing GSF	Proposed GSF
Common Areas	4381	4069
Shared Spaces	1625	8179
Senior Center	5624	5754
Sudbury Public Schools	6639	7713
Recreation Center (Less Aquatics)	3810	5507
Aquatics (Existing to Remain and Repair)	15350	11384
Aquatics (Proposed)		6192
Gymnasium	3475	5160
<b>Total Proposed Building Program with Aquatics</b>	<b>40904</b>	<b>53959</b>
<b>Total Proposed Building Program for New Construction</b>		<b>42575</b>

### Proposed Aggregate GSF

These spaces include user group dedicated space, plus shared spaces outlined below.

#### Senior Center

Dedicated: 5,754 GSF  
 Add: Shared - 8,179 GSF; 1/3 Common Areas  
**Aggregate: 15,289 GSF**

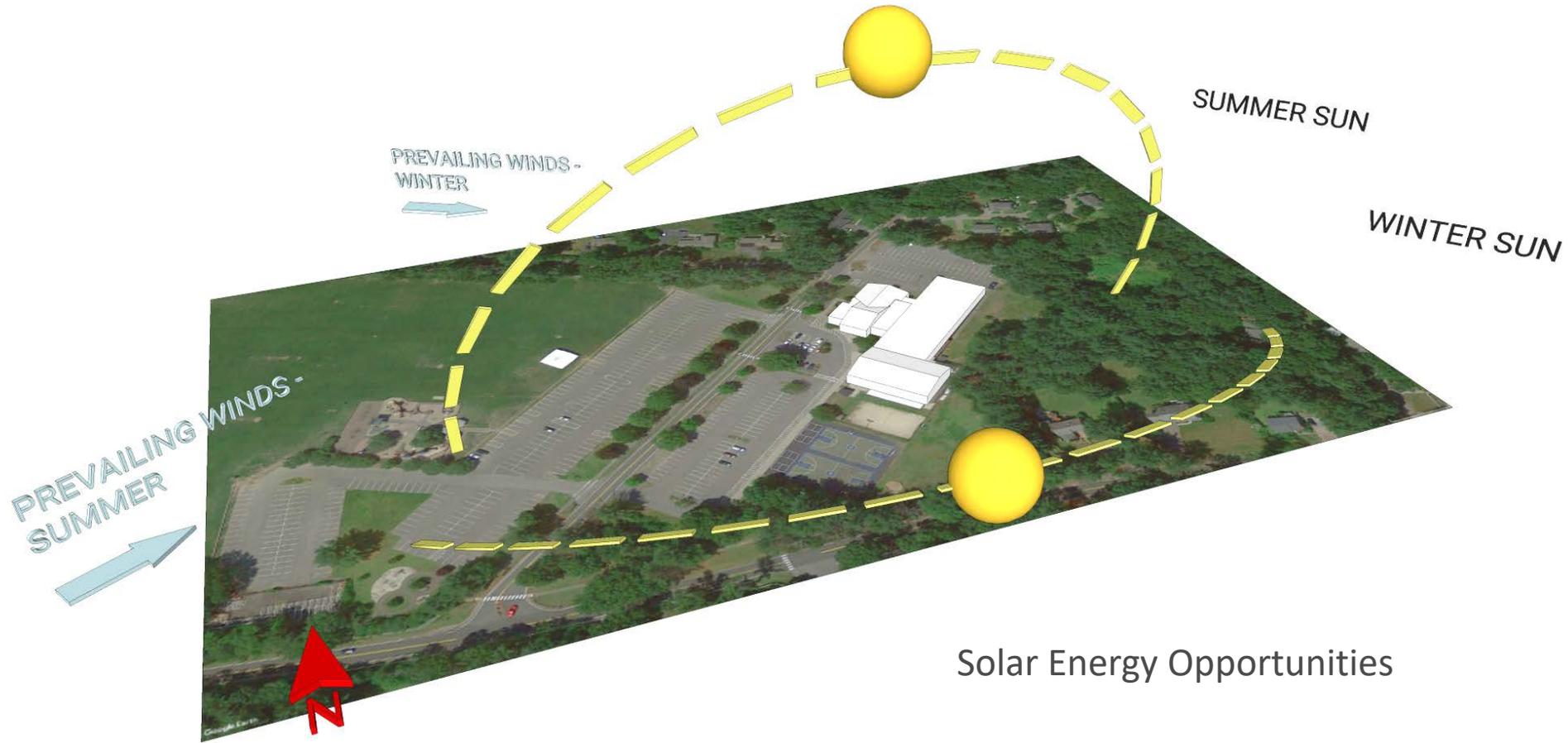
#### Recreation Center

Dedicated: 11,700 GSF  
 Add: Shared - 8,179 GSF; 1/3 Common Areas  
**Aggregate: 21,235 GSF**

#### Emergency Shelter

Add: 1/3 Common Areas, Rec and Senior Program Rooms, Multipurpose, Kitchen and Storages, Wellness and Gym  
**Aggregate: 12,490 GSF**





# The World's Most Energy Efficient Performance Standard

## Goal: Lower Consumption

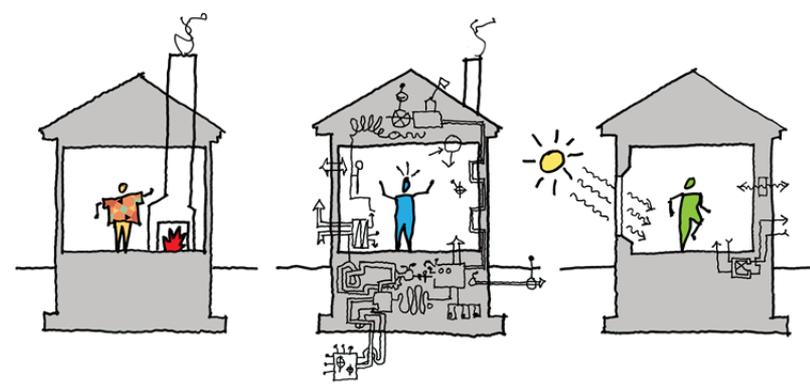
- Radically reduce energy demand

## Requirements: Measurable Criteria

- Meet a specifically low energy budget

## Benefits:

- Reduced Carbon Footprint: Radically low energy
- Comfortable: No drafts or temperature swings
- Healthy: High Quality, Continuously filtered Air
- Resilient: Extreme Thermal Stability
- Affordable to Operate: Low Utility Bills for life



Credit: Albert Richter Tittmann Architects



ICON Architecture - Distillery Building – Largest Passive House Building in New England



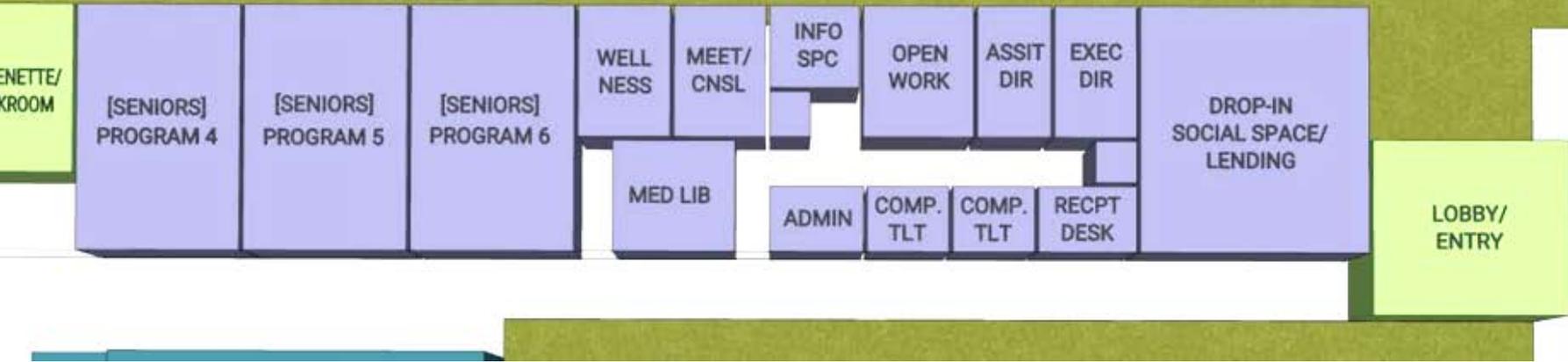
CONSENSUS SOLUTION OVERHEAD – FROM SOUTH



CONSENSUS SOLUTION OVERHEAD – FROM NORTH



CONSENSUS SOLUTION OVERHEAD – FROM SOUTHEAST



SITE MAP



LOBBY/  
ENTRY

TODDLER SPACE  
W/ CHILD TLT ROOMS

PGM  
STOR

OPEN  
OFF

RECEPT

COPY

ADMIN

[RECREATION]  
PROGRAM 1

[RECREATION]  
PROGRAM 2

[RECREATION]  
PROGRAM 3

ELEC

MECH

REC  
DIR

ASSIST  
DIR

PGM 1

PGM 2

LS  
ELEC

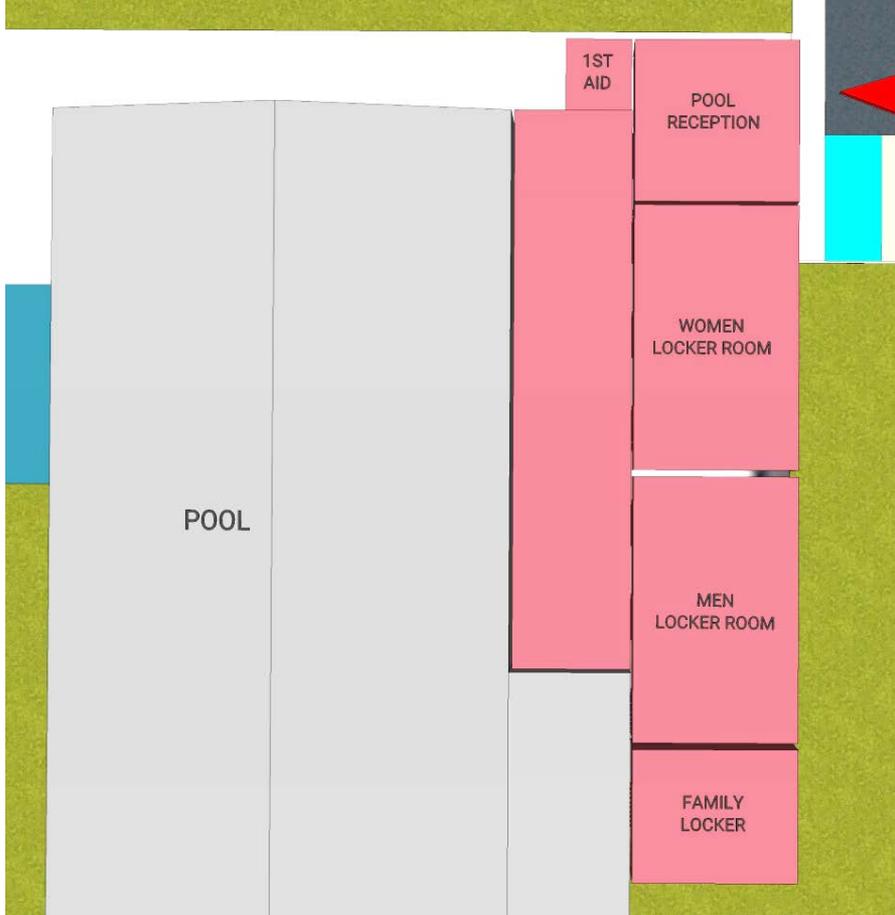
PLUMB/FP



SITE MAP



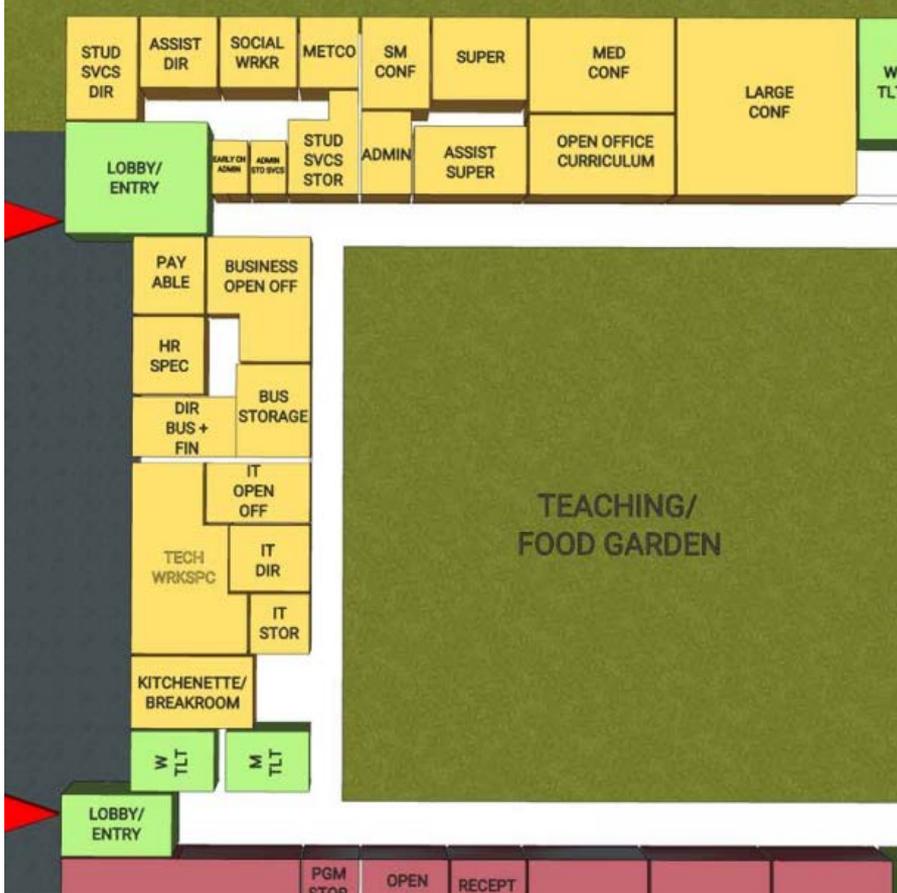
CONSENSUS SOLUTION RECREATION



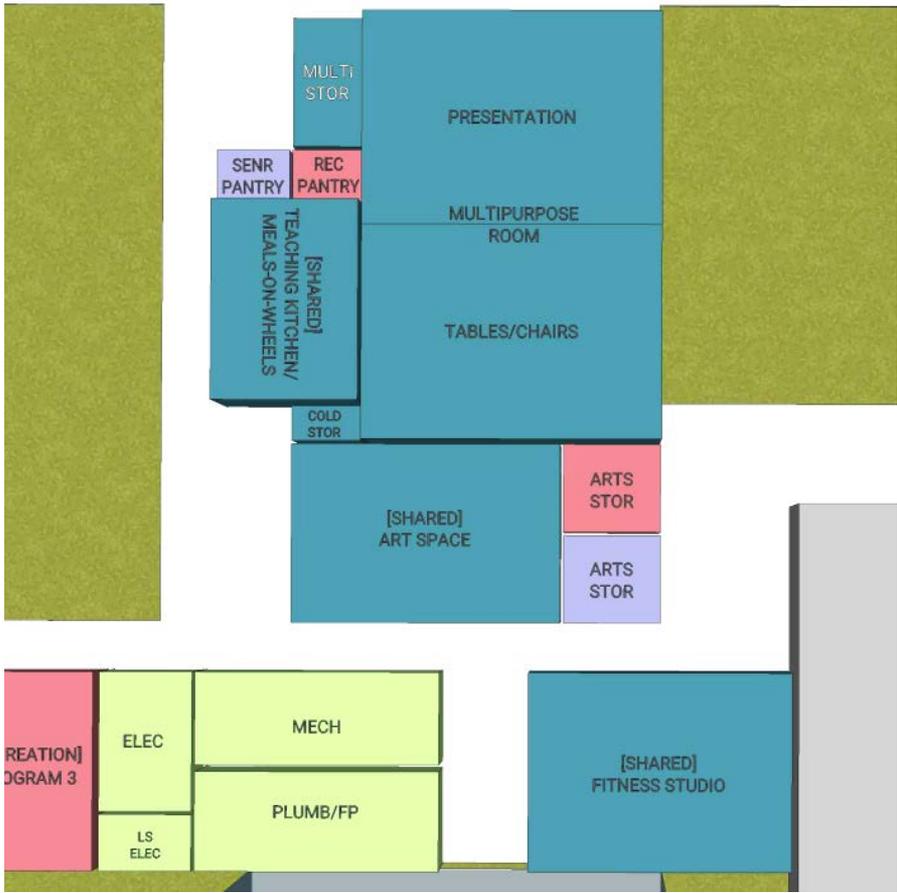
SITE MAP



CONSENSUS SOLUTION RECREATION



SITE MAP



SITE MAP



CONSENSUS SOLUTION OVERHEAD

**FAIRBANK COMMUNITY CENTER - PROPOSED PROGRAM BREAKOUT**

**COMMON AREAS - PROPOSED** Proposed Net SF

<b>Vestibules, Toilet Rooms, Mechanicals</b>	
Building Lobby	700
Entry Vestibule	130
Pool Vestibule	120
Shared Breakroom/Kitchenette (Rec/Senior Ctr)	240
Men's Restroom	450
Women's Restroom	450
Elec	180
Life Safety Elec	100
Plumb/FP	200
Mech	400

<b>Common Areas Total Gross Square Feet</b>	<b>2970</b>
<b>Net to Gross 1.37</b>	<b>4069</b>

**SHARED SPACES - PROPOSED** Proposed Net SF

Multipurpose Room	3000
Multipurpose Storage	200
Commercial Kitchen	650
Commercial Kitchen Walk-in Cold Storage	80
Commercial Kitchen Storage	40
Fitness Studio	1000
Art Space	1000

<b>Shared Spaces Total Gross Square Feet</b>	<b>5970</b>
<b>Net to Gross 1.37</b>	<b>8179</b>



<b>SENIOR CENTER - PROPOSED</b>		<b>Proposed Net SF</b>
<b>Administrative Area</b>		
Executive Director		150
Assistant Director (future Position)/ Program Coordinator		120
Administrative Assistant		95
Information Specialist		95
Workspace for 4 (grant employees & volunteers)		150
Small Meeting Room/Counseling		150
Wellness Office		160
Copy/Supplies		80
Coat Closet		
	<b>Subtotal</b>	<b>1000</b>
<b>Program Spaces and Storage Spaces</b>		
Drop-in Social Space/Lending Library		800
Reception Area		80
Arts & Crafts Storage		100
Kitchen Pantry		60
Program Room 4		600
Program Room 5		600
Program Room 6		600
General Storage		
	<b>Subtotal</b>	<b>2840</b>
<b>Department Back-of House</b>		
Companion Toilet Rooms		160
Medical Equipment Lending Library		200
	<b>Subtotal</b>	<b>360</b>
	<b>Senior Center Total Gross Square Feet</b>	<b>4200</b>
	<b>Net to Gross 1.37</b>	<b>5754</b>



**SUDBURY PUBLIC SCHOOLS - PROPOSED**

Proposed Net SF

<b>Front-of-House</b>	
Lobby/Waiting/Entry	300
Security	50
<b>Subtotal</b>	<b>350</b>
<b>Administration</b>	
Superintendent	225
Executive Assistant	55
<b>Subtotal</b>	<b>280</b>
<b>Administration and Curriculum</b>	
Assistant Superintendent	225
Open office for:	
Math Curriculum Coordinator	60
Humanities Curriculum Coordinator	60
Science Curriculum Coordinator	60
Science Coach	60
Wellness Curriculum Specialist	60
Storage	100
<b>Subtotal</b>	<b>625</b>
<b>Student Services</b>	
Student Services Director	150
Assistant Student Services Director	100
Social Worker/Team Chair	100
METCO Director	100
Admin Assistant to Student Services	55
Early Childhood Admin Assistant	55
Storage -Active - IEP's /Documents	60
Storage - Long Term	100
<b>Subtotal</b>	<b>720</b>



<b>Business and Finance</b>		
Director of Business and Finance		150
HR Specialist		100
Accounts Payable Accountant		100
Open Office for:		
Payroll Clerk		55
Business Office Clerk 1		55
Business Office Clerk 2		55
Mail Clerk		55
Dedicated work space for visitors		55
Dedicated work space for visitors		55
Storage -Active -Payroll		60
Storage -Active - HR		60
Storage - Long Term -Payroll		60
Storage - Long Term -HR		60
<b>Subtotal</b>		<b>920</b>
<b>Information Technology</b>		
Director of Technology		100
Open Office for:		
Network Specialist		55
Elementary Tech. Specialist		60
Data Specialist		55
Storage for Tech		100
Technology Workspace (Server Room?)		500
<b>Subtotal</b>		<b>870</b>
<b>Conference Room and Back-of-House</b>		
Conference (Small 1-6 People)		180
Conference (Medium 1-15 People)		360
Conference/Curriculum Development (Large 13-30 People)		1000
Kitchenette/Break Room		225
Copy Room/Storage		100
Custodial		
<b>Subtotal</b>		<b>1865</b>
<b>Sudbury Public Schools Total Gross Square Feet</b>		<b>5630</b>
<b>Net to Gross 1.37</b>		<b>7713</b>



**RECREATION - PROPOSED**

Proposed Net SF

<b>Administration</b>		
Reception (covers Building Lobby & Rec. Dept.)		100
Director's Office		150
Assistant Director & Office Coordinator Office		150
Admin. Assistant		40
Common Office		160
Program Office 1 (Program & Youth Coordinator)		100
Program Office 2 (Rec. & Fitness Programming)		100
Copy/Supplies		50
<b>Subtotal</b>		<b>860</b>

<b>Program Space</b>		
Program Room 1		600
Program Room 2		600
Program Room 3		600
Preschool Space with integral child toilet rooms		1200
Arts & Crafts Storage		60
Camp/Off Season Storage		100
Gymnasium		4950
Gymnasium Storage		200
<b>Subtotal</b>		<b>8320</b>
<b>Subtotal Less Gym</b>		<b>3160</b>

<b>Aquatics</b>		
50 Existing Pool Space (Existing)		10761
49 Pool Filtration/Mechanical (Existing)		428
48 Pool Electrical (Existing)		195
Pool Lobby & Reception		400
Addition - Bleacher Seating/Squared Corner		1500
Aquatics Office (in above addition)		250
First Aid Treatment		120
Pool Locker Rooms - Men		1000
Pool Locker Rooms - Women		1000
Family Changing Room		500
<b>Subtotal (Existing Spaces Excluded)</b>		<b>4520</b>

<b>Recreation Center Total Gross Square Feet</b>		<b>8540</b>
<b>Net to Gross 1.37</b>		<b>11700</b>

**BUILDING PROGRAM**

## OVERALL PROJECT BUDGET WORKSHEET

Fairbank Community Center  
Sudbury, MA  
2-Mar-20

1	<b>BUILDER'S RISK INSURANCE</b>	In Construction Cost	\$0.00
2	<b>ARCHITECTURAL &amp; ENGINEERING FEES</b>	Feasibility Study + 8% of Construction	\$1,873,059.00
3	<b>ADDITIONAL DESIGN &amp; PROFESSIONAL SERVICES</b>	Commissioning	\$50,000.00
4	<b>CONSTRUCTION COST</b>		
	Demolition		\$184,500.00
	Site		\$3,717,191.00
	Trade Costs		\$14,168,584.00
	Constructions Management Fees and Costs		\$2,577,629.00
	Estimating Contingency	12%	\$2,168,433.00
	<b>SUBTOTAL</b>		<b>\$22,816,337.00</b>
5	<b>TESTING OF SOILS, MASONRY, STEEL, MATERIALS, ETC.</b>	In Owner's Contingency	\$0.00
6	<b>AUDIO / VISUAL EQUIPMENT</b>	Allowance	\$50,000.00
7	<b>FF&amp;E / MISCELLANEOUS</b>	Allowance	\$375,000.00
8	<b>SIGNAGE - EXTERIOR</b>	Allowance	\$5,000.00
9	<b>UTILITY COMPANY CHARGES</b>		\$0.00
	<b>SUBTOTAL</b>		<b>\$25,169,396.00</b>
10	<b>OWNER'S CONTINGENCY</b>	10% of Construction	\$2,315,800.00
	<b>Total Project Cost (TPC)</b>	<b>TOTAL</b>	<b>\$27,485,196.00</b>
	<b>ESCALATION</b>	Mid-point of 2021	\$596,902.00
	<b>OWNER'S PROJECT MANAGER (OPM)</b>	3%-5% of Construction	\$702,400 - \$1,170,660



# TOTAL PROJECT COST – NEW CONSTRUCTION

Existing Building Program Summary	Existing GSF	Typical Renovation Cost \$450/SF
Common Areas	4381	\$ 1,971,450.00
Shared Spaces	1625	\$ 731,250.00
Senior Center	5624	\$ 2,530,800.00
Sudbury Public Schools	6639	\$ 2,987,550.00
Recreation Center (Less Aquatics)	3810	\$ 1,714,500.00
Aquatics Support - Locker Rooms, Lobby, Office	3966	\$ 1,784,700.00
Aquatics - Pool, Deck, Mech, Elec*	11384	\$ 398,440.00
Gymnasium **	3475	\$ 1,337,875.00
<b>Existing Building</b>	<b>40904</b>	
<b>Trade Cost Subtotal</b>		<b>\$ 13,456,565.00</b>

\* Aquatics renovation is being carried at \$35/SF  
 \*\* Gymnasium is being carried at \$385/SF

<b>RENOVATION — OVERALL PROJECT BUDGET WORKSHEET</b>			
Fairbank Community Center Sudbury, MA 2-Mar-20			
1	<b>BUILDER'S RISK INSURANCE</b>	In Construction Cost	\$0.00
2	<b>ARCHITECTURAL &amp; ENGINEERING FEES</b>	Feasibility Study + 8% of Construction	\$1,076,525.20
3	<b>ADDITIONAL DESIGN &amp; PROFESSIONAL SERVICES</b>	Commissioning	\$50,000.00
4	<b>CONSTRUCTION COST</b>		
	Selective Demolition		\$184,500.00
	Site		\$1,233,750.00
	Trade Costs		\$13,456,565.00
	Constructions Management Fees and Costs		\$2,238,284.14
	Estimating Contingency	15%	\$2,018,484.75
	<b>SUBTOTAL</b>		<b>\$19,131,583.89</b>
5	<b>TESTING OF SOILS, MASONRY, STEEL, MATERIALS, ETC.</b>	In Owner's Contingency	\$0.00
6	<b>AUDIO / VISUAL EQUIPMENT</b>	Allowance	\$50,000.00
7	<b>FF&amp;E / MISCELLANEOUS</b>	Allowance	\$375,000.00
8	<b>SIGNAGE - EXTERIOR</b>	Allowance	\$5,000.00
9	<b>UTILITY COMPANY CHARGES</b>		\$0.00
	<b>SUBTOTAL</b>		<b>\$20,688,109.09</b>
10	<b>OWNER'S CONTINGENCY</b>	13% of Construction	\$1,749,353.45
	<b>Total Project Cost (TPC)</b>	<b>TOTAL</b>	<b>\$22,437,462.54</b>
	<b>ESCALATION</b>	Mid-point of 2021	\$518,319.85
	<b>OWNER'S PROJECT MANAGER (OPM)</b>	3%-5% of Construction	\$369,100 - \$615,200



**TOTAL PROJECT COST – RENOVATION**

**E-ICON**  
**ARCHITECTURE**