# **Newton Center for Active Living (NewCAL) project**

# NewCAL Design Review Committee (DRC) Project Update

Date: Wednesday, October 12, 2022

Date: Zoom Meeting (online)

Time: 6:00PM



#### Attendees:

See attached Sign-In List for Design Review Committee, Project Community Representatives and Guests who were in attendance.

were in attenuance.							
CITY COMMITTEE STAFF							
Josh Morse	Public Buildings Dept.	$\boxtimes$	Alex Valcarce	Public Buildings Dept.	$\boxtimes$		
CONSULTANTS							
Tom Murphy	NV5	$\boxtimes$	Paul Laurence	Allied Engineering	$\boxtimes$		
Melissa Gagnon	NV5	$\boxtimes$	John Buhl	Foley Buhl & Roberts	$\boxtimes$		
Joel Bargmann	BH+A	$\boxtimes$	Lenny Weiss	Foley Buhl & Roberts	$\boxtimes$		
Dan Chen	BH+A	$\boxtimes$			$\boxtimes$		

Alex Valcarce opened the meeting at 6:00PM. The presentation tonight focused on a building system update, specifically with regard to structural and HVAC systems, as well design developments related to the main communicating stair and storage. The project is currently in the Design Development phase. Structural framing systems are being explored in tandem with floor plan alignments and MEP coordination refinements.

## **Design Progress Update**

Dan Chen of BH+A provided an overview of design developments since the last DRC meeting on 9/14/22, including the presentation of (3) structural options and (3) HVAC options as well as floor plan updates.

The following three (3) structural framing options were presented:

- Wood Framing using trusses, Glu-Lams and micro-laminated members
- Mixed Steel & Wood (Option A) utilizing a steel frame for the gym and wood frame for the remainder of the building
- Hybrid Steel & Wood (Option B) utilizing steel for the longest spans in the gym and track structure and relying on wood members for the remainder of the building



Pros and cons for each of the options were presented using wood framing as the basis.

#### Wood Framing:

BH+A and Foley Buhl Roberts (FBR) noted this option to be cost effective and within the project parameters. The walking track is envisioned to be supported by steel rods from the roof structure on the cantilevered edge. Although particular aesthetic details have not yet been factored into the design, the DRC noted interest to learn more about incorporating structurally appropriate detailing.

## Mixed Steel & Wood (Option A):

It was noted that steel provides a more rigid structure vs. wood-framed construction. Plus, steel members often do not require as many points of support. It was also noted that wood on the other hand is greener, renewable, loses less heating and cooling and is more readily available in New England. BH+A noted concern about incorporating too much steel into a wood-framed structure due to requirements for extensive bracing between frames as well as coordination of trade labor during construction. FBR and at least one DRC member supported the hybrid option, noting it was successfully implemented on several projects for which they have designed.

Concern was noted by one DRC member as it relates to fire protection and the wood-framed structure, during construction. DRC members noted the Newton Fire Department, and the GC/CM would convene to devise a protection plan for "hot work", fire watches, temporary standpipe, etc. during construction.

BH+A noted the ancillary area below the gym would be enclosed and heated for the sprinkler system within. The ceiling height below the gym is designed to be 11'-0" above the parking area.

The following three (3) HVAC options were presented:

- Air Cooled Variable Refrigerant Flow (VRF) consists of a rooftop heat pump unit and several terminal boxes strategically placed around the building to distribute heating and cooling. The terminal boxes are piped with flexible refrigerant lines and can provide heat and cooling to different zones simultaneously. Controls are supplied by the VRF manufacturer.
- Air Water Heat Pump/Chiller is more centrally located and consists of two systems, one for heating and one for cooling. Above ceiling fan coils are connected to circulating hot or chilled water lines and distribute form their respective zones. An electric boiler is required below zero degree temperatures. Third party temperature controls are separate from the system equipment.
- Water Cooled Variable Refrigerant Flow & Geothermal utilizes ground source temperature (50 degrees Fahrenheit) to pre-heat or cool water before supplying the VRF terminals. Space for roughly 20- 600-foot-long wells would be required for the NewCAL project.

At the time of the presentation none of the proposed systems has gone beyond schematic design. Definitive energy modeling would need to be performed in order to compare their operating expense. The relative costs are projected to show that Air Cooled VRF has the least expensive first costs followed by the Air Sourced Heat Pump Chiller system and the VRF/Geothermal Option being the highest. The presentation



provided a table that rated the initial cost, efficiency, installation complexity, control simplicity, relative maintenance costs and mechanical space required, revealing that the air cooled VRF may be the path to follow.

The following floor plan updates were presented:

#### First Floor

#### Stair

The connecting stair in the lobby, near the main entrance, was reviewed relative to the overall impact, extending from the first floor to the third floor. An alternate option was presented in which the stair extends from the first to the second floor only, as a switchback with a separate disconnected single flight from the second to the third floor. BH+A explained the revised design benefits both the structure as well as affording natural light to penetrate the second-floor corridor.

#### Restrooms

- Restrooms are consolidated into one block, allowing walls to vertically align on all three (3) floors.
- Restroom consolidation provides visibility from the lobby/lounge to activity and dining spaces.

#### Storage

- Refinements to AV storage closet, as well as to movable wall pocket, at the Dining and Activity rooms help to maximize visibility from the lobby/lounge to the activity spaces. An additional storage space was shown behind the stage in the Dining area. With the behind the stage storage room, the window design at the west elevation may need to be slightly modified, to change two windows to include spandrel panels, while maintaining the design rhythm and intent.
- An additional storage room was shown adjacent to the lobby stair. The juice bar has been reduced in size to work with the storage volume.

# Second Floor

• The design of the main communicating stair was modified to be a separate single flight from the second to the third floor.

#### **Roof Plan**

- Proposed rooftop equipment locations were presented in the roof well. Two (2) air handling units (AHUs) (one for the gymnasium and one for the main NewCAL building), two (2) heat pumps and three (3) condensers are identified on the plan. The access door from Stair 2 was not added to the plan but identified as the access point by the design team.
- BH+A depicted PV arrays mounted on top of the high roof at the gymnasium. The angle of the PV panels as well as the orientation to the sun was not presented and will need to be provided.



#### **Discussion, Comments and Questions**

- Back-up battery power. The strategy for back-up power was discussed. BH+A referenced a recent project where battery backup was incorporated with the following points noted: The size was close to the size of a shipping container (@10′ x 20′ x 8′tall) with an approximate cost of \$630K and a useful life of approximately four (4) hours, which is dependent on what systems are required to be in service. The battery would be placed outside in the space that would have been occupied by a diesel generator. Useful battery life was discussed as not being sufficient for particular situations and whether proposed solar PVs could provide ability to recharge.
- Emergency diesel generator. Newton's Sustainability staff is currently leaning towards the use of emergency diesel generators whereas there will be no fossil fuels on the NewCAL project site. According to Allied Engineering, it was noted that depending on the client diesel generator tanks are often specified to last 48 hours. Consideration of cost associated with a generator would need to include maintenance, fuel costs, servicing and exercising the equipment. Based upon proximity to neighboring properties a battery back-up may be the appropriate response.

Respectfully submitted,
Melissa Gagnon
NV5, Inc.
[End of 10/12/2022 Meeting Minutes]

DESIGN REVIEW COMMITTEE	Sign In
Meeting Date:	12 October 2022
Place/Room:	Remote Meeting Via Zoom

Name	Initial	Organization	E-Mail	
DESIGN REVIEW COMMITTEE				
Peter Barrer vm	$\boxtimes$	Design Review Committee Co-Chair	pbarrer@gmail.com	
Ellen Light vm	$\boxtimes$	Design Review Committee Co-Chair	elslight@rcn.com	
Ambrose Donovan vm		Design Review Committee Member	AJD@mcphailgeo.com	
David Gillespie vm	<u> </u>	Design Review Committee Member	davidgillespie74@outlook.com	
Thomas Gloria vm	<u> </u>	Design Review Committee Member	tgloria@fas.harvard.edu	
Robert Hnasko vm		Design Review Committee Member	hnasko@gmail.com	
Jonathan Kantar vm	<u> </u>	Design Review Committee Member	jonathan@sagebuilders.com	
SigNing Kuo vm		Design Review Committee Member	singning.kuo@gmail.com	
Amy Mackrell vm	<u> </u>	Design Review Committee Member	amackrell@mds-bos.com	
Carol Schein vm	<u> </u>	Design Review Committee Member	cschein@rcn.com	
Steve Siegel vm	<u> </u>	Design Review Committee Member	spsiegel10@gmail.com	
vm		Design Review Committee Member		
Emily Prenner	$\boxtimes$	School Committee Representative	prennere@newton.k12.ma.us	
Andrea Kelley	<u>N</u>	City Council Representative	akelley@newtonma.gov	
Committee Staff				
Josh Morse (partial)	<u>×</u>	DRC – Public Buildings Department	jmorse@newtonma.gov	
Barney Heath		DRC – Planning Department	bheath@newtonma.gov	
Alex Valcarce	X	Public Buildings Department	avalcarce@newtonma.gov	
Jayne Colino (partial)	<u>N</u>	Senior Services	jcolino@newtonma.gov	
Stephanie Gilman	<u> </u>	Public Schools Department	gilmans@newton.k12.ma.us	

DESIGN REVIEW COMMITTEE	Sign In
Meeting Date:	12 October 2022
Place/Room:	Remote Meeting Via Zoom

Name		Initial	Organization	E-Mail		
Project Community	<u>y Reps</u>					
Anne Cedrone	vm-necp		DRC Community Member - NECP	bostonanne@gmail.com		
Tom Enselek	vm-necp		DRC Community Member - NECP	Tom.Enselek@hotmail.com		
Maria Leo	vm-le	☒	DRC Community Member – Lincoln Eliot	leofm@rcn.com		
John Mulligan	vm-le	$\boxtimes$	DRC Community Member – Lincoln Eliot	john@mulliganphoto.com		
Marc Kaufman	vm-newcal	<u> </u>	DRC Community Member - NewCAL	ddgdesign@gmail.com		
Barbara Lietzke	vm-newcal	$\boxtimes$	DRC Community Member - NewCAL	bclietzke@gmail.com		
<u>Guests</u>						
Tom Murphy		<u> </u>	<u>NV5</u>			
Dan Chen		$\boxtimes$	BH+A			
Frank Kennedy		$\boxtimes$	<u>NV5</u>			
Joel Bargmann		$\boxtimes$	BH+A			
Bea Goldsmith		$\boxtimes$	NewCAL WG			
Joan Belle Isle		$\boxtimes$	COA, Chair			
Maria Scibelli Greenb	erg	$\boxtimes$	City Council			
Vivian Varbedian		$\boxtimes$	Hill			
Mark Krikorian		$\boxtimes$	.Hill			
Doug Murray		$\boxtimes$	Hill			
Tina SooHoo		$\boxtimes$	AST			
Larry Spang			AST			
Refer to attached Zoo participants	om list of all					

Name (Ori <sub>l</sub> User Email	Join Time	Leave Time	Duration (Minι	Guest Re	cording	In Waiting
Alex Valcaı stocci@ne	10/12/2022 17:39	10/12/2022 21:04	206	No		No
Vivian Varbedian	10/12/2022 17:45	10/12/2022 17:56	11	Yes		Yes
Susan Loffredo	10/12/2022 17:49	10/12/2022 17:56	7	Yes		Yes
DChen# BH+A	10/12/2022 17:51	10/12/2022 17:51	1	Yes		Yes
DChen# BH+A	10/12/2022 17:51	10/12/2022 20:58	187	Yes Ye	S	No
Kellie Connelly - Terra	10/12/2022 17:52	10/12/2022 17:56	5	Yes		Yes
Kelly Ashton	10/12/2022 17:53	10/12/2022 17:56	4	Yes		Yes
Josh Morse	10/12/2022 17:54	10/12/2022 17:55	2	Yes		Yes
Kelly Ashton	10/12/2022 17:54	10/12/2022 17:56	3	Yes		Yes
Bea Goldsmith	10/12/2022 17:55	10/12/2022 17:56	2	Yes		Yes
Josh Morse	10/12/2022 17:55	10/12/2022 18:51	57	Yes Ye	S	No
barbaralietzke	10/12/2022 17:55	10/12/2022 17:56	1	Yes		Yes
Tina SooHoo -Arrowst	10/12/2022 17:55	10/12/2022 17:56	1	Yes		Yes
Tora Coursey# Arrows	10/12/2022 17:55	10/12/2022 17:56	1	Yes		Yes
Vivian Varbedian	10/12/2022 17:56	10/12/2022 21:04	189	Yes Ye	S	No
Susan Loffredo LWVN	10/12/2022 17:56	10/12/2022 19:13	78	Yes Ye	S	No
Kelly Ashton (Terraink	10/12/2022 17:56	10/12/2022 18:09	14	Yes		No
barbaralietzke	10/12/2022 17:56	10/12/2022 19:03	68	Yes Ye	S	No
Tora Coursey# Arrows	10/12/2022 17:56	10/12/2022 18:46	51	Yes		No
Tina SooHoo -Arrowst	10/12/2022 17:56	10/12/2022 21:04	189	Yes Ye	S	No
Bea Goldsmith	10/12/2022 17:56	10/12/2022 18:49	53	Yes Ye	S	No
Kellie Connelly - Terra	10/12/2022 17:56	10/12/2022 21:04	188	Yes Ye	S	No
Kelly Ashton	10/12/2022 17:56	10/12/2022 17:56	1	Yes		No
Michelle Callahan - Ni	10/12/2022 17:56	10/12/2022 17:57	1	Yes		Yes
Joan	10/12/2022 17:56	10/12/2022 17:58	2	Yes		Yes
Andrea Kelley	10/12/2022 17:57	10/12/2022 17:57	1	Yes		Yes
Frank Kennedy	10/12/2022 17:57	10/12/2022 17:57	1	Yes		Yes
Mark Krikorian	10/12/2022 17:57	10/12/2022 17:57	1	Yes		Yes
Michelle Callahan - Ni	10/12/2022 17:57	10/12/2022 18:09	12	Yes Ye	S	No
Andrea Kelley	10/12/2022 17:57	10/12/2022 18:59	62	Yes Ye	S	No
Amy MacKrell# MDS A	10/12/2022 17:57	10/12/2022 17:57	1	Yes		Yes
Mark Krikorian   Hill I	10/12/2022 17:57	10/12/2022 21:04	187	Yes Ye	S	No
Amy MacKrell (Amy N	10/12/2022 17:57	10/12/2022 20:51	174	Yes Ye	S	No
Melissa	10/12/2022 17:57	10/12/2022 17:58	1	Yes		Yes
Frank Kennedy	10/12/2022 17:57	10/12/2022 18:11	14	Yes Ye	S	No
Joan	10/12/2022 17:58	10/12/2022 19:14	77	Yes Ye	S	No
Melissa Gagnon (Meli	10/12/2022 17:58	10/12/2022 19:14	77	Yes Ye	S	No
Maria Scibelli Greenbe	10/12/2022 17:58	10/12/2022 17:58	1	Yes		Yes
Maria Scibelli Greenbe	10/12/2022 17:58	10/12/2022 20:00	122	Yes Ye	S	No
Colin Bonfield# BH+A	10/12/2022 17:59	10/12/2022 17:59	1	Yes		Yes
Paul Laurence	10/12/2022 17:59	10/12/2022 17:59	1	Yes		Yes
Colin Bonfield# BH+A	10/12/2022 17:59	10/12/2022 19:14	76	Yes Ye	S	No
Sallyann Thomas Farn	10/12/2022 17:59	10/12/2022 17:59	1	Yes		Yes
Paul Laurence	10/12/2022 17:59	10/12/2022 19:14	75	Yes Ye	S	No
Sallyann Thomas Farn	10/12/2022 17:59	10/12/2022 18:31	32	Yes Ye	S	No
Peter Barrer	10/12/2022 18:00	10/12/2022 18:00	1	Yes		Yes

Design Review Commit Meeting	rtee	Zoom Participants			12 October 2022
Peter Barrer	10/12/2022 18:00	10/12/2022 21:04	185 \	Yes Yes	s No
John Wood	10/12/2022 18:00	10/12/2022 18:00		Yes	Yes
John Wood - Allied Co	• •	10/12/2022 19:14	74 \		
Carol Schein	10/12/2022 18:00	10/12/2022 18:01		Yes	Yes
Carol Schein	10/12/2022 18:01	10/12/2022 20:49	169 \		
jayne	10/12/2022 18:01	10/12/2022 18:01		Yes	Yes
jayne	10/12/2022 18:01	10/12/2022 19:14	73 \		
Lenny Weiss	10/12/2022 18:01	10/12/2022 18:01		Yes	Yes
1.98E+10	10/12/2022 18:01	10/12/2022 19:14	73 \		No
Lenny Weiss	10/12/2022 18:01	10/12/2022 18:42	41 \		
Jon Buhl	10/12/2022 18:01	10/12/2022 18:01		Yes	Yes
Maura Morse (she/he		10/12/2022 18:01		Yes	Yes
Jon Buhl	10/12/2022 18:01	10/12/2022 19:14	73 \		
Maura Morse (she/he		10/12/2022 18:05		Yes Yes	
Tom Murphy# NV5	10/12/2022 18:02	10/12/2022 18:02		Yes	Yes
Tom Murphy# NV5	10/12/2022 18:02	10/12/2022 19:14	73 \		
Doug Murray	10/12/2022 18:02	10/12/2022 18:02		Yes	Yes
Stephanie Gilman (she		10/12/2022 18:02		Yes	Yes
Doug Murray	10/12/2022 18:02	10/12/2022 21:04	183 \		
Maria Leo	10/12/2022 18:02	10/12/2022 18:02		Yes	Yes
Stephanie Gilman (she		10/12/2022 21:04	182 \		
Maria Leo	10/12/2022 18:02	10/12/2022 21:04	182 \		
Tom Gloria	10/12/2022 18:02	10/12/2022 18:02		Yes	Yes
Tom Gloria	10/12/2022 18:02	10/12/2022 21:04	182 \		
Steve Siegel - Structur		10/12/2022 18:04		Yes	Yes
Steve Siegel - Structur		10/12/2022 21:04	180 \		
Daniel Jick	10/12/2022 18:04	10/12/2022 18:05		Yes	Yes
Daniel Jick	10/12/2022 18:05	10/12/2022 21:04	180 \		
David Gillespie	10/12/2022 18:05	10/12/2022 18:06		Yes	Yes
David Gillespie	10/12/2022 18:06	10/12/2022 18:35	30 \		
Joel Bargmann. bh+a	10/12/2022 18:08	10/12/2022 18:08		Yes	Yes
Joel Bargmann. bh+a	10/12/2022 18:08	10/12/2022 18:52	44 \		
Frank Kennedy	10/12/2022 18:13	10/12/2022 18:14		Yes	Yes
Ellen Light	10/12/2022 18:14	10/12/2022 18:14		Yes	Yes
Ellen Light	10/12/2022 18:14	10/12/2022 18:50	36 \		
Emily Prenner	10/12/2022 18:24	10/12/2022 18:26		Yes	Yes
Emily Prenner	10/12/2022 18:26	10/12/2022 18:26		Yes	Yes
Emily Prenner	10/12/2022 18:26	10/12/2022 20:38	132 \		
Jonathan Kantar	10/12/2022 18:30	10/12/2022 18:31		Yes	Yes
Jonathan Kantar	10/12/2022 18:31	10/12/2022 21:04	153 \		
David Gillespie	10/12/2022 18:35	10/12/2022 18:37		Yes	Yes
David Gillespie	10/12/2022 18:37	10/12/2022 18:43		Yes	Yes
John Mulligan	10/12/2022 18:39	10/12/2022 18:41		Yes	Yes
John Mulligan	10/12/2022 18:41	10/12/2022 18:42		Yes	Yes
John Mulligan	10/12/2022 18:43	10/12/2022 18:43		Yes	Yes
David Gillespie	10/12/2022 18:43	10/12/2022 18:44		Yes	Yes
David Gillespie	10/12/2022 18:43	10/12/2022 21:04	141 \		No
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Design Review Committee Meeting		Zoom Participants			12 October 2022
John Mulligan	10/12/2022 18:43	10/12/2022 21:04	141 Yes	Yes	No
Ellen Light	10/12/2022 18:51	10/12/2022 18:52	2 Yes		Yes
Ellen Light	10/12/2022 18:52	10/12/2022 21:04	133 Yes	Yes	No
Terry Sauro	10/12/2022 18:53	10/12/2022 18:53	1 Yes		Yes
Terry Sauro	10/12/2022 18:53	10/12/2022 21:04	132 Yes	Yes	No
Larry Spang	10/12/2022 18:53	10/12/2022 18:55	2 Yes		Yes
Larry Spang	10/12/2022 18:55	10/12/2022 21:04	130 Yes	Yes	No
Kelly Ashton	10/12/2022 19:01	10/12/2022 19:03	3 Yes		Yes
Sallyann Thomas Farn	10/12/2022 19:02	10/12/2022 19:03	2 Yes		Yes
Tora Coursey# Arrows	10/12/2022 19:02	10/12/2022 19:03	2 Yes		Yes
Tora Coursey# Arrows	10/12/2022 19:03	10/12/2022 21:04	121 Yes		No
Sallyann Thomas Farn	10/12/2022 19:03	10/12/2022 20:26	83 Yes		No
Kelly Ashton - Terrainl	10/12/2022 19:03	10/12/2022 21:04	121 Yes	Yes	No
Michelle Callahan - Ni	10/12/2022 19:05	10/12/2022 19:12	8 Yes		Yes
Michelle Callahan - Ni	10/12/2022 19:12	10/12/2022 21:04	112 Yes	Yes	No
Maura Morse (she/he	10/12/2022 19:19	10/12/2022 19:20	2 Yes		Yes
Maura Morse (she/he	10/12/2022 19:20	10/12/2022 21:04	104 Yes		No
Kate Bubriski	10/12/2022 19:28	10/12/2022 20:03	35 Yes		Yes
Kate Bubriski	10/12/2022 20:03	10/12/2022 21:04	62 Yes	Yes	No
Maria Scibelli Greenbe	10/12/2022 20:04	10/12/2022 20:07	4 Yes		Yes
Maria Scibelli Greenbe	10/12/2022 20:07	10/12/2022 21:04	57 Yes	Yes	No