WESTWOOD ELEMENTARY SCHOOLS BUILDING PROJECT COMMITTEE
Westwood, Massachusetts

SUSTAINABILITY SUBCOMMITTEE MEETING MINUTES

September 24, 2020

Attendance and Call to Order

The meeting, held remotely[1], was called to order 9:51am by Chair Maya Plotkin. Also present on the videoconference were: Ken Aries, Brian Bayer, John Cummings, Lemma Jn-baptiste, and Anthony Mullin. Ex-officio members Julie Gervais and Tom Philbin were also present. Nancy Hyde was absent. Mr. Mullin left the meeting prior to adjournment. John Cianciarulo recorded the minutes.

Tim Bonfatti and Chin Lin of Compass Project Management; and Rob Fitzgerald of Dore and Whittier were also present.

Mrs. Plotkin recognized the live stream of the meeting which was provided for real-time, public access to the activities of the Sustainability Subcommittee. Members of the public were able to view a live stream of the meeting via the Internet at www.westwood.k12.ma.us/live.

Discussion Items

Mrs. Plotkin recognized Rob Fitzgerald of Dore and Whittier. Mr. Fitzgerald noted that Matt Disalvo, Mechanical Engineer at GGD (Garcia, Galuska & DeSousa) and Erik Ruoff from The Green Engineer were also in attendance to answer any questions.

Heating and Cooling System Options: Tier 1 vs. Tier 2

Mr. Fitzgerald summarized the lifecycle cost analysis:

- Baseline: EUI 34.75
- Tier-2: EUI 20.92; Energy cost savings percentage of 39.8%
- Tier-1: EUI 23.11; Energy cost savings percentage of 33.5%

Tier 2 vs. Tier-3 – Heating and Cooling Systems

- Tier-2: Geothermal Source Heat Pump System
  - Approximately 80 wells
  - EUI: 20.9
  - $138k annual electrical costs
  - $3.8M capital costs
  - 39.8% above baseline energy model
- Tier-3: Geothermal Source Heat Pump System with Supplemental Electric Boiler
  - Approximately 70 wells
  - EUI: 23.1
  - $153k annual electrical costs
  - $3.7M capital costs
  - 33.5% above baseline energy model

100% AC and increased air-flow (gym, cafeteria are primary drivers) has increased design by 10 wells, and associated increase in geothermal costs

[1] Remote meeting held in accordance with Executive Order of Massachusetts Governor, March 12, 2020

Cost comparison of Tier-2 and Tier-3: Tier-2 increased wells is offset by increased costs in electric boilers, electrical service, and increase in electrical service size in Tier-3, resulting in $100k difference.

Emergency Back-Up System

- Depending on final HVAC system design, an exterior 350-650kW diesel stand-by generator with sound attenuated enclosure and a 48-hour reserve base mounted tank with alarms will be provided
- The generator will be sized to provide power for emergency lighting, fire safety systems, heating system and circulating pumps, elevator, kitchen refrigeration, communications, and security systems
- The generator will also include heating and ventilation for HVAC equipment serving a portion of the main administration area (500 sf) and nurse's suite (500 sf), as well as what is required to maintain a minimum temperature of 40°F if a sustained power outage should occur.

An electric boiler will not provide emergency back-up.

The Subcommittee discussed the advantages and disadvantages of both tiers, including fresh air flow capabilities. The consensus was to accept the design team's recommendation of Tier-2.

The Subcommittee also discussed the generator. Mr. Aries asked why the design team is recommending a diesel generator. Mr. Lin indicated that diesel is standard and a gas generator would require approval from the fire department.

Mrs. Plotkin stated that she would like to have the Subcommittee vote on tiers today and schedule an additional meeting to discuss HVAC, the generator and net-zero energy.

Action Items

Recommendation to Full School Building Committee on Heating and Cooling System Option

Mr. Aries made a motion to accept the architect's recommendation of the Tier-2 geothermal heating system and recommend to the School Building Committee. Seconded by Mr. Cummings.

Roll-Call Vote:

Mrs. Plotkin	Yes
Mr. Aries	Yes
Mr. Bayer	Yes
Mr. Cummings	Yes

Vote: 4-0-0.

Result: Approved

Approval of August 18, 2020 Minutes

Mr. Cummings made a motion to approve the meeting minutes of August 18, 2020. Seconded by Mr. Aries.

Roll-Call Vote:

Mrs. Plotkin	Yes
Mr. Aries	Yes
Mr. Bayer	Yes
Mr. Cummings	Yes

Vote: 4-0-0.

Result: Approved

New Business

The subcommittee discussed – and agreed to – an additional meeting to further review HVAC and generator options; and net-zero energy attainability.

Adjournment

Mr. Aries made a motion to adjourn the meeting. Seconded by Mr. Cummings.

Roll-Call Vote:

Mrs. Plotkin	Yes
Mr. Aries	Yes
Mr. Bayer	Yes
Mr. Cummings	Yes

Vote: 4-0-0.

Result: Approved

The meeting adjourned at 10:44am.

Documents and Exhibits Used at Meeting

- Draft Sustainability Subcommittee meeting minutes of August 18, 2020
- Slideshow presentation by Dore and Whittier, dated September 24, 2020
- Updated Energy Model Calculations for Hanlon School, prepared by Garcia, Galuska, and DeSousa, dated September 16, 2020