

Joint Meeting of the Jones Library, Inc. Sustainability & Feasibility Subcommittees

July 2, 2020 9:00 a.m. via Zoom

Sustainability Members Present: Sara Draper, Chris Riddle, Todd Holland, Alex Lefebvre, Lee Jennings
Feasibility Members Present: Austin Sarat, Tammy Ely, Lorin Starr, Bonnie Isman, Janice Ratner, Alex Lefebvre, Joan Temkin
Also Present: Jim Alexander, Beth Persy, Ellen Anselone, Josephine Penta, Ken Beck, (Finegold Alexander) Sharon Sharry, George Hicks, and members of the public.

- I. Sustainability meeting called to order at 9:03 am.
- II. Feasibility meeting called to order at 9:03 am
- III. **Minutes**
 - A. **MOTION:** To approve the minutes of February 26, 2020 for Feasibility Committee. Approved 6-0-0
 - B. **MOTION:** Motion to approve the minutes of February 13, 202 for Sustainability Committee. Approved 4-0-0 (Lee Jennings joined the meeting after the vote).
- IV. **Sustainability Report**
 - A. FAA presented their sustainability report.
 - B. Explained that the Tally Life Cycle Assessment does not figure in the demolition into lifecycle analysis. This would require an entirely different process and is very difficult to do the calculation. Can do an analysis on what would be demo'ed - assume transportation, where going and most common disposal method. Can do it, but there would be a lot of assumptions. Can do it as separate assumptions but can't roll into Tally as the program is not designed for this piece.
 - C. Question if FAA looked at other types of electrified heating and cooling other than geothermal wells? The base proposal uses a VRF system. The Environmental Consideration Measures are those beyond the base proposal for the renovation/expansion. The cost savings/operating costs is based on the base design.
 - D. Ground Source vs VRF - on this parcel, given the proximity of property line would an air-cooled system be able to meet the noise requirements? Would have to do calculation on boundary noise system but don't anticipate a problem.. VRF would be quieter in the library than the geothermal. Have run into same issues around noise in downtown Boston and have found that with proper screening and baffling they have been able to solve that problem.
 - E. Confirmation that the total embodied and operation carbon calculation includes both the existing and new building, not just the new. What does green bar show in the graph? It is the base design without the additional ECM measures and without the CLT.
 - F. EUI pie chart by use type - the % going to lighting seems very high? Library usage around lighting tends to be higher. The base considers code required lighting controls in the number. One of ECMs is to add further lighting controls. Comment that Hampshire College's predicted energy pie chart model actual overestimated lighting and underestimated HVAC. Believe that is primarily due to

voluntary human behavior - tend to be good with turning off lights but not as good with setting the temperature.

- G. Post COVID 19 operation of HVAC systems - one of recommendations is to disable control ventilation and run systems for pre- or post occupancy flush period (4 hour pre-occupancy purge). May need to rerun numbers on this new assumption. Doing things now for short term to mitigate issues around COVID 19 - don't know how long will need to deal with that.
- H. UV introduced into HVAC systems? Have looked at this and other systems. This system is primarily heat recovery, brought in without cross contamination.
- I. Could we relook at ECMs based on new realities for COVID-19? Would need to run these ideas as we move forward. Would run again and change during DD.
- J. Occupancy gate? 2022.
- K. Table showing ECM - is there a version that includes the Global warming /embodied potential of each measure to help us get a good look across everything? Can add a column to show that.
- L. Do we know how close we are to NetZero? The design is NetZero capable with offset renewables but can't do with what we can put on the building. Building configuration does not lend itself to a lot of PVs. May be able to get more than 10kw projected but likely need offsite or purchase to get to net zero. In DD consider looking at configuration of building to optimize? Have monitors on the roof which helps bring more daylight into the building. If don't have monitors could substitute more PV. With existing 1928 building have other limitations about what can be done.
- M. Tally assumptions for assessment calculations - includes most parts of the building. Timber would make a difference in global warming potential. What insulation was assumed? Included what is in the design package in the new building. What is in the existing, not particularly insulating 1928 portion of the building. One of the ECMs that was included was around insulation. No cavity in 1928, wood paneling and fireplaces trying to keep. What type of insulation system is going on in the slab, roof, walls (can make a difference in the bottom line footprint). At the end of report, everything assumed is articulated.
- N. Maybe a good amount of room for improvement just using insulation material and not having to get into redesign. No line item for type of insulation in new building (not R value but embodied carbon). Operation is looking good, so focus can be on embodied. Will add on to ECM chart. R32 for walls and roof.
- O. Geothermal - what type of landscape features are allowed over geothermal wells? Wells are down 3-4 feet so normal plantings are usually allowed. Nothing with deep roots or structural support. Wells are not big, spaced wide apart. The circles are the 15 foot diameter - in the middle only doing a 12" bore. Could something like the Kinsey garden go in the plan? The disturbance is limited to 12" bore and area around it but not entire 15 feet.
- P. Large parking lot behind the site. If we had permission, could do below the parking lot. The heat of the parking lot can sometimes mess with the heat of the water. Need to drill deeper to avoid those issues.
- Q. Hybrid systems, part geothermal and part air source to reduce the size of the field? Can and have done that before. The cost inside the building is the same for geothermal as VRF. Cost of geothermal is external to building and has to be treated as an add on.
- R. Discussed that this document is the beginning of the process and that the Sustainability should continue to review, discuss, and determine if we have the information needed for next steps. Will need to come up with recommendations to the Board. Also need to continue discussions as we move through actual design and development.

- S. How can you get to repair of wells? Rare to need repairs, would need to excavate.
- T. Are costs of ECM 4 and 5, net or gross? Those are net increases.
- U. ECM 4 - how much of cost and energy savings is for window replacement in the 1928 building?
Did not break out that way. Can look at that and get back to us.
- V. \$0 for gas savings because not using gas at all. The baseline does not use gas.
- W. Estimated recovery for geothermal is 147 years. Is that normal? Every year it gets longer and longer for recovery. Several years ago, the cost of gas or electricity was higher and the efficiency of equipment was lower. Now when comparing against geothermal, using equipment that is extremely efficient and does not offset the outdoor well costs. Well costs are substantial. Everything inside building with current codes, does not change what doing inside the building from one system to another.
- X. Any knowable maintenance issues associated with what is being proposed? MEP - typical maintenance.
- Y. What is FAA's experience with these kinds of design elements. How comfortable about CLT approach in buildings like this one? Worked with structural engineer who is working on several CLT structures. Feel very confident. The person who did design has a lot of experience with CLT. CLT uses a burn rate to decide safety and each municipality approaches differently and would require investigation. Because of the Olver Building at UMass think may be less of a municipal issue. Given large meeting room and need long span, would be difficult with a flat ceiling, proposal was best solution to cut down the depth of the steel and transfer load to wood above.
- Z. How thinking about library design differently in light of COVID and what would be the implications to the sustainability of the building if we wanted to make changes, such as amount of seating in meeting room? Physical building - idea of separate children's entrance that has been discussed takes down the load of people heading to one place. People concerned about computer use and how we space out. Trying to squeeze down space works against what is needed with COVID. Do we need to rethink spacing in the building? What is most important is flexibility in the building, partitions, and the furnishings to address concerns related to COVID, future health issues, and future library usage.

V. **Public Comment**

- A. Does existing design contemplate single pane windows? no, double pane and ECM bumps to triple pane.
- B. Is it true the roof capacity limits solar PV potential? Yes

VI. **Next steps**

Looking for and depending upon a recommendation from the Sustainability Committee about the adequacy of what FAA has done and articulation of priorities from the point of view of Sustainability. Sara will send a list of follow up questions or information to be included with FAA revised report. Once revised report is received Sustainability will meet again to discuss priorities and send recommendations to the Board for consideration.

VII. **Accessibility Study**

A copy of the report was presented to both committees. No questions at this time. The report will be presented by Kuhn Riddle to the Town Council on July 13. Encouraged people to attend the meeting.

VIII. **MBLC Update**

No additional information to share. MBLC is meeting on July 9 where they will discuss the waitlisted libraries' requests for delay and additional money due to fiscal uncertainty from COVID-19.

Meeting adjournments

- Sustainability Committee adjourned 10:37 am
- Feasibility Committee adjourned 10:38 am

Respectfully submitted by Alex Lefebvre