

**Minutes**  
**Building Systems Sub-Committee**  
**December 16, 2015**

The meeting was called to order at 5:30 PM.

Committee members present: Kim Totten, Brad Totten, Brant Miller, Tim Ellsworth, Steve Dyer, Chris Shaw

Others present: Bob Curtis – PDT, Ian MacDonald – Allied Engineering

1. The Committee further discussed “early” commissioning. Brant Miller passed out the section (5.2.2) regarding commissioning from the ASHRAE Guideline 0-2013. It was agreed that the committee should work toward development of an Owners Project Requirements (OPR) document in order to guide further work toward developing an RFQ/RFP for commissioning work. Alan Kuniholm distributed a draft that PDT had developed dated June 2015.
  - a. Section 1 – Owner and User Requirements - The type of project will be a grade 9-12 high school. The project description is design-bid-build a 150K square foot (approx.) grade 9-12 high school for 750 (approx.) students The project vision can be developed from the Educational Specifications. The new high school is expected to serve the District for at least 50 years. Some members of the Committee feel it could be developed with the expansion and flexibility requirements to last 100 or more years The General Project Goals were discussed for relevance and to identify areas the Building Systems Committee could focus on.
  - b. Section 2 – General Project Information – Not much discussion as the design phase has not begun and PDT had just met with the Town of Topsham the previous week.
  - c. Section 3 – Budget and Schedule – The budget is still unknown as is the construction budget. Project schedule milestones are in flux because the DOE has just experienced another Commissioner change. Special budget and schedule considerations have not been identified as the District is I a partnership with MDOE and BGS.
  - d. Section 4 – Building Standards – The committee discussed which standard that the building should be designed for. IBC 2015? Plus the committee should consider standards above minimums no matter what standard is identified to be used
  - e. Section 5 – Operations and Maintenance and Training Requirements – Personnel identified are: Energy Manager, Facilities Director, Custodial staff. Maintenance and training requirements identified are a systems manual and an O&M manual.
  - f. Section 6 – Sustainability and Performance – It was suggested that the 4/15, 4/29 and 5/13 Building Committee meeting notes be attached to the OPR.

Design Process – Draft OPR acceptable

Site Planning – Draft OPR acceptable

Water Use – Waterless Urinals should be scratched, use of on-demand hot water whenever possible, use sub-metering as a teaching tool, scratch grey water use as it is not cost effective and high maintenance, water bottle filling stations are a priority

Energy Efficiency – Consider geothermal, a membrane roof (preferably not white unless year round use is viable) should be the only consideration, a thermally comfortable building is the goal, correct orientation for the roof should be considered, reduce movement of air, increase movement of water, use ANSI for achieving harmony regarding building acoustics, an emphasis on using natural daylight

Materials – Consider appropriate use of carpet

Indoor Environmental Quality – Consider HEPA 13 filters, design for future modernization, minimize rooftop equipment, the building should be “clean, dry, and pollutant free”, use no materials and products that cannot be serviced or acquired locally, building orientation is important

Innovation – downloadable and interactive energy dashboard (teaching tool), be net zero ready, commissioning should be 3 phases – design, construction, operation, recycling and composting programs should afford compliance with the DOE Integrated Pest Management (IPM) regulations, passive house practices are not relevant for this project

Building Systems Review List – Use a higher standard for roadway design (pavement), standardized lighting and integrate with security system, safe, secure and inviting lighting, flagpole lit 24/7, avoid unnecessary tanks

2. The next meeting will be held on January 11, 2016 at 5:30 PM., and its recommended that it be a joint meeting with the Sustainability Committee.
3. The meeting adjourned at 7:35 PM

Respectfully submitted,

Steven A. Dyer