Bowdoin College is an academic institution that recognizes the value in pursuing sustainable initiatives. After conducting in-depth research spanning a wide range of construction categories, we have generated a list of sustainable alternatives for the current building specifications of Bowdoin College. These recommendations will serve to update the current building practices and further perpetuate the college’s commitment to becoming environmentally sustainable. We were able to meet with the Facilities Management staff in order to ground our recommendations in practicality. We realize that switching to sustainable products poses certain risks and can not be implemented immediately without further considerations. Regardless, we hope that the products we highlight below will someday become standard in the construction of new facilities on the Bowdoin campus.

ROOFING/INSULATION

There is a wide variety of roofing and insulation materials available on the market which will fit our needs as new environmental additives and insulating strategies. In both cases, the current environmental benefits will outweigh the past practices. If sustainable practices are utilized, it is projected that this will be about 35% by reflecting sunlight and improving insulation can reduce energy consumption by up to 35%, several sustainability alternatives to roofing and insulation are highlighted below.

CARPET/PAIN

Carpet and paint are essential elements in the construction process. There are various characteristics that are important in carpet selection. Such as being made from recycled carpet, being made from environmentally friendly materials, and being made from natural fibers. Paint, on the other hand, should be considered as an important factor since it affects the overall appearance of the building. Paint that is made from recycled materials, water-based, and has low volatile organic compounds (VOC's) is recommended for the most sustainable structures. Paint Recommendation: Sherwin-Williams HARMONY Low VOC Paint:

- Does not need to be replaced in case of stains or rips
- Resists moisture and mildew
-𬨎s low VOC

Suggested for: Bowdoin College would be supporting a local store that is environmentally responsible.

Paint Recommendation: Bioshield Paint

- Low VOC
- Contains formaldehyde and has higher energy use during manufacture. No VOC's emitted during the production and manufacturing.

Suggested for: Endurance II, Bowdoin College would be supporting Shaw's Endurance II.

Other Environmental and LEED Credits

Rapidly Renewable Resources

Asphalt shingles: not recyclable, limited life, off gassing.

Cellular Glass (Foam): little recycled content, cannot be reused

Polyisocyanurate (Foam): little recycled content, cannot be reused

XPS (Foam): uses ozone depleting agents, potential release of a carcinogen.

Good roofing: Slightly newer technology but increasingly used, reduces energy costs, prevents run off and heat island effect.

In order to gain in solar radiation (solar heat gain), select low e glass, to cool the building, select high e glass. Windows are the most critical issue of energy efficiency. Selecting high quality insulation is the best way to save energy. Windows with high quality seals are the most important factor in saving energy. Windows with high quality seals are the most important factor in saving energy.

**Carpet Recommendation:**

- Woodclad [wood frame with Vinyl cover]

- Contains formaldehyde and has higher energy use during manufacture. No VOC's emitted during the production and manufacturing.

- For the most sustainable structures look for carpet made from 100% recycled content.

**Paint Recommendation:**

- Sherwin-Williams HARMONY Low VOC Paint:

- Does not need to be replaced in case of stains or rips
- Resists moisture and mildew
- Does not emit VOC
- Shaw will take back old carpet for recycling for free – a way for Bowdoin College to support a local store that is environmentally responsible.

- Bioshield Paint

- Low VOC
- Contains formaldehyde and has higher energy use during manufacture. No VOC's emitted during the production and manufacturing.

- For Bowdoin College to support a local store that is environmentally responsible.

- Endurance II

- For Bowdoin College to support a local store that is environmentally responsible.

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