

Add the following new subsection .05 in its entirety to Section 01 81 13 per the following. Remainder of section is unchanged.

## 01 81 13 Sustainable Design Requirements

### **.05 Owner's Additional Energy Conservation Options - Alternate Bid Requirements**

- A. **Alternate Bids for Additional Energy Conservation Options:** Competitively bid projects with a scope of work that have energy related components shall include Energy Conservation Options that are determined to be economically viable as defined below.
1. Base Bid documents: shall be submitted by the lead Design Professional with sealed certification that the package complies with [.02 Owner's High-Performance Requirements](#) above. The Additional Energy Conservation options shall not be used as a basis for "Trade-Off" options with the building envelope or other equipment or systems that fall below the requirements in the referenced high- performance standards.
  2. Alternate Bids: Design professionals shall develop additional Energy Conservation Options that can be reasonably expected to be capable of financially supporting themselves for each energy component category that are relevant to the project scope. Examples include but are not necessarily limited to the following:
    - a. Building Envelope
      - i. An increased level of insulation for walls, roofs, floors, or ceilings
      - ii. Limit vertical fenestration area to not exceed 0.75 of the prescriptive requirement in ASHRAE 189.1.
      - iii. Extra-High Performance Insulated Glass (higher R value, reflective coating, etc.). Refer to Section [08 50 00 WINDOWS \(EXTERIOR INSULATING GLAZING UNITS\)](#).
      - iv. High-Performance Solar Control Film Option for Existing Facilities. Refer to Section [08 50 00 WINDOWS \(EXTERIOR INSULATING GLAZING UNITS\)](#).
    - b. Heating, Ventilating and Air Conditioning
      - i. Alternate selection of mechanical equipment with a higher efficiency (motor, drive, chiller, fan, pump, valve, etc.)
      - ii. Additional or supplemental BAS technology (programming or equipment)
    - c. Lighting
      - i. Alternate selection of lighting (newer technology, LED, light sensing ballast, daylight harvesting)
    - d. Additional energy conservation measures that reduce energy, or operations and maintenance will also be considered such as alternative/renewable energy technologies, process changes, and sustainable practices.

3. The following items shall be prepared by Party in responsible charge of the project and reviewed by OPP Engineering Services:
  - a. All additional costs associated with each option.
  - b. An energy comparison between the base design and the alternate option for a 12 month period.
  - c. A Life Cycle Cost analysis that indicates simple payback in years and the Net Present Value at 5 years (for Energy Conservation Measure funded options), 10 years (for Energy Saving Program funded options), and 15 years (for other marginal cases) based on the current rates and projections.
  - d. Note: In some cases, such as when evaluating options associated with the building thermal envelope with longer periods of useful life, the LCCA period shall be extended and performed to show which option has the lowest total cost of ownership with respect to the service life of the asset/component.
4. If more than one alternate is determined to be feasible, a second energy comparison between the base design and all selected options shall be prepared at the owners request prior to award.

END of revision

**Update Commentary:**

Section was modified primarily for the following reasons:

1. *To define requirements for alternate bids for Energy Conservation options to provide the opportunity for the Owner to select and fund additional energy optimization features beyond the minimum project scope.*