ENERGY MANAGEMENT PLAN

1200 MLK – CONDITIONAL ZONING
CHAPEL HILL, NORTH CAROLINA

Prepared by: CJTpa

The current Town of Chapel Hill Energy Management Plan Section list of requests are included below, accompanied by the applicants response:

1. **Description of how project will be 20% more energy efficient than ASHRAE Standards**
    a. While final designs are still being developed and construction costs evaluated, areas of consideration to increase the energy efficiency of the building will be:
        i. Tight building envelope construction.
        ii. Explore energy recovery HVAC systems with variable speed motors.
        iii. High-efficiency domestic hot water system, utilizing condensing water.
        iv. Heat-absorbing, low-emissivity or energy-star window strategies.
        v. Use of energy star appliances and equipment will be used for all appliance as practical.
        vi. Use of masonry walls and concrete floors that increase the thermal mass of the building to reduce the temperature swings in the building.
        vii. Use of energy efficient LED lighting for interior and exterior.
        viii. Occupancy sensors for light controls provided in areas as required per ASHRAE 90.1
        ix. Programmable mechanical systems controls.

2. **Description of utilization of sustainable forms of energy (Solar, Wind, Hydroelectric, and Biofuels)**
    a. The possible use of a solar energy source hot water system is the only current option to explore.

3. **Participation in NC GreenPower program**
    a. Participation in the program will be explored through either a probable contribution or solar array.

4. **Description of how project will ensure indoor air quality, adequate access to natural lighting, and allow for proposed utilization of sustainable energy**
    a. The project will investigate appropriate ways to achieve these goals through use of the following methods:
        i. An outdoor air make-up system beyond industry standards.
        ii. Paints, sealants, fabrics and finishes to have low VOC content.
        iii. The common space areas to utilize large exterior windows to bring daylight into interior spaces, balance energy needs and views.
        iv. Mechanical systems will be designed to operate with controllable fresh air intakes and economizers.

5. **Description of how project will maintain commitment to energy efficiency and reduced carbon footprint over time**
    a. While this project is not pursuing LEED certification, the research and use of green oriented products, materials and equipment will provide for long-term reduction in carbon footprint.
    b. Light Pollution Reduction: The proposed light fixtures are dark sky friendly and the project will utilize LEED-compliant forms of light pollution reduction design practices to improve nighttime visibility and reduce the consequences of development for wildlife and people
    c. White roofing materials to promote reflectivity.

d. Outdoor Water Use Reduction: through LEED-compliant forms of outdoor water use reduction design practices involving selective irrigation areas and careful choice of planting materials that should thrive in years of normal rainfall

e. Indoor Water Use Reduction: through LEED-compliant forms of indoor water use reduction design practices involving specification of low flow, water-saving plumbing fixtures

f. Fundamental Refrigerant Management: through LEED-compliant forms of fundamental refrigerant management design practices to reduce stratospheric ozone depletion.

g. Construction and Demolition Waste Management Planning: through LEED-compliant forms of demolition and construction waste management planning and practices.

h. Through education of staff of building utilization to maintain awareness of energy usage and reduction.

i. Indoor Environmental quality: through LEED-compliant forms of minimum indoor air quality performance compliance, environmental tobacco smoke control and minimum acoustic performance strategies

6. Description of how the project's Transportation Management Plan will support efforts to reduce energy consumption as it affects the community

a. Proposed project siting provides LEED-compliant access to bus routes for guests and employees and accommodations for bike riders

7. An outline of each elevation of the building, including the finished grade line along the foundation (height of building measured from mean natural grade)

a. Height from mean natural grade indication is provided on the Drawings