Facility Planning & Control

**6. ENERGY CONSERVATION ANALYSIS REQUIREMENTS, SUSTAINABLE BUILDING STANDARDS AND COMMISSIONING**

**ENERGY CONSERVATION ANALYSIS**

Articles 7.1.3(4) and 7.1.4(3) of the "Louisiana Capital Improvements Projects Procedure Manual for Design and Construction," require that the Designer shall prepare an Energy Conservation Analysis for each project.

All new state-owned buildings and all applicable alterations and repairs to state owned buildings (as defined in R.S. 40:1574(C), (D), (E) (F) and (G)**\*** must be determined to meet the energy efficiency requirements of the State Building Energy Conservation Code as defined in RS 40:1730.45, currently IECC 2021. The Designer must use total building performance methodology as defined in IECC 2021, Section C407 to confirm compliance.

The Designer shall provide a report to the Owner with the Design Development Phase Submittal (and shall update and verify the report at the Construction Document Phase Submittal) that shall include proof that the building meets and exceeds the above-mentioned state energy code standard reference design requirements by 30% in terms of the building systems and loads: heating systems, cooling systems, service water heating, fan systems, lighting power, receptacle loads and process loads. The Designer shall include in his/her submittal either the pertinent completed forms or a computer printout from the program used to determine that the building meets all energy efficiency requirements and certification by a professional engineer. In all cases, the Designer shall include (on 8 ½" x 11" sheets of paper) a schedule of materials and the pertinent values for those materials used in making this determination.

**SUSTAINABLE BUILDING STANDARDS**

 R.S. 40:1730.49 defines a Major Facility Project as a state-funded new construction building project larger than five thousand gross square feet or a state-funded renovation project which involves more than fifty percent of the replacement value of the facility or a change in occupancy. A major facility project shall not mean a building, regardless of size, which does not have conditioned space as defined by the IECC (International Energy Conservation Code), published by the ICC (International Code Council), adapted by the Council pursuant to RS 40:1730.28.

 Furthermore, in accordance with [RS 40:1730.49](https://legis.la.gov/legis/Law.aspx?d=452804), each Major Facility Project must be designed and constructed to meet sustainable building standards. In order to achieve the required sustainable building standards, each major facility project shall be designed and constructed to earn at least 25 points as described on the FPC Environmental Building Rating System Checklist which references International Green Construction Code (IgCC 2024). The total of 25 points must include at least 2 points from Section 6 – Water Use Efficiency and at least 6 points from Section 7 – Energy Efficiency. If any requirement of the FPC Environmental Building Rating System Checklist and/or IgCC 2024 is found to be in conflict with any requirement found in the “Louisiana Capital Improvement Projects Procedure Manual for Design and Construction”, “Instructions to Designers”, or any other design or construction code or standard currently in use by FPC, that prior existing code or standard shall govern.

The Designer, as part of his/her basic services, shall design the project to meet the functional requirements of the Owner within the budget established for the project and with the most practical energy efficient design possible.

The Designer shall evaluate the following elements for the project, and shall provide a written report to the Owner with the Schematic Design Phase Submittal setting forth recommendations for the design of the facility that will result in a building that consumes a practical minimum amount of energy and indicating the methods or design features proposed to achieve compliance with the FPC Environmental Building Rating System. The report shall be organized according to the FPC Environmental Building Rating System Checklist format. Elements to be considered include the following:

**1.** Site Sustainability

**2.** Water Use Efficiency

**3.** Energy Efficiency

**4.** Indoor Environmental Quality

**5.** Materials, and Resources

**6.** Construction and Plans for Operation

At the time of the Schematic Design Phase Submittal, and also with the submittal for each subsequent design phase, the Designer shall include an up-to-date, completed FPC Environmental Building Rating System Checklist.

The Designer shall provide a report to the Owner with the Construction Document Phase Submittal explaining which items in the plans and specifications correspond to each point indicated as earned on the FPC Environmental Building Rating System Checklist.

**COMMISSIONING**

In accordance with R.S. 40:1730.49, a certified third-party commissioning agent shall certify that the major facility project's systems for heating, ventilation, air conditioning, energy conservation, and water conservation are installed and working properly to ensure that each major facility project performs according to the major facility project's overall environmental design intent and operational objectives. FP&C will contract directly with an agent for commissioning services. The Designer shall include the requirements for supporting commissioning activities in the project specifications.

**\**The pertinent Subsections of R.S. 40:1574 are reproduced below. Please note that for state owned buildings, Facility Planning and Control shall make judgments concerning energy conservation issues rather than the state fire marshal****.*

C. If within any twelve month period, alterations or repairs costing in excess of fifty percent of the then physical value of the building are made to an existing building, such building shall be made to conform to the requirements of the code for new construction.

D. Where an entire floor of a facility, building, or structure is substantially renovated, that floor shall be made to conform with requirements of the code for new construction to such extent as the state fire marshal may determine to be practicably feasible, provided however, and notwithstanding the provisions of R.S.40:1578.1(A), the board of review shall be the final authority on issues of practical feasibility.

E. Altered elements in existing facilities shall be made to conform to the requirements of the code for new construction to such extent as the state fire marshal may determine is practicably feasible, provided however, and notwithstanding the provisions of R.S. 40:1578.1(A), the board of review shall be the final authority on issues of practical feasibility.

F. The physical value of a building in Subsection C of this Section may be established by an appraisal not more than three years old, provided that said appraisal was performed by a certified appraiser, or by the tax assessor in the parish where the building is located.  In the absence of such an appraisal, the physical value of the building in Subsection C of this Section shall be established by the state fire marshal.

G. The cost of alterations or repairs in Subsection C of this Section may be established by an estimate signed by a licensed architect, by a licensed general contractor, or in the absence of either such licensed person, by the state fire marshal.