

## Green Building Construction & Renovation Policy

<b>Objective:</b>	To adopt "green" building standards for all new construction and major renovations of County-owned buildings.	<b>Policy/Procedure Number:</b>	09-47
<b>Reference:</b> (All applicable federal, state, and local laws)	NYS Uniform Fire Prevention and Building Code; NYS Energy Conservation Construction Code; Title 19 of NYS Code, Rules, & Regulations (19 NYCRR)	<b>Effective Date:</b>	May 7, 2013
<b>Legislative Policy Statement:</b>	It is the policy of the Legislature to reduce energy and materials consumption and achieve the County's goal of net-zero greenhouse gas (GHG) emissions. To these ends Tompkins County requires that all new construction of County-owned buildings and all major renovations or expansions to existing County-owned buildings seek to reduce greenhouse gas emissions and prioritize sustainability as a primary objective in the building process.	<b>Responsible Department:</b>	Planning & Sustainability/Facilities
		<b>Modified Date (s):</b>	May 7, 2019; January 16, 2024
		<b>Resolution No.:</b>	2019-100; 2024-4
		<b>Next Scheduled Review:</b>	January 2029
<b>General Information:</b>	LEED is a copyrighted term used by the U.S Green Building Council. It stands for Leadership in Energy and Environmental Design. It is a nationally accepted rating system for the design, construction, and operation of buildings of all types. LEED establishes benchmarks for how "green" a building is, focusing on sustainable site development, water savings, energy efficiency, materials selection, and indoor air quality. Certification to LEED standards adds to the cost of the project but these costs may be offset by energy, water and sewer, and productivity savings.		

**I. Definitions:** **Building Project** - A construction project involving real property including land and/or buildings that meet the terms of subsections (a), (b) and (c) of this definition:

- a) The County is the record owner of said real property including land and/or buildings or related improvements that are used for public purposes; and
- b) The project involves (i) new construction, or (ii) substantial renovation of an existing building, or (iii) the expansion of an existing building; and
- c) The project total construction cost is at least \$500,000.

**Building Project Team** - Consisting of staff members from County Administration, the Facilities Department, the Department of Planning and Sustainability, the Recycling and Materials Management Department, external experts, and other department staff as needed.

**Construction** - What is bid as the construction portion of the project.

**County-Owned Building** - Any real property, buildings, and/or improvements thereon owned by Tompkins County and used for public purposes.

**Deconstruction** - The disassembly of a building to maximize the recovery of reusable and recyclable materials.

**Embodied Carbon** - Sometimes referred to as "upfront carbon," embodied carbon

refers to the carbon footprint of a material. It is measured in carbon dioxide equivalent (CO<sub>2</sub>e) and is the summation of greenhouse gas emissions emitted from cradle to site of use. It can include the extraction of materials, as well as production, processing, assembly, and transportation of a product until it reaches its final destination of use.

**Environmental Product Declarations** - Essentially, a nutrition label for a product or material that transparently documents the environmental performance or impact over the course of its lifetime.

**GreenNY Specifications** - Specifications approved by the New York State GreenNY Council to be used by the State and municipalities in their procurement process.

**LEED for Building Design and Construction** - The green building rating system standards defined by the United States Green Building Council Leadership in Energy and Environmental Design program that provides a framework for building a holistic green building and offering the opportunity to enhance sustainability and maximize benefits. Projects can earn levels that include (from lowest to highest): certified, silver, gold, and platinum.

**Net-Zero Emissions** - Achieving a net balance between the greenhouse gas emissions that are produced and the greenhouse gas emissions that are taken out of the atmosphere.

**Occupied Building** - A building that is primarily utilized to host people instead of materials, such as a warehouse or storage shed.

**Substantial Renovation** - The New York State Building Code defines this as: "The replacement of more than fifty (50) percent of a building's subsystems within any consecutive 12-month period. A subsystem is a building assembly, or building set of units, made up of various components that serve a specific function including, but not limited to, exterior walls, windows, doors, roofs, ceilings, floors, lighting, piping, ductwork, insulation, HVAC system equipment or components, electrical appliances and plumbing appliances."

**Unoccupied Building** - A building that is primarily utilized to host materials instead of people. Examples include storage sheds, warehouses, and vehicle garages.

**Zero-Emissions Construction Site** - A construction site is considered zero-emissions when it uses no on-site combustion or fossil-fuel based equipment. This can be accomplished by using fully electric equipment and fully electric on-site heating during construction. This can be further enhanced by matching electricity usage during construction with renewable energy generation with renewable energy certificates or by showing that the electricity came from a net-zero emissions electric grid.

## II. Policy:

- A. At the outset of a building project, the County Administrator will create a Building Project Team comprised of staff from County Administration, the Facilities Department, the Department of Planning and Sustainability, the Recycling and Materials Management Department, external experts, and other department staff as needed. The Building Project Team will be responsible for preparing and reviewing Building Project documents and providing recommendations to the County Administrator.

- B.** The County Administrator or designee will designate a member of the Building Project Team as the Sustainability Lead. The Sustainability Lead will be responsible for tracking and reporting adherence to this policy to the Building Project Team and for prioritizing and advocating for sustainability throughout the building project, including but not limited to the design, bidding, construction, and commissioning stages.
- C.** There are five (5) types of building projects addressed by this policy:
- 1) New Building Projects for Occupied Buildings - These shall, at a minimum, be designed and constructed to meet the requirements for the LEED for Building Design and Construction at the Gold level;
  - 2) New Building Projects for Unoccupied Buildings - These shall, at the discretion of the County Administrator and upon advice from the Director of Facilities, be designed and constructed to meet the requirements for the LEED for Building Design and Construction at the Silver level;
  - 3) Building Projects involving an Expansion of an Occupied Building shall, at a minimum, be designed and constructed to meet the requirements for the LEED for Building Design and Construction at the Gold level;
  - 4) Building Projects involving Substantial Renovation of Occupied Buildings shall, at a minimum, be designed and constructed to meet the requirements for the LEED for Building Design and Construction at the Silver level; and
  - 5) Building Projects involving Substantial Renovation or Expansion of Unoccupied Buildings - These shall, at the discretion of the County Administrator and upon advice from the Director of Facilities, be designed and constructed to meet the requirements for the LEED for Building Design and Construction at the Silver level.
- D.** Tompkins County will prioritize the reduction of greenhouse gas emissions in all Occupied Building Projects by requiring a Life Cycle Assessment of greenhouse gas emissions of the proposed building project in comparison to a baseline for a similar project that would adhere to the New York State Building Code in effect at the time of construction. New Building Projects should target a minimum reduction in global warming potential of greenhouse gases (measured in kg CO<sub>2</sub>e) of 5% when compared with the baseline.
- E.** Tompkins County will promote zero-emissions construction site practices in the issuance of requests for qualifications, proposals, or when awarding building-related contracts.
- F.** Tompkins County Building Projects shall follow best practices for waste reduction, including salvage and reuse, recycling, and minimization of landfill disposal. The design of Building Projects should consider reuse and disassembly, as well as the incorporation of salvaged materials. Building Projects should consider preservation best practices, including deconstruction.
- G.** Fossil-fuel based equipment will be prohibited in all day-to-day operations of Building Projects, including for heating and cooling, domestic hot water,

cooking, ventilation, or other day-to-day building operations. Fossil-fuel based equipment may be considered as part of a construction operation in extenuating circumstances or for an emergency back-up system at the discretion of the County Administrator in consultation with the Building Project Team.

**III. Procedure: A. Building Project Team & Sustainability Lead**

1. At the outset of a Building Project, the County Administrator will create a Building Project Team comprised of staff from County Administration, the Facilities Department, the Department of Planning and Sustainability, the Recycling and Materials Management Department, external experts, and other department staff as needed. The Building Project Team will be responsible for preparing and reviewing Building Project documents and providing recommendations to the County Administrator.
2. The County Administrator or designee will designate a member of the Building Project Team as the Sustainability Lead. The Sustainability Lead will be responsible for tracking and reporting adherence to this policy to the Building Project Team and for prioritizing and advocating for sustainability the building project, including but not limited to the design, bidding, construction, and commissioning stages.

**B. New Building Projects for Occupied Public Buildings**

1. The Building Project Team will ensure that the Building Project meets the minimum requirements to be certified LEED for Building Design and Construction at the Gold Level. A lower LEED level may be recommended by the County Administrator in consultation with the Building Project Team. However, all LEED points as required in Section III.B.2.b should still be achieved for energy efficiency and greenhouse gas emissions reductions. If such a reduction in LEED achievement is to be recommended, the County Administrator shall seek approval from the full County Legislature, articulating the benefit/cost analysis of the alternative approach as compared to the Policy, including the life-cycle operational data of both evaluated against the upfront costs over the life of the project.
2. The County Administrator, in consultation with the Director of Facilities and the Department of Planning and Sustainability, may direct appropriate staff to pursue actual LEED certification from the USGBC for the project.

New Building Projects for Occupied Public Buildings must be eligible for LEED Gold including all required prerequisites. The following are additional requirements that must be met while meeting the LEED Gold requirements:

- a. Achieve a minimum of four (4) points for Energy and Atmosphere (EA) Credit: Enhanced Commissioning;
- b. Achieve a minimum of eight (8) points for EA Credit: Optimize Energy Performance requirements;
  - Points must be achieved for percentage improvement in energy performance -% Greenhouse Gas Emissions

- c. Achieve a minimum of one (1) point for EA Credit: Grid Optimization;
  - d. Achieve a minimum of one (1) point for EA Credit: Enhanced Refrigerant Management;
  - e. Achieve two (2) points for Indoor Environmental Quality Credit: Interior Lighting; and
  - f. Achieve a minimum of two (2) points for Regional Priority Credit: Regional Priority.
3. The Sustainability Lead will provide recommendations for indoor and outdoor LED lighting temperatures to the Building Project Team based on industry best practices.
  4. The Sustainability Lead will ensure that electric vehicle charging stations for Tompkins County Fleet vehicles are provided. The number and type of charging stations should be made in consultation with the Fleet Manager designated by the County Administrator.
  5. The Sustainability Lead will provide recommendations to the Building Project Team regarding the amount of covered and secure bicycle parking that a Building Project will require. Projects will aim to provide one bicycle parking space for every 5,000 sq. ft. with a minimum of four (4) bicycle parking spaces.

#### **C. New Building Projects for Unoccupied Buildings**

1. All new, unoccupied buildings must only meet the minimum requirements to be certified LEED Silver at the discretion of the County Administrator in consultation with the Director of Facilities and the Commissioner of Planning and Sustainability.
2. All new, unoccupied public buildings will meet the prerequisites for the LEED Water Efficiency category for both Outdoor Water Reduction and Indoor Water Reduction unless explicitly made exempt at the discretion of the County Administrator in consultation with the Director of Facilities and the Commissioner of Planning and Sustainability.
3. All new, unoccupied public buildings will use recommendations for indoor and outdoor LED lighting temperatures as proposed by the Sustainability Lead.
4. All new, unoccupied public buildings will undergo an analysis by the Director of Facilities and the Fleet Manager, as appointed by the County Administrator, to determine whether the facility should include:
  - a. Electric vehicle charging infrastructure; and
  - b. Covered and secure bicycle parking.

#### **D. Expansions of Existing Public Buildings**

1. All Building Projects involving Expansions to existing Occupied Buildings must, at a minimum, meet the requirements for LEED Gold. This applies only to the actual additional expansion of the building, not the pre-existing

structure. A lower LEED level may be recommended by the County Administrator in consultation with the Building Project Team. However, all LEED points as required in Section III.B.21.b should still be achieved for energy efficiency and greenhouse gas emissions reductions. If such a reduction in LEED achievement is to be recommended, the County Administrator shall seek approval from the full County Legislature, articulating the benefit/cost analysis of the alternative approach as compared to the Policy, including the life-cycle operational data of both evaluated against the upfront costs over the life of the project.

2. All Building Projects involving Expansions to existing Unoccupied Buildings must, at a minimum, meet the requirements for LEED Silver. This applies only to the actual expansion of the building, not the pre-existing structure.

The Building Project Team will advise the County Administrator in making the final recommendation of whether Expansions will include replacing existing fossil fuel-based systems for the entirety of the existing structure or whether only the proposed additions to the pre-existing building will need to meet the fossil fuel-based infrastructure requirements of this policy.

#### **E. Substantial Renovations of Existing Public Buildings**

1. Substantial renovations to existing public buildings occupied or otherwise, will meet the minimum requirements for LEED Silver. This shall only apply to the space that is being renovated, not the entirety of the building.
2. The Building Project Team will advise the County Administrator in making the final recommendation of whether substantial renovations will include replacing existing fossil fuel-based systems for the entirety of the existing structure or whether only the proposed renovated sections or additions will need to meet the fossil fuel-based infrastructure requirements of this policy.

#### **F. Building Project Waste Reduction**

1. At the outset of a building project, a waste management plan will be created that adheres to the following waste reduction hierarchy:
  - a. On-site Salvage and Reuse - Projects will look to salvage and reuse as much waste material on-site as possible;
  - b. Recycle - Projects will require source-separated recycling for metal, unpainted scrap drywall, wood, cardboard, and inert materials; and
  - c. Landfill or Hazardous Waste Disposal - Construction waste not suitable for on-site reuse, or that cannot be recycled, will be landfilled or disposed of in consultation with the Department of Recycling and Materials Management.
2. The Building Project Team will review and recommend approval of the waste management plan to the County Administrator.
3. The Building Project Team will review contractor-generated bi-weekly reports on adherence to the waste management plan. These reports will include amounts and types of construction waste and method of disposal.

This report will be supplied to the Director of Recycling and Materials Management and to the Director of Facilities or their designees.

## **G. Reducing Embodied Carbon**

1. Tompkins County will require a Life Cycle Assessment of greenhouse gas emissions of all building projects in comparison to a baseline of a similar project that would adhere to the New York State Building Code in effect at the time of construction.

New Construction projects should target a five percent (5%) minimum reduction in global warming potential of greenhouse gases (measured in kg CO<sub>2e</sub>) when compared with the baseline. This target can be modified by the County Administrator in consultation with the Building Project Team.

2. The County will prioritize designs that utilize low-carbon emissions or positive carbon emission building materials. This includes designing and building projects that use approved GreenNY Specifications for construction materials, and prioritizing products that have Environmental Product Declarations (EPDs). Products that will be evaluated for this include:
  - a. Carbon Steel Rebar and Structural Steel;
  - b. Flat Glass;
  - c. Mineral Wool Board Insulation;
  - d. Aggregate;
  - e. Asphalt; and
  - f. Concrete.