Commercial Energy Inspections

Montgomery County commercial energy inspections must be requested at the same time as the building inspections. Inspection requests made before 12:00 noon will be scheduled for the next working day, requests made after 12:00 noon will be scheduled within two working days. **When scheduling inspections within multi story buildings please provide contact information and floor and suite number.**

The permit, approved plans and all attached notes, comments and/or inspection reports shall be kept on the site and available for immediate review until the project has received final DPS approval. The permit must be conspicuously posted.

The following is a list of inspection types available for scheduling and the inspection code for the inspection. Additional information and/or scheduling assistance is available by contacting us directly using our Find My Inspector application or by calling 240.777.0311.

- **502 Energy Slab Inspection**
  - Insulation materials, R-Values/thickness, thermal breaks installed.

- **504 Energy Ceiling Inspection**
  - Insulation materials, R-Values/thickness, manufacturers specifications, air barrier/air sealing materials and methods. Verification of Skylight/Roof monitor U-Values, SHGC/VT.

- **506 Energy Floor or Wall Inspection**
  - Insulation materials, R-Values, manufacturer specifications, air barrier/air sealing materials and methods. Provide air leakage pressure tests when appropriate.
  - Fenestration verification with approved plans and specifications. Must show NFRC labels or manufacturer proof of U-Values, SHGC, VT and air leakage testing results.
  - Provide verification of slab/foundation insulation R-Values and thermal breaks.
  - Rooms containing fuel burning appliances where open combustion air ducts supply combustion air to open combustion space conditioning fuel-burning appliances shall be located in a room isolated from and outside of the building thermal envelope.

- **508 Energy Mechanical Inspection**
  - Duct sealing, insulation R-Values verification with approved plans/specifications. Provide HVAC equipment labeling verification with approved plans/specifications. Duct leakage test results as appropriate. Service Hot Water (SHW) systems equipment efficiency verification, piping insulation verification.

- **510 Energy Electrical Inspection**
  - Type, wattage and number of lighting fixtures. Sensors for occupancy and daylighting control locations. Motor nameplate efficiencies verified with approved plans/specifications.

- **550 Energy Final Inspection**
  - Functional testing reports for the new building systems (HVAC and Lighting) shall be transmitted to DPS prior to scheduling building final inspection. When Commissioning (Cx) is required by code, preliminary Cx report shall be provided to the building owner and, DPS must receive a letter of transmittal from the building owner acknowledging receipt of the Preliminary Cx Report **prior to scheduling building final inspection.** Within 90 days of Occupancy Approval, the building owner must be provided with the Final Cx report, System Balancing Report and all manuals associated with the building systems and operations. Please forward all required documentation to: mark.nauman@montgomerycountymd.gov and ye.jiang@montgomerycountymd.gov

**ALL ISSUED PERMITS MUST BE INSPECTED BY DPS**

Within 90 days of Occupancy Approval, the building owner must be provided with the Final Cx report, System Balancing Report and all manuals associated with the building systems and operations. Please forward all required documentation to: mark.nauman@montgomerycountymd.gov and ye.jiang@montgomerycountymd.gov
Commissioning IECC

Prior to the final mechanical and plumbing inspections, the registered design professional or approved agency shall provide evidence of mechanical systems commissioning and completion in accordance with the provisions of the IECC.

Construction document notes shall clearly indicate provisions for commissioning and completion requirements in accordance with this section and are permitted to refer to specifications for further requirements. Copies of all documentation shall be given to the owner or owner’s authorized agent and made available to DPS upon request in accordance.

The following systems are exempt:

1. Mechanical systems and service water heater systems in buildings where the total mechanical equipment capacity is less than 480,000 Btu/h (140.7 kW) cooling capacity and 600,000 Btu/h (175.8 kW) combined service water-heating and space-heating capacity.

2. Systems that serve individual dwelling units and sleeping units.

A commissioning plan shall be developed by a registered design professional or approved agency and shall include the following items:

1. A narrative description of the activities that will be accomplished during each phase of commissioning, including the personnel intended to accomplish each of the activities.

2. A listing of the specific equipment, appliances or systems to be tested and a description of the tests to be performed.

3. Functions to be tested including, but not limited to, calibrations and economizer controls.

4. Conditions under which the test will be performed. Testing shall affirm winter and summer design conditions and full outside air conditions.

5. Measurable criteria for performance.

Functional performance testing shall be conducted.

Equipment functional performance testing shall demonstrate the installation and operation of components, systems, and system-to-system interfacing relationships in accordance with approved plans and specifications such that operation, function, and maintenance serviceability for each of the commissioned systems is confirmed. Testing shall include all modes and sequence of operation, including under full-load, part-load and the following emergency conditions:

1. All modes as described in the sequence of operation.

2. Redundant or automatic back-up mode.


4. Mode of operation upon a loss of power and restoration of power.

Exception: Unitary or packaged HVAC equipment that do not require supply air economizers.

HVAC and service water-heating control systems shall be tested to document that control devices, components, equipment and systems are calibrated and adjusted and operate in accordance with approved plans and specifications. Sequences of operation shall be functionally tested to document they operate in accordance with approved plans and specifications.

Air economizers shall undergo a functional test to determine that they operate in accordance with manufacturer’s specifications.
A preliminary report of commissioning test procedures and results shall be completed and certified by
the registered design professional or approved agency and provided to the building owner or owner’s
authorized agent. The report shall be organized with mechanical and service hot water findings in
separate sections to allow independent review. The report shall be identified as “Preliminary
Commissioning Report” and shall identify:

1. Itemization of deficiencies found during testing required by this section that have not been
corrected at the time of report preparation.
2. Deferred tests that cannot be performed at the time of report preparation because of climatic
conditions.
3. Climatic conditions required for performance of the deferred tests.

Buildings, or portions thereof, shall not be considered acceptable for a final inspection until DPS
has received a letter of transmittal from the building owner acknowledging that the building owner
or owner’s authorized agent has received the Preliminary Commissioning Report. DPS shall be
permitted to require that a copy of the Preliminary Commissioning Report.

The construction documents shall specify that the required commissioning documents be provided to
the building owner or owner’s authorized agent within 90 days of the date of receipt of the certificate of
occupancy.

A written report of systems balancing describing the activities and measurements completed in
accordance with Section C408.2.2.

A report of test procedures and results identified as “Final Commissioning Report” shall be delivered to
the building owner or owner’s authorized agent. The report shall be organized with mechanical system
and service hot water system findings in separate sections to allow independent review. The report shall
include the following:

1. Results of functional performance tests.
2. Disposition of deficiencies found during testing, including details of corrective measures used
or proposed.
3. Functional performance test procedures used during the commissioning process including
measurable criteria for test acceptance, provided herein for repeatability.

Exception: Deferred tests that cannot be performed at the time of report preparation due to
climatic conditions.

C408.3 Lighting system functional testing. Controls for automatic lighting systems shall comply with
this section.

C408.3.2 Documentation requirements. The construction documents shall specify
that documents certifying that the installed lighting controls meet documented performance criteria
of Section C405 are to be provided to the building owner within 90 days from the date of receipt of
the certificate of occupancy.
Commissioning IgCC - Includes all the requirements under the IECC and:

**Preoccupancy report requirement.** The approved commissioning agency shall keep records of the commissioning required by the IgCC. The approved agency shall furnish commissioning reports to the owner and the registered design professional in responsible charge and, upon request, to DPS. Reports shall indicate that work was or was not completed in conformance to approved construction documents. Discrepancies shall be brought to the immediate attention of the contractor for correction. Where discrepancies are not corrected, they shall be brought to the attention of the owner, DPS and to the registered design professional in responsible charge prior to the completion of that phase of the work. Prior to the issuance of a Certificate of Occupancy, a final commissioning report shall be submitted to and accepted by DPS.

**Post-occupancy report requirement.** Post-occupancy commissioning shall occur as specified in the applicable sections of this code. A post-occupancy commissioning report shall be provided to the owner within 30 months after the Certificate of Occupancy is issued for the project and shall be made available to DPS upon request.

**Commercial Demolition Permits**

*Chapter/Section 1006 of the IgCC-2012 applies:*

Where buildings, structures or portions thereof are deconstructed or demolished, a minimum of 50% of materials shall be diverted from landfills. A waste management plan shall be developed and submitted with your Demolition Permit Application which outlines procedures for deconstruction, and that documents the total materials in building, structures or portions thereof to be deconstructed or demolished and the materials to be diverted. The plan shall comply with the following:

- The location on the site for collection, separation and storage of recyclable waste shall be indicated.
- Materials to be diverted from disposal by efficient usage, recycling, reuse, manufacturer’s reclamation, or salvage for future use, donation or sale shall be specified.
- The percentage of materials to be diverted shall be specified and shall be calculated by weight or volume, but not both.
- Receipts or other documentation related to diversion shall be maintained through the course of demolition. Evidence of diversion shall be made to DPS upon request.

Deconstruction/Demolition waste materials shall not include land clearing debris, excavated soils/fill, topsoil, sand/gravel, stumps, rocks, and vegetation.

In conjunction with your Demolition Permit Activities; A building site waste management plan shall be developed and implemented to divert not less than 75% of the land-clearing debris and excavated soils from disposal. Land-clearing debris includes rock, trees, stumps and associated vegetation. The plan shall include provisions which address all of the following:

- Materials to be diverted from disposal by efficient usage, recycling or reuse on the building site shall be specified.
• Diverted materials shall not be sent to sites that are agricultural land, flood hazard areas or greenfield sites where development is prohibited except where approved by the AHJ.
• The effective destruction and disposal of invasive plant species.
• Where contaminated soils are removed, the methods of removal and location where the soils are to be treated and disposed.
• The amount of materials to be diverted shall be specified and shall be calculated by weight or volume, but not both.
• Where the site is located in a federal or state designated quarantine zone for invasive insect species, building site vegetation management shall comply with the quarantine rules.
• Receipts or other documentation related to diversion shall be maintained through the course of construction.

An approved Commissioning agency can either be a “registered design professional” meeting the following requirements:

1. Must be independent of the work of design and construction of this project (though may be an employee of the project design firm).
2. Must not be an employee of, or contracted through, a contractor or construction manager holding construction contracts of this project.
3. Must have prior experience commissioning a minimum of two (2) projects of similar scope.
4. May be an employee or consultant of the owner of this project meeting the above requirements.

- OR –

POSSESS AT LEAST ONE OF THE FOLLOWING CREDENTIALS:

Must be a Certified Commissioning Professional certified by at least one of the following commissioning provider certification agencies:

• Building Commissioning Association (BCA), Certified Commissioning Professional (CCP)
• Building Commissioning Certification Board (BCCB)- Certified Commissioning Professional -CCP
• ASHRAE, Commissioning Process Management Professional (CPMP)
• ASHRAE, Building Commissioning Professional Certification (BCxP)
• AABC Commissioning Group, ACG, Commissioning Authority (CxA)
• National Environmental Balancing Bureau (NEBB), Building Systems Commissioning (BSC)
• Association of Energy Engineers (AEE), Certified Building Commissioning Professional (CBCP)
• University of Wisconsin -Accredited Commissioning Process Manager (CxM)
• University of Wisconsin - Accredited Commissioning Process Authority Professional (CxAP or CAP)
• University of Wisconsin - Accredited Green Commissioning Process Provider (GCxP or GCP)
The following is a list of agencies recognized as meeting the minimum credentialing requirements.

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<td>Sustainable Building Partners (SBP)</td>
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