



Willistown Township enforces the following building codes:

- 2009 International Building Code (IBC)
- 2009 International Residential Code (IRC)
- 2009 International Plumbing Code (IPC)
- 2009 International Mechanical Code (IMC)
- 2009 International Electrical Code (IEC)
- 2008 National Electric Code (NEC)
- 2009 International Energy Conservation Code (IECC)
- 2009 International Fuel Gas Code (IFGC)
- 2009 International Property Maintenance Code (IPMC)
- 2009 International Existing Building Code (IEBC)
- 2009 International Fire Code (IFC)

Per the PA Uniform Construction Code (UCC) and all the listed International Codes all submissions must be complete to process. A complete application includes all the required information as outlined in each of the minimum construction requirements as stated in each of the adopted codes. The codes also list the minimum number of inspections required in each of the individual codes in the administration chapter, typically the first chapter.

Per the Willistown Code of Ordinances each and every building permit, either IBC or IRC requires a Zoning Permit to be issued prior to the issuance of a building permit. The Municipal Planning Code (MPC) regulates a maximum time for acceptance or rejection of a Zoning Permit. All Zoning Permits are submitted to the Zoning Officer for review. The Willistown Building Department has a maximum time limit under the PA UCC of fifteen (15) days to accept or reject a complete application, in writing, for a residential permit. Commercial permits are required to be accepted or rejected, in writing, for a complete application within thirty (30) days per the PA UCC. The responsibility to submit a complete application is of paramount importance.

In addition to the building permit application, Willistown also may require Soil and Erosion Control Plans, prepared by a licensed design professional, submitted to the Zoning Officer which are reviewed by Willistown's consulting engineering firm.

If such plans are required as part of the Zoning application, the building plans will be reviewed per the PA UCC requirements as well as the ICC requirements but will not be issued until the Zoning Permit has been approved.

- Per the State Highway Law (P. L. 1242, No. 428), a Highway Occupancy Permit must be issued before access to a state highway is permitted. The permit process is accomplished through the PA Department of Transportation.
- Lateral sanitary connections to the Willistown Sewer System, both gravity and low-pressure systems, are regulated and permitted **prior** to installation and use. Sanitary systems on private property are permitted, regulated and inspected by the Chester County Department of Health.
- Willistown Township does not regulate commercial boiler systems, underground propane tank installations, or commercial elevator conveying systems. All permitting and inspections are under the PA Department of Licenses and Inspections.
- All establishments that serve food to the public are regulated by the applicable building codes and are subject to the rules and regulations of the Chester County Department of Health. Willistown highly encourages any application that may fall under the Chester County Health Department rules submit the respective application to Chester County.
- The Department of Justice in Washington D. C. is charged with the oversight of the American for Disabilities Act of 1990 and the subsequent ADA Amendment Act of 2008 (ADAAA), most commonly known as ADA. All commercial building applications (IBC) and certain types of multi-family construction are required to meet a set of minimum ADA standards in the IBC and ICC/ANSI A117.1 2003. All applications submitted that are within the standards must be submitted indicating compliance with ADAAA. At present all non-residential plans, save electrical, are reviewed and inspected by our engineering consultant and all consulting costs are billed through Willistown Township at the engineering consultant's current costs.
- **Accessibility Plans** should include the following specifications, drawings and details
  1. Complete signed and sealed architectural plans and material specifications of all work. Details and plans drawn to scale with sufficient clarity, details and dimensions to show the nature and extent of the work proposed.
  2. A site plan including the following information:
    - a. Size and location of all new construction and all existing structures on the site.
    - b. Location of any recreational facilities (i.e., pool, tennis courts, etc).
    - c. Established street grades and proposed finished grade.
    - d. Accessible parking, other locations of public access to the facility, accessible exterior routes and locations of accessible entrances.
  3. Architectural plans and specifications to include:
    - a. Description of uses and the proposed occupancy group(s) for all portions of the building. The design approach for mixed-uses (as applicable).
    - b. Fully dimensioned drawings to determine areas and building height.
    - c. Adequate details and dimensions to evaluate accessible means of egress, including occupant loads for each floor, exit arrangement and sizes, corridors, doors, stairs, ramps, handrails, areas of refuge, etc.

- d. Adequate details and dimensions to evaluate the accessible route to areas required to be accessible, including corridors, doors, protruding objects, maneuvering clearances, clear floor space at fixtures and controls, etc.
- e. Accessibility provisions including but not limited to access to services, seating, dining, listening systems, accessible fixtures, elevators, work surfaces, etc.
- f. Accessible plumbing facilities and details.
- g. Visual and tactile signage provided.
- h. Details of required fire protection systems and user controls.

**Plan submittal requirements:**

- All IBC plans must bear the seal of the appropriate licensed design professional.
  - All IBC plans must have a Letter of Transmittal accompanying the application listing the quantity of each item, the date submitted and a brief description of the item. Each page of the plans must be listed together with the current revision listed. This includes electrical plans as they are reviewed by Willistown's third-party consultant.
  - Two sets of plans are required for review. One will be returned to the applicant, which is the plan of record that must be on site. Regardless of an owner's requirement for as-built plans, Willistown requires either a copy of the as-builts or sketches for each change should they occur. This is a condition for the final occupancy permit. The as-builts may be submitted in digital format.
  - All IBC regulated plans must indicate those requirements in Chapter 1 of the 2009 IBC relating to construction documents. Where special conditions exist, the building code official may require additional construction documents to be prepared by a registered design professional.
  - **The Mechanical Plan** requirements include the following specifications, drawings and details:
    1. Complete signed and sealed plans and specifications of all heating, ventilating and air conditioning work.
    2. Complete information on all the mechanical equipment and materials including listing, labeling, installation and compliance with referenced material standards.
    3. Details on the HVAC equipment including the equipment capacity (Btu/h input), controls, equipment location, access and clearances.
    4. A ventilation schedule indicating the outdoor air rates, the estimated occupant load/1,000 sq/ft, the floor area of the space and the amount of outdoor air supplied to each space. If 2009 IMC requirements are used, complete calculations clearly denoting equations and factors must be provided.
    5. The location of all outdoor air intakes with respect to sources of contaminants.
    6. Duct construction and installation methods, flame spread/smoke development ratings of materials, flexible air duct and connector listing, sealing of duct joints, seams and connections and duct support spacing.
    7. Condensate disposal, routing of piping and auxiliary and secondary drainage systems.

8. Required exhaust systems, routing of ducts and termination to the exterior.
9. Complete details of all Type I and II kitchen hoods, grease duct construction and velocity, clearance to combustibles and fire suppression system.
10. Details of all duct penetrations through fire-resistance rated assemblies including locations for all fire dampers, smoke dampers and ceiling radiation dampers along with applicable fire protection ratings and labeling requirements.
11. Method of supplying combustion air to all fuel fired appliances, the location and size of openings and criteria used to size the openings.
12. Details on the vents used to vent the products of combustion from all fuel burning appliances including the type of venting system, the sizing criteria required for the type of vent and the routing of the vent.
13. Boiler and water heater equipment and piping details including safety controls, gauges, valves and distribution piping layout.
14. Details on the type and quantity of refrigerant, calculations indicating the quantity of refrigerant and refrigerant piping material and the type of connections.
15. Complete details on the gas piping system including materials, installation, valve locations, sizing criteria and calculations (i.e., the longest run of piping, the pressure, the pressure drop and applicable gas pipe sizing Table(s) in the IFGC).

- The **energy plans** will show the following:

Residential Energy Plan Reviews are based on the 2009 ICC *International Energy Conservation Code*® (IECC®). Commercial Energy Plan Reviews are based on Chapter 5 of the IECC or the referenced edition of ASHRAE 90.1 unless otherwise directed. In order to perform a thorough Energy Plan Review, the following specifications, drawings and details will be submitted:

1. Complete signed and sealed plans and specifications as indicated below.
2. **Envelope-Architectural** plans and specifications to include:
  - a. Description of uses and the proposed occupancy group(s) for all portions of the building.
  - b. Thermal performance of envelope components.
  - c. Fenestration performance details (U-factor, SC, SHGC, VLT, air leakage rates, etc.).
  - d. Fully dimensioned drawings to determine gross and net areas of all envelope components.
  - e. Details of vapor barrier and insulation installation, and air sealing methods.
  - f. REScheck, COMcheck, or ENVSTD output (where applicable).
  - g. Design conditions (interior and exterior) consistent with local climate.
3. **Electrical**-Complete plans and specifications of all electrical power and lighting work including:
  - a. Riser diagram(s) of the distribution system indicating:
    1. Check metering provisions for individual dwelling units.
    2. Subdivision of feeders by end use: 1) Lighting, 2) HVAC, 3) SWH and systems over 20 kW.

- b. Lighting fixture schedule(s) depicting location, fixture lamps, ballasts, ballast specifications, fixture input watts, fixture wiring methods, powerfactor, etc.
- c. Lighting plan(s) for building exteriors including total exterior Connected Lighting Power (CLP).
- d. Lighting and power floor plans for building interiors including total interior CLP.
- e. REScheck, COMcheck, or LTGSTD output (where applicable).
- f. Interior and exterior means of lighting control.
- g. Electric motor schedule including type, HP and efficiencies.

**4. Mechanical Plans**-Complete plans and specifications of all mechanical work including:

- a. Equipment type, capacity (Btuh) and efficiency (peak and part-load).
- b. System design airflow rates (cfm).
- c. Details of equipment/system sizing.
- d. System and/or zone control capabilities including terminal device schedule.
- e. Provisions for automatic setback/shutdown.
- f. Indicate intentions or plans for systems commissioning.
- g. Energy consumed by fans and pumps.
- h. Economizers (air or water) including provisions for integrated control.
- i. Duct construction and system static pressure(s), including provisions for sealing.
- j. Duct and/or hydronic-piping lining and insulation materials.
- k. Provisions for air and/or hydronic system balancing.
- l. Boiler and water heater equipment and piping details, safety controls and distribution piping layout.

**5. Service water heating (SWH)**-Complete SWH specifications including:

- a. SWH equipment data including: type, capacity and efficiency.
- b. SWH pipe insulation, thickness, conductivity and vapor retarder (where appropriate).
- c. Water conservation requirements.
- d. Energy conservation measures for swimming pools (where applicable).

• **Plumbing Plans** should have the following specifications, drawings and detail as follows:

- 1. Complete signed and sealed (as required by applicable laws) plans and specifications of all plumbing work.
- 2. Plumbing fixture specifications including identification of the applicable referenced material standards and the maximum flow rates for the plumbing fixtures.
- 3. The basis for the number of plumbing fixtures provided including the occupant load used, the applicable occupancy group(s) and the fixture rate(s).
- 4. Dimensions for bathrooms and plumbing fixture locations along with the wall and floor surface materials to be installed.
- 5. Site plan which indicates the routing of the sanitary, storm and water service with the burial depths for all sewers and water service.
- 6. Water distribution system sizing criteria and calculations.

7. Water supply and distribution piping plan showing the incoming water supply, distribution piping, pipe size, the location of water hammer arrestors and the location of all valves.
  8. The location of all backflow preventers, the type of backflow preventers provided for each piece of equipment or outlet and the specified material standards referenced in the code.
  9. Drainage system piping plan showing the layout of all piping, of plumbing fixtures and the location of cleanouts.
  10. Riser diagram(s) of the drain, waste and vent piping including the building drain, all horizontal branches and the connections and layout of all fixtures. Pipe sizes, direction of flow, grade of horizontal piping, drainage fixture loads and the method of venting all plumbing fixtures.
  11. The location of all indirect waste connections, standpipes, grease traps and separators.
  12. Complete water heater details, temperature and pressure relief valve discharge, discharge piping and pan details along with the method of supplying tempered water to required fixtures.
  13. Complete details of the method of draining storm water from the roof including calculations to verify pipe and/or gutter sizes, the location of all roof drains and the roof area that each group of roof drains is intended to serve and an independent secondary roof drainage system.
  14. Piping material specifications to verify compliance with the referenced material standards for all sanitary, storm and potable water piping (e.g., ASTM B88 for copper pipe), the type of joints and connections for all piping, the pipe hanger support spacing and details of anchorage and bracing.
- **Electrical Plan** Reviews are based on the current edition of the *National Electrical Code*® (2008) as referenced by the *International Building Code* , the following specifications, drawings and details should be submitted:
    1. Complete signed and sealed plans and specifications of all electrical work.
    2. Labeling criteria of all electrical equipment.
    3. Lighting floor plan including fixture locations, electrical circuits, circuit numbers, and panel locations.
    4. Power floor plans including electrical circuits, wiring sizes, panel locations, working clearances and electrical room egress, disconnect switches, receptacle locations including GFCI locations and required arc fault protected circuits.
    5. Exit sign/means of egress lighting location and power supply.
    6. Single line diagram and panelboard schedule including AIC rating and available fault current and the calculated service load with a load distribution schedule.
    7. Lighting fixture schedule.
    8. Symbol schedule and diagrams.
    9. Details showing the grounding electrodes, bonding of the grounding electrode system and the size of all bonding and grounding electrode conductors for the service.
    10. Specifications to include requirements for:
      - a. Wire, cable, raceway and conduit with fittings.
      - b. Electrical boxes, connections, fittings and installation.
      - c. Electrical wiring devices.

- d. Circuit and motor disconnects, and motor control centers.
  - g. Hangers and supporting devices.
  - f. Electrical identification.
  - g. Service entrance and details.
  - h. Overcurrent protection and grounding.
  - i. Switchboard and panelboards.
  - j. Transformers.
  - k. Lighting fixtures.
- **Sprinkler Plan Reviews** are based on the specified edition of the applicable NFPA 13, 13D or 13R standard as referenced by the *2009 International Building Code*® (IBC®). The following items should be submitted:
    1. Complete signed and sealed (as required by applicable laws) plans and specifications for the sprinkler system and related equipment.
    2. Description and locations of uses within the building and corresponding occupancy class for each room or area. Location and size of all concealed spaces, closets, attics and bathrooms. Details of occupancies utilized for high-piled storage including commodity types and storage arrangement.
    3. Design details in accordance with the appropriate sprinkler system standard (i.e., NFPA 13, 13D, 13R) as referenced by the IBC and all other applicable design standards (NFPA 14, NFPA 20, NFPA 24, etc.)
    4. Design calculations indicating the discharge requirements of the sprinkler system including the design density, area of application, and inside/outside hose stream demand for each occupancy.
    5. Results of a current flow test indicating the location, date and witness of the test, site plan indicating the overall water supply source and arrangement.
    6. Working drawings indicating all pipe sizes and the spacing between branch lines and sprinklers on the branch line. Hydraulic reference points on the drawings correlated with the hydraulic calculations.
    7. Make, model, type, temperature rating and k-factor for all sprinklers. Total number of sprinklers on each floor and for each system.
    8. Full height section views and location of all interior partitions, fire barriers, fire partitions, fire walls and horizontal assemblies.
    9. Material specifications and equipment specifications for all sprinkler system components including type of sprinkler pipe(s), pipe fittings, control valves, check valves, dry pipe valves, test connections, pipe hangers, backflow preventers, fire department connections, and alarm bells. All materials used should be verified that they are installed in accordance with their listing.

**Residential Submission Notes:**

- All residential new construction plans and documents will be prepared by a registered design professional.
- Two sets of plans are required for submission. One set will be returned and be considered the site plan of record.

- All residential plans will have the required information upon which to properly review for compliance with the adopted codes. This includes:
  - a. Plumbing
  - b. Mechanical
  - c. Electrical
  - d. Energy
- The plans will indicate compliance with NFPA 13D or 2009 IRC section 2904 for sprinkler protection. The manufacturer's installation instructions will be submitted with the building permit application.
- The IRC plans will indicate the heating and or cooling appliances, their location, method of delivery and indicating compliance with ACCA Manual S for sizing calculated in accordance with ACCA Manual J or an approved heating and cooling calculation methodology.
- The plans will indicate the 2009 IRC wall bracing requirements in section R602 together with the floor framing requirements of section R502.2. The roof framing plans will show and indicate compliance with section R802.
- Willistown requires double fire-resistant drywall (GWB) between the dwelling unit and attached garages per previous code adoption ordinance.

#### General Notes:

- All home improvement contractors in PA must be registered with PA attorney General. Home Builders are not Home Improvement contractors thus; they must register with Willistown Township.
- Commercial Contractors are not Home Improvement contractors thus; they must register with Willistown Township.
- All subcontractors performing work are contractors thus; must register with Willistown Township.
- Under PA Worker's Compensation Law employers are required to insure their workers in the workplace and municipalities have the responsibility to require proof of worker compensation insurance. Therefore, all contractors and subcontractors having employees must provide proof from their carrier to Willistown Township.
- Each and every permit application must bear an original owner signature. Faxed copies are not acceptable.
- Willistown will make every effort to accommodate the scheduling of inspections. Willistown is aware that field and personnel changes occur. One days notice is required to schedule an inspection under normal conditions. The more notice that Willistown receives to schedule the greater the probability that your time request be successful.
- IBC inspections, as well as plan review, are performed by Willistown Township's consultant(s). Once the IBC permit(s) are issued all scheduling will be done with the Designated Consultant.
- The Following links may be helpful in the application process:

<http://www.attorneygeneral.gov/hic.aspx>  
<http://www.iccsafe.org/Pages/default.aspx>  
<http://www.dli.state.pa.us>

- When requesting any residential inspection please contact Theresa Simmons at 610-647-5300 ext. 250