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Residential Plan Submittal Guide

The provisions of the residential plan submittal guide shall apply to the construction, addition, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, removal and demolition of one- and two-family dwellings and multiple single family dwellings (Townhouses) not more than three stories in height with a separate means of egress and their accessory structures.

This guide was prepared to help you submit the information necessary to process your application for plans examination and building permit. Your application and construction documents will be evaluated for compliance with the Pennsylvania Uniform Construction Code Act 45 of 1999, the most current edition of the International Residential Code as adopted by the PA State Legislature and the Loyalsock Township Zoning Ordinance.

The requirements presented in this guide are not all inclusive of the code requirements. The Building Code Official may request additional information to ascertain compliance with the building code and zoning ordinance to complete the plan review process.

Residential construction documents are not required to be prepared by a registered design professional. Where special or unusual conditions exist, the Building Code Official is authorized to require construction documents to be prepared by a registered design professional.

Building construction plans shall be drawn to scale and the scale must be noted on the plans. The recommended minimum scale is $\frac{1}{4}$ " = 1"-0"

CONSTRUCTION DOCUMENT REQUIREMENTS

General Requirements:

- 1. One complete set of construction documents shall be submitted along with one set in pdf form with the construction application for plans examination and building permit. A complete set of construction documents shall consist of site plan, building construction plans, sewage permit documents for on lot sewage systems or approval of sewer/water hook-up from the Williamsport Sewer/Water Authority, Pennsylvania Departments of Transportation (PENNDOT) Highway Occupancy Permit when accessing the property from a state road.
- 2. Provide as much information on construction and MEP's that is necessary to do a complete plan review in compliance with the code.
- 3. Provide sprinkler details if plans pertain to townhouses.

C) Foundation:

- 1. Footing width and thickness.
- 2. Concrete PSI for footings, walls interior concrete floors, concrete slabs and concrete steps exposed to weather and concrete garage floors.
- 3. Maximum foundation wall height.
- 4. Foundation wall thickness.
- 5. Maximum backfill height.
- 6. Reinforcement size and spacing when code required.
- 7. Minimum foundation parging thickness and type of foundation wall dampproofing or type of waterproofing.
- 8. Foundation wall perimeter drain details. (Required for all basements and crawl spaces over 30" high)
- 9. Size and type of wood for foundation wall sill plates.
- 10. Sill plate anchor type and spacing.
- 11. Provide manufacturers design drawings for Pre-Fab foundation walls.
- 12. Locations and net ventilation area of crawl space foundation vents.
- 13. Crawl space access location and net opening size.
- 14. Crawl space ground surface finish details.
- 15. Depth from finish grade to bottom of footing (Min. 42").

- 16. Concrete pier diameter, size & depth from finish grade to bottom of pier.
- 17. Footer size and thickness for girder support columns.

D) Floors:

- 1. Floor joist wood species and grade.
- 2. Floor joist size and on center spacing.
- 3. Cantilevered floor joist construction details.
- 4. Joists under bearing walls construction details.
- 5. Girder wood species, grade, size, and on center spacing of girder support columns.
- 6. Construction details for floor openings.
- 7. Manufacturer's installation instruction and span tables for floor trusses, I-joists, laminated beams, etc.
- 8. Draftstopping type and location when required by the code.
- 9. Panel sheathing grade and thickness
- 10. Concrete floor minimum thickness and PSI
- 11. Concrete floor minimum base course depth.
- 12. Concrete floor vapor barrier retarded mil thickness.
- 13. Garage floor must slope toward vehicle entry door and be lower than the dwelling unit by a minimum of 4".

- E) Walls, exterior and interior:
 - 1. Wood stud grade and species.
 - 2. Stud size, height and on center spacing.
 - 3. Header sizes for exterior and interior wall openings.
 - 4. Number of jack studs supporting each end of headers.
 - 5. Fireblocking locations or note referencing such.
 - 6. Panel sheathing grade and thickness.
 - 7. Type of exterior wall sheathing paper when required by the code.
 - 8. Type of exterior wall siding.
 - 9. Type of flashing and locations or note referencing such.
 - 10. Provide stone and masonry veneer details if applicable.
 - 11. Veneer ties: gage and spacing.
 - 12. Type, thickness, size and location of interior wall finish.
 - 13. Detail type & location of required wall bracing.

- F) Roof & Ceiling Construction:
- 1. Wood species and grade.
- 2. Rafter size and on center spacing.
- 3. Ceiling joist size and on center spacing.
- 4. Frame detail drawings for openings in roof and or ceiling.
- 5. Attic access location and net size.
- 6. Wood trusses: Provide manufactures design drawings and specifications at plan review or frame inspection.
- 7. Provide design specifications for engineered wood products.
- 8. Ridge board size.
- 9. Roof/attic ventilation details.
- 10. Roof sheathing grade and thickness.
- 11. Felt paper installation details if required.
- 12. Ice barrier installation details (Zip sheathing requires ice barrier).
- 13. Type of roof covering materials.
- 14. Flashing type, thickness and location or note such.

- H) Chimneys and Fireplaces:
 - 1. Masonry chimney construction details.
 - 2. Masonry fireplace construction details (Copy from code book acceptable).
 - 3. Exterior air intake location and size.
 - 4. Exterior air outlet location.
 - 5. Provide manufacturers installation instructions and specifications for factory built fireplaces, stoves and chimneys.

- I) Energy Efficiency Requirements:
 - 1. Design Criteria: Specify which path of compliance you are using; Chapter 11 of the IRC, IECC, PA Alternative or ResCheck.
 - 2. Envelope component materials: Insulation R-Values, maximum required fenestration U-factor values.
 - 3. Heating and air conditioning appliance and equipment minimum efficiency requirements. Equipment sizing and controls.
 - 4. Water heating appliance and equipment minimum efficiency requirements.
 - 5. Typically the insulation type, location and R-value should be noted on a cross section drawing.
 - 6. Note air leakage testing to meet code section N1102.4.1.2 of the 2015 IRC on plans. Also duct testing when code required by Section 1103.3.3

J) Mechanical:

- 1. All appliances shall bear the label of an approved testing agency.
- 2. Size of working area for appliance repair or service. Required light fixture and receptacle outlet in the work area.
- 3. Height above floor for appliances having ignition source as needed.
- 4. Clearances from unprotected combustibles.
- 5. Condensate disposal and drain pipe material and size.
- 6. Exhaust for dryer, range and bath: size and termination location (Bath exhaust must terminate <u>away</u> from any vented soffit area).
- 7. Gauge and size of metal air ducts.
- 8. Duct insulation R-value.
- 9. Return air locations.
- 10. Combustion air requirements.
- 11. Chimney type, size and termination location.
- 12. Heating and cooling load calculation and equipment information must be supplied with plans or noted on plans.

K) Fuel Gas:

- 1. Location of appliances within the dwelling.
- 2. Air requirements for combustion, ventilation and dilution air.
- 3. Type of pipe material and size.
- 4. Pipe support requirements.
- 5. Venting details.
- 6. Note on plans whether natural or LP gas will be used.

L) Plumbing:

- 1. Proposed water service entry point and depth below grade.
- 2. Proposed sewer pipe entry point and depth from grade.
- 3. Pipe supports for material being installed.
- 4. Water heater size and location.
- 5. Water supply and distribution system design.
- 6. Drain, waste and vent pipe sizing and riser diagram. (Isometric drawing preferred).
- 7. Backwater valves as required.
- 8. Provide details on manufacturers specifications for individual shower, combination tub and shower, bathtubs and whirlpool control valves as meeting code requirements or note such on plans..
- 9. Provide manufactures specifications for expansion tanks, pressure reducing valves and backflow prevention devices as required by code or note such on plans.

M) Electrical:

- 1. Proposed service size. Specify overhead or underground service.
- 2. Floor plans showing location of the required lighting, receptacle outlets, switches, smoke alarms, circuit number, wire size, amp. size, etc. See the next two pages for samples.
- 3. Note locations of GFCI and Arc Fault circuits.

G) Decks:

- 1. Footings: diameter or size of concrete piers and footings when applicable. Minimum depth below finished grade is 42".
- 2. Height of deck floor from finished grade.
- 3. Lumber species and grade.
- 4. Floor joist size and on center spacing.
- 5. Size of girders/beams if applicable.
- 6. On center spacing of deck support columns.
- 7. Size of ledger board attached to dwelling.
- 8. Type, diameter, length and on center spacing of bolts used to attach ledger board to dwelling.
- 9. Rim board shall be doubled if supported at end.
- 10. Type of flashing between deck and dwelling.
- 11. Minimum guardrail height from deck floor and/or built in bench.
- 12. Maximum spacing between guardrail or stair handrail balusters or other ornamental closures.
- 13. Stair location, riser height and tread depth.
- 14. Stair handrail location, height and grip size.
- 15. Structural metal hanger/connector types and locations.
- 16. Deck floor: type of material and thickness.

17. If roof over deck or a porch is built, use this page plus "walls" and "roof-ceiling" pages as needed.