

## BOROUGH OF FOX CHAPEL

### MINIMUM REQUIREMENTS FOR BUILDING PERMIT CONSTRUCTION DRAWINGS & CHECKLIST

#### GENERAL REQUIREMENTS

The application for building permit must be accompanied by **the completed checklist, the site plan/survey and two (2) sets of construction drawings (three (3) sets for commercial applications)**. The construction drawings for new construction, alteration, repairs, expansion, addition or modification to buildings or structures shall be prepared by an architect or structural engineer who is registered in the Commonwealth of Pennsylvania. The construction drawings shall include the name and address of the registered design professional and shall be signed, sealed and dated by the registered design professional. (The Building Code Official may waive the requirement for a registered design professional if it is determined that the proposed work is minor in nature.) The construction drawings shall be drawn to scale and shall be of sufficient clarity to indicate the nature and extent of the work proposed and shall show in detail that the work will conform with the provisions of the Commonwealth of Pennsylvania Uniform Construction Code and Borough of Fox Chapel Ordinance No. 639.

#### CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

Ground Snow Load	Wind Speed (mph)	Seismic Design Category	SUBJECT TO DAMAGE FROM				Winter Design Temp.	Ice Shield Under-Layment Required	Flood Hazards	Climate Zone		Radon Control Required
			Weathering	Frost Line Depth	Termite	Decay				Check FEMA Maps	PA Alternative Central	
25 PSF	115	C	Severe	36"	Mod. To Heavy	Slight To Mod	0° F	Yes	Check FEMA Maps	IRC 5A	PA Alternative Central	Yes

**This design criteria must be noted on the first page of the construction drawings and all buildings and structures must be designed in accordance with this criterion.**

#### STRUCTURAL DESIGN CRITERIA

The design criteria, both **dead load** and **live load**, must be noted on the first page of the construction drawings for the following structural members:

- Decks (floor joist)
- Exterior balconies (floor joist)
- Sleeping rooms and attics accessed by a fixed stairway (floor joist)
- Attics with storage (ceiling joist)
- Attics without storage (ceiling joist)
- Rooms other than sleeping rooms (floor joist)
- Roof rafters (snow load or live load, whichever is greater)

### FRAMING LUMBER

The species, grade, size, spacing and span for all framing lumber (floor joist, ceiling joist, roof rafters, headers, girders, walls, etc.) must be marked on the drawings. The minimum bearing requirements for all framing lumber bearing on wood, metal, masonry or concrete must be marked on drawings.

### MANUFACTURED WOOD PRODUCTS

The manufacturer of the prefabricated wood components (roof trusses, floor trusses, glue-laminated beams, composite structural panels, etc.) must submit detailed construction drawings that have been prepared, signed and sealed by a professional structural engineer who is registered in the Commonwealth of Pennsylvania.

### PLUMBING CONSTRUCTION DRAWING

The Allegheny County Health Department (ACHD) will do the plumbing, **including residential fire sprinkler systems**, plan review and approval/denial for the Borough. They will also conduct the required inspections in conjunction with the Borough of Fox Chapel. Drawings should be submitted directly to ACHD in the format required by them. NOTICE: The requirements for building sewers (“laterals”) in Fox Chapel Borough are different from those of Allegheny County Health Department. **Sanitary sewer lateral lines and cleanout locations shall be shown on all drawings and/or site plans submitted.** PLUMBERS ARE REQUIRED TO CONTACT THE BOROUGH’S SANITARY SEWER SUPERINTENDENT AT 412/963-1100 EXT. 126 BEFORE STARTING ANY BUILDING SEWER WORK IN THE BOROUGH. All building sewers must be inspected and approved by both the ACHD and the Borough.

### ELECTRICAL CONSTRUCTION DRAWINGS

The Borough requires the use of a third-party agency that is certified by the Commonwealth of Pennsylvania Department of Labor & Industry. The third-party agency will do the electrical plan review approval/denial and the required inspections. Drawings should be submitted directly to the third-party agency in the format required by them.

### CONSTRUCTION DRAWING REVIEW CHECKLIST

**The checklist on the following pages must be completed and submitted with the construction drawings.** All information must be filled in, checked (✓) to indicate that it is included or marked not applicable (N/A). An explanation for any information not marked as included or marked N/A must be given in Section XII – Comments at the end of the checklist. All explanations in the comment section must be correlated to its section number (i.e., Section II, 5. would refer to footing depth below grade). The drawing page number on which the information is noted must also be identified. This checklist is designed to help you develop an acceptable set of drawings and is not meant to be all inclusive. The building code official may require additional information.

Owners Name: \_\_\_\_\_ Telephone: \_\_\_\_\_

Project Address: \_\_\_\_\_

Agent Name: \_\_\_\_\_ Telephone: \_\_\_\_\_

Design Professional  
or other contact  
regarding information  
on construction  
drawings: \_\_\_\_\_ Telephone: \_\_\_\_\_

Section I - Building Planning

✓ or N/A	Drawing Page No.	
_____	_____	1. Two (2) sets of construction drawings (3 for commercial) prepared and sealed by registered design professional and site plan/survey
_____	_____	2. Scale marked on drawings
_____	_____	3. Climatic and geographic design criteria
_____	_____	4. Structural design criteria
_____	_____	5. Framing lumber; species, grade, size, spacing and span
_____	_____	6. Framing lumber; minimum bearing requirements
_____	_____	7. Manufactured wood products engineer seal
_____	_____	8. Use designation for all rooms/spaces
_____	_____	9. Dimensions for all rooms/spaces
_____	_____	10. Ceiling heights for all rooms/spaces
_____	_____	11. Typical building cross section
_____	_____	12. Elevation drawings including indication of finished grade; front, sides and rear
_____	_____	13. Windows and doors; size type and location
_____	_____	14. Hazardous glazing locations (safety glazing)
_____	_____	15. Window fall prevention devices; applies to open able windows where bottom of opening is > 72" above grade and bottom of opening is < 24" above finished floor
_____	_____	16. Skylight glazing material
_____	_____	17. 1 3/8" solid core door or 20-minute fire-rated door between garage and living space
_____	_____	18. 5/8" Type X gypsum board or equivalent separation between garage and habitable space
_____	_____	19. Emergency escape and rescue opening from basements
_____	_____	20. Emergency escape and rescue opening from every sleeping room
_____	_____	21. Emergency escape and rescue opening net clear opening
_____	_____	22. Emergency escape and rescue opening net clear height and width

✓ or N/A	Drawing Page No.	
_____	_____	23. Emergency escape and rescue opening sill height above finished floor
_____	_____	24. Emergency escape and rescue opening sill height above finished grade
_____	_____	25. Width of hallways
_____	_____	26. Required exit door; width, height and type
_____	_____	27. Floor and stair landings; size and location
_____	_____	28. Width of stairways
_____	_____	29. Stairs; riser height, tread depth and nosing projection
_____	_____	30. Stair headroom
_____	_____	31. Stair closed or open riser (if open, give dimension of opening)
_____	_____	32. Protection of enclosed accessible space under stairs
_____	_____	33. Handrail location and height above nosing
_____	_____	34. Handrail type and grip size
_____	_____	35. Handrail continuous for full length of flight
_____	_____	36. Handrail returned or terminated in newel post
_____	_____	37. Guardrail location and height
_____	_____	38. Guardrail intermediate rail or ornamental closure spacing
_____	_____	39. Smoke Alarm locations
_____	_____	40. Smoke Alarm interconnection and power source
_____	_____	41. Carbon Monoxide Alarm locations
_____	_____	42. Foam plastic 1/2" gypsum board separation from interior of building
_____	_____	43. Moisture vapor retarder for all elements comprising the building thermal envelope that are not vented.
_____	_____	44. Pressure treated lumber in areas subject to decay damage
_____	_____	45. Termite shield; location, material and type

Section II - Footings and Foundation

✓ or N/A	Drawing Page No.	
_____	_____	1. Presumptive load-bearing value of soil
_____	_____	2. Concrete compressive strength
_____	_____	3. Footing; width and edge thickness
_____	_____	4. Footing; reinforcement size, location and spacing
_____	_____	5. Footing depth below grade
_____	_____	6. Footing projection
_____	_____	7. Footings supporting piers and columns; size, thickness and reinforcement
_____	_____	8. Type of foundation walls (masonry, poured concrete, ICF, precast concrete, etc.)
_____	_____	9. Precast concrete foundations require engineer's stamp and manufacturers installation instructions
_____	_____	10. Foundation wall height

✓ or N/A	Drawing Page No.	
_____	_____	11. Foundation unbalanced backfill height
_____	_____	12. Height of foundation above finished grade
_____	_____	13. Foundation wall thickness
_____	_____	14. Change in foundation wall thickness (masonry veneer ledge); course of solid masonry between thicker wall below and thinner wall above
_____	_____	15. Foundation reinforcement size and spacing
_____	_____	16. Sill plate size and decay protection
_____	_____	17. Type of sill plate anchorage (anchor bolts or anchor straps)
_____	_____	18. Anchor straps require manufacturer's installation instructions
_____	_____	19. Anchor bolts; diameter, spacing, depth of embedment and distance from corners
_____	_____	20. Foundation drains; location, type and size of pipe, depth of gravel cover, size of gravel and filter membrane
_____	_____	21. Damp proofing/Waterproofing system
_____	_____	22. Steel beam; location, size, weight and thickness
_____	_____	23. Steel beam pocket bearing details; thickness of solid masonry
_____	_____	24. Steel columns; size, weight and method of corrosion protection
_____	_____	25. Wood columns; size and method of decay protection
_____	_____	26. Method of column anchorage (prevent lateral displacement)
_____	_____	27. Under-floor space (crawl space) vented or not vented
_____	_____	28. Vented crawl space; location and size of openings, vapor retarder
_____	_____	29. Non-vented crawl spaces; indicate if mechanical ventilation or conditioned air, vapor retarder
_____	_____	30. Crawl space access size and location
_____	_____	31. Crawl space; distance of crawl space grade to bottom of floor joist

### Section III - Floors

✓ or N/A	Drawing Page No.	
_____	_____	1. Floor framing details plan
_____	_____	2. Floor joist; species, grade, size, spacing and span
_____	_____	3. Girder and header; species, grade, size, spacing and span
_____	_____	4. Cantilevered joist; ratio of backspan to cantilever, full depth rim joist, blocking and type of connections
_____	_____	5. Double floor joist under parallel bearing partitions
_____	_____	6. Floor joist lateral restraint and bridging; location and method
_____	_____	7. Floor joist framing of openings; header, trimmer joist and tail joist
_____	_____	8. Floor sheathing; type, span rating and thickness
_____	_____	9. Concrete floors (on ground); thickness of slab, compressive strength, thickness of gravel base, size of gravel used for base and vapor retarder

Section IV - Wall Construction

✓ or N/A	Drawing Page No.	
_____	_____	1. Wall studs (interior and exterior); species, grade, size, spacing and height
_____	_____	2. Girder and header; species, grade, size, span and number of jack studs
_____	_____	3. Wall bracing; braced wall lines, location, length and method
_____	_____	4. Stud wall capped with double top plate
_____	_____	5. Stud wall bottom plate
_____	_____	6. Fire blocking (required to cut off all concealed draft openings both vertical and horizontal); location and material

Section V - Wall Covering

✓ or N/A	Drawing Page No.	
_____	_____	1. Interior wall covering; type, material, thickness and fastening method (nails, screws, glued or combination)
_____	_____	2. Exterior wall covering material
_____	_____	3. Exterior wall sheathing; type, span rating and thickness
_____	_____	4. Exterior wall water-resistive barrier
_____	_____	5. Exterior wall flashing (top of doors and windows, chimneys, porches, decks, stairs, roof intersections, etc.)
_____	_____	6. Stone and masonry veneer ties; type, gage, horizontal spacing and area supported
_____	_____	7. Stone and masonry veneer; air space, flashing and weep holes
_____	_____	8. Stone and masonry veneer lintels; size, thickness and bearing

Section VI - Roof and Ceiling Construction

✓ or N/A	Drawing Page No.	
_____	_____	1. Pitch/slope of roof
_____	_____	2. Roof and ceiling framing details plan
_____	_____	3. Roof rafter; species, grade, size, spacing and span
_____	_____	4. Ceiling joist; species, grade, size, spacing and span
_____	_____	5. Roof rafter framing of openings; header, trimmer rafters and tail rafters
_____	_____	6. Ceiling joist framing of openings; header, trimmer joist and tail joist
_____	_____	7. Roof ridge board; size and thickness
_____	_____	8. Roof valley or hip rafter; size and thickness

✓ or N/A	Drawing Page No.	
_____	_____	9. Ceiling joist not parallel to rafters: rafter ties; type, size and spacing
_____	_____	10. Ceiling joist not parallel to rafters: roof ridge beam/girder; designed and sealed by registered design professional
_____	_____	11. Ceiling joist parallel to rafters; distance ends of joist lapped
_____	_____	12. Roof rafter and ceiling joist lateral restraint and bridging; location and method
_____	_____	13. Roof tie-down; type, method and spacing
_____	_____	14. Roof sheathing; type, span rating and thickness
_____	_____	15. Attic access; location and size
_____	_____	16. Roof ventilation for attics and enclosed rafter spaces; location, type, number and size
_____	_____	17. Eave or cornice vents; amount of space provided between insulation and roof sheathing
_____	_____	18. Ceiling covering; type, material, thickness and fastening method (nails, screws, glued or combination)
_____	_____	19. Roof covering; material and class
_____	_____	20. Roof covering underlayment; type, thickness and number of layers
_____	_____	21. Roof flashing; location, method and material
_____	_____	22. Ice shield/protection underlayment; type, material and distance from exterior wall line of building
_____	_____	23. Chimney cricket/saddle; material, height and width

Section VII - Masonry Chimneys and Fireplaces

✓ or N/A	Drawing Page No.	
_____	_____	1. Footings; width, edge thickness, reinforcement and depth below grade
_____	_____	2. Chimney wall; thickness of solid masonry units
_____	_____	3. Termination; height above roof and height above any portion of the building within ten feet
_____	_____	4. Chimney clearances; distance of air space clearance to combustibles
_____	_____	5. Chimney fireblocking; location and material
_____	_____	6. Fireplace flue size
_____	_____	7. Fireplace firebox walls; thickness of solid masonry units
_____	_____	8. Fireplace firebox dimensions; height, width and depth
_____	_____	9. Fireplace lintel; size, location and material
_____	_____	10. Fireplace throat; distance above lintel
_____	_____	11. Fireplace damper; material and distance above fireplace opening
_____	_____	12. Fireplace smoke chamber; thickness of solid masonry units
_____	_____	13. Fireplace smoke chamber dimensions; inside height and width
_____	_____	14. Fireplace hearth slab thickness

✓ or N/A	Drawing Page No.	
_____	_____	15. Fireplace hearth extension; material, thickness, distance to sides and distance to front
_____	_____	16. Fireplace clearance to combustible material; distance from front, sides and back
_____	_____	17. Fireplace mantel and trim made of combustible material; thickness of material and distance from fireplace opening
_____	_____	18. Fireplace exterior air supply; method and location

Section VIII – Factory Built Chimneys and Fireplaces

✓ or N/A	Drawing Page No.	
_____	_____	1. Listing and labeling information provided
_____	_____	2. Manufacturer’s installation instructions provided
_____	_____	3. Fireplace exterior air supply; method and location

Section IX - Mechanical

✓ or N/A	Drawing Page No.	
_____	_____	1. Heating, ventilating and air conditioning (HVAC) appliances; location and type of fuel
_____	_____	2. Water heating appliance; location and type of fuel
_____	_____	3. Heating appliances located in garage; height of ignition source above floor and method of protection from impact
_____	_____	4. HVAC appliance access; location and size
_____	_____	5. Heating and cooling equipment; load calculations ( <b>system load calculations should be obtained from mechanical contractor prior to application for building permit and submitted with construction drawings</b> )
_____	_____	6. Duct systems; material, location and size
_____	_____	7. Combustion air; calculations and source
_____	_____	8. Clothes dryer exhaust; material, size, length and termination point
_____	_____	9. Range hood exhaust; material and termination point
_____	_____	10. Bathroom exhaust, material and termination point



Section X - Energy Efficiency

You must demonstrate compliance with the energy requirements of the Pennsylvania Uniform Construction Code. One method is to use the REScheck residential compliance program which you can obtain free from the U.S. Department of Energy at [www.energycodes.gov](http://www.energycodes.gov). If you do not use the REScheck program, you must provide enough information on the construction drawings to demonstrate compliance with Chapter 11 of the International Residential Code (IRC) or the International Energy Conservation Code (IECC) or Pennsylvania's Alternative Residential Energy Provisions (PAREP). COMcheck for commercial applications.

REScheck Program

✓ or N/A	Drawing Page No.	
_____	_____	1. Computer generated compliance record and inspector's checklist provided
Chapter 11 of IRC IECC PAREP		
_____	_____	2. Indicate selected compliance path; IRC, IECC or PAREP
_____	_____	3. Climate Zone
_____	_____	4. Glazing area; percent of the gross area of the exterior walls
_____	_____	5. Glazing/fenestration; U-factor for all skylights, windows, doors, glass block, etc.
_____	_____	6. Roof/ceiling insulation; R-value
_____	_____	7. Framed wall insulation; R-value
_____	_____	8. Floor over non-conditioned space insulation; R-value
_____	_____	9. Concrete slab perimeter insulation; R-value and length
_____	_____	10. Basement wall insulation; R-value
_____	_____	11. Crawl space wall insulation; R-value
_____	_____	12. Vapor retarder; location and type
_____	_____	13. Air leakage; all joints, seams, penetrations, windows, doors, etc. sealed to limit air movement
_____	_____	14. HVAC appliances and equipment; energy efficiency rating
_____	_____	15. HVAC duct insulation; R-value and location
_____	_____	16. HVAC piping insulation; R-value and location
_____	_____	17. Water heating appliance; energy efficiency rating

