

RESOLUTION

WHEREAS, It is the desire of the County Commission of Jefferson County, West Virginia to protect the life and property of the citizens of Jefferson County and;

WHEREAS, The County Commission of Jefferson County, West Virginia duly passed an Ordinance adopting the State of West Virginia building code on March 29, 2001 and;

WHEREAS, the County Commission of Jefferson County, West Virginia desires that all building permits issued before April 1, 2003 shall remain valid and regulated under the state building codes adopted and in effect prior to April 1, 2003 and;

WHEREAS, The State of West Virginia has decreed that as of April 1, 2003, the State of West Virginia building code shall be revised to the following codes:

International Building Code 2000 (with amendments)
International Plumbing Code 2000
International Mechanical Code 2000
International Fuel Gas Code 2000 (with amendment)
International Property Maintenance Code (may be rejected at the option of the local jurisdiction)
International Energy Conservation Code 2000
International Residential Code 2000 (with amendments)
ICC/ANSI A117.1 Standards for Accessibility & Usable Buildings and Facilities/1998
International Existing Building Code 2003 (with amendments)

NFPA 70, National Electric Code/ 1999
NFPA 101 Life Safety Code/2000

and;

WHEREAS, the County Commission of Jefferson County, West Virginia desires that all building permits issued after March 31, 2003 be regulated under the revised state building code, as adopted by the County Commission of Jefferson County, West Virginia.

THEREFORE, BE IT RESOLVED that the County Commission of Jefferson County, West Virginia reaffirms its action of adopting the State of West Virginia building code on March 29, 2001 and desires to adopt the revisions to the State of West Virginia building code that became effective April 1, 2003 and HEREBY adopts the new Building Code Enforcement Ordinance, as attached.

BY: Jane M. Tabb DATE: 4-3-03
Jefferson County Commission

ATTEST:

CLERK OF JEFFERSON COUNTY: John E. Ott

ORDINANCE AND ORDER

An ordinance and order to ADOPT the State of West Virginia building code relating to building construction and building inspection activities in Jefferson County, West Virginia, and enforcement of said codes.

WHEREAS, it is the desire of the County Commission of Jefferson County, West Virginia to adopt the state building code relating to minimum building and housing construction standards for the public safety, health, and well-being and;

WHEREAS, the adoption of this code is to facilitate proper permitting, inspection, and enforcement activities relating to the construction of buildings, structures, and additions within the jurisdiction of Jefferson County, West Virginia.

NOW, THEREFORE, BE IT ORDAINED AND ORDERED BY The County Commission of Jefferson County, West Virginia that the following state codes Section 3n, Article 1, Chapter 7 of the Code of West Virginia, One-thousand Nine-hundred Thirty-one and the State Building Code as provided for in Section 5b, Article 3, Chapter 29 of the Code of West Virginia, One-thousand Nine-hundred Thirty-one, not including, however, the Property Maintenance Code, are hereby adopted and made a part hereof, as if fully set out in this ordinance, with the amendments, if any, prescribed in the Jefferson County Building Code Amendments Ordinance.

BE IT FURTHER ORDAINED AND ORDERED that this Ordinance and Order shall take effect and be in force from 3rd day of April, 2003, the public welfare requiring it.

PASSED AND APPROVED BY The County Commission of Jefferson County, West Virginia on the 3rd day of April, 2003.

BY: Jane M. Jablo
Jefferson County Commission

ATTEST:

CLERK OF JEFFERSON COUNTY: John E. Ott

JEFFERSON COUNTY BUILDING CODE ENFORCEMENT ORDINANCE

GENERAL AUTHORITY

By authority of the Code of West Virginia, Chapter 7, Article 1, Section 3n & Chapter 29, Article 3, Section 5b, to enforce minimum regulations governing the design, construction, alteration, enlargement and demolition of all buildings and structures: providing for the issuance of permits, collection of fees, making of inspections, providing penalties for the violation thereof, to be known as "Jefferson County Building Code Enforcement Ordinance".

STANDARDS & CODES

In accordance with the provisions of the Code of West Virginia, Chapter 29, Article 3, Section 5b, the County Commission of Jefferson County, West Virginia does hereby adopt the State Building Code and building code amendments as set forth in Title 87, Legislative Rules, State Fire Commission. Copies of all adopted Codes and Legislative Rules shall be on file in the Office of Clerk of County Commission.

The versions of said Codes shall be those cited in paragraph 4.1, Section 87-4-4, of Title 87, Legislative Rules, State Fire Commission, however, the Property Maintenance Code shall not be adopted.

Electrical inspections shall be conducted, by an approved private electrical inspector, using the National Electric Code approved by the West Virginia State Fire Commission. Fees for said electrical inspections shall be paid by the applicant directly to the private inspector or inspection service provider and shall not be included in the permit fees paid to the County.

ADMINISTRATIVE PROCESS

The administration of the building code shall be in accordance with the Administration Chapter of the applicable building code.

ORDINANCE AND ORDER

An ordinance and order to AMEND the State of West Virginia building code relating to building construction and building inspection activities in Jefferson County, West Virginia, and enforcement of said codes.

WHEREAS, the County Commission of Jefferson County, West Virginia having duly adopted the state building code relating to minimum building and housing construction standards and;

WHEREAS, Title 87, Legislative Rules, State Fire Commission, Series 4, Section 87-4-7, attached herein, authorizes each local jurisdiction to further complete, by order or ordinance, those respective areas which are indicated to be completed by the adopting jurisdiction and;

WHEREAS, the County Commission of Jefferson County, West Virginia desires to provide the authorized amendments including additions, insertions, deletions, and changes.

NOW, THEREFORE, BE IT ORDAINED AND ORDERED BY The County Commission of Jefferson County, West Virginia that the Jefferson County Building Code Amendments Ordinance is hereby adopted.

BE IT FURTHER ORDAINED AND ORDERED that this Ordinance and Order shall take effect and be in force from 3rd day of April, 2003, the public welfare requiring it.

PASSED AND APPROVED BY The County Commission of Jefferson County, West Virginia on the 3rd day of April, 2003.

BY: Jane M. Webb
Jefferson County Commission

ATTEST:

CLERK OF JEFFERSON COUNTY: John E. Ott

JEFFERSON COUNTY BUILDING CODE AMENDMENTS ORDINANCE

GENERAL AUTHORITY

By authority, of the Code of West Virginia, Chapter 7, Article 1, Section 3n and Chapter 29, Article 3, Section 5b, and Title 87, Legislative Rules, State Fire Commission, Series 4, Section 87-4-7, attached herein as Attachment - B; to further complete, by order or ordinance, those respective areas which are indicated to be completed by the adopting jurisdiction, thereof, to be known as "Jefferson County Building Code Amendments Ordinance".

AMENDMENTS

The following amendments shall apply:

1) International Residential Code 2000:

Section R101.1 insert "Jefferson County, West Virginia" where "[NAME OF JURISDICTION]" appears.

Section R108.2 Attachment – A, Schedule of Permit Fees, shall apply.

Section R113.4 add the following paragraph:

"Any person, firm or corporation violating any of the provisions of any of the adopted codes shall be guilty of a misdemeanor and each such person, firm or corporation shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this code is committed, continued, or permitted. Upon conviction of any such violation such person, firm or corporation shall be punishable by a fine of not less than \$50.00 or more than \$500.00. In addition to the criminal penalties provided herein, Jefferson County may, at its option, pursue injunctive relief in the Circuit Court of Jefferson County, West Virginia".

Table R301.2(1) insert the following design criteria:

Roof Snow Load (lbs/sq. ft.)	Wind Speed (mph)	Seismic Design Category	Subject to Damage From				Winter Design Temp (Degrees Fahrenheit)	Flood Hazard
			Weathering	Frost line Depth	Termite	Decay		
35 ground snow load	80	0/A	Severe	30 inches	Moderate	Slight to Mod	10	F.I.R.M. 1980, as revised

Appendix – E, Section AE503.1 add the following sentence to the end of the first paragraph:

“Skirting and permanent perimeter enclosures shall be required in Jefferson County, West Virginia”.

2) International Building Code 2000:

Section 101.1 insert “Jefferson County, West Virginia” where “[NAME OF JURISDICTION]” appears.

Section 108.2 Attachment – A, Schedule of Permit Fees, shall apply.

Section 113.4 add the following paragraph:

“Any person, firm or corporation violating any of the provisions of any of the adopted codes shall be guilty of a misdemeanor and each such person, firm or corporation shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this code is committed, continued, or permitted. Upon conviction of any such violation such person, firm or corporation shall be punishable by a fine of not less than \$50.00 or more than \$500.00. In addition to the criminal penalties provided herein, Jefferson County may, at its option, pursue injunctive relief in the Circuit Court of Jefferson County, West Virginia”.

Section 1608.2 add the following sentence at the end of the paragraph:

“The ground snow load for Jefferson County, West Virginia shall be a minimum of 35 pounds per square foot.”

Section 1805.2.1 add the following sentence at the end of the paragraph:

“The frost line of the locality shall be a minimum of thirty inches (30”)”.

Section 3409.2 insert “April 3, 2003” where “[DATE TO BE TO BE INSERTED BY THE JURISDICTION]” appears in the first paragraph.

3) International Plumbing Code 2000:

Section 101.1 insert “Jefferson County, West Virginia” where “[NAME OF JURISDICTION]” appears.

Section 106.6.2 insert Attachment – A, Schedule of Permit Fees where “[JURISDICTION TO INSERT APPROPRIATE SCHDEULE]” appears.

Section 106.6.3 insert zero percent in paragraph no. 2 where “[SPECIFY PERCENTAGE]” appears.

Section 106.6.3 insert zero percent in paragraph no. 3 where “[SPECIFY PERCENTAGE]” appears.

Section 108.4 delete the first paragraph and insert the following paragraph:

“Any person, firm or corporation violating any of the provisions of any of the adopted codes shall be guilty of a misdemeanor and each such person, firm or corporation shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this code is committed, continued, or permitted. Upon conviction of any such violation such person, firm or corporation shall be punishable by a fine of not less than \$50.00 or more than \$500.00. In addition to the criminal penalties provided herein, Jefferson County may, at its option, pursue injunctive relief in the Circuit Court of Jefferson County, West Virginia”.

Section 108.5 insert “fifty” for the not less than “[AMOUNT]” and five-hundred for the not more than “[AMOUNT]”.

Section 305.6.1 insert “eighteen” where “[NUMBER]” appears in the first paragraph.

Section 904.1 insert “sixteen” where “[NUMBER]” appears in the first paragraph.

4) International Mechanical Code 2000:

Section 101.1 insert “Jefferson County, West Virginia” where “[NAME OF JURISDICTION]” appears.

Section 106.6.2 insert Attachment – A, Schedule of Permit Fees where “[JURISDICTION TO INSERT APPROPRIATE SCHDEULE]” appears.

Section 106.6.3 insert zero percent in paragraph no. 2 where “[SPECIFY PERCENTAGE]” appears.

Section 106.6.3 insert zero percent in paragraph no. 3 where “[SPECIFY PERCENTAGE]” appears.

Section 108.4 delete the first paragraph and insert the following paragraph:

“Any person, firm or corporation violating any of the provisions of any of the adopted codes shall be guilty of a misdemeanor and each such person, firm or corporation shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this code is committed, continued, or permitted. Upon conviction of any such violation such person, firm or corporation shall be punishable by a fine of not less than \$50.00 or more than \$500.00. In addition to the criminal penalties provided herein, Jefferson County may, at its option, pursue injunctive relief in the Circuit Court of Jefferson County, West Virginia”.

Section 108.5 insert “fifty” for the not less than “[AMOUNT]” and five-hundred for the not more than “[AMOUNT]”.

5) International Energy Conservation Code 2000:

Section 101.1 insert “Jefferson County, West Virginia” where “[NAME OF JURISDICTION]” appears.

6) Existing Buildings Code 2003:

Section 101.1 insert “Jefferson County, West Virginia” where “[NAME OF JURISDICTION]” appears.

Section 108.2 Attachment – A, Schedule of Permit Fees, shall apply.

Section 113.4 delete the first paragraph and insert the following paragraph:

“Any person, firm or corporation violating any of the provisions of any of the adopted codes shall be guilty of a misdemeanor and each such person, firm or corporation shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this code is committed, continued, or permitted. Upon conviction of any such violation such person, firm or corporation shall be punishable by a fine of not less than \$50.00 or more than \$500.00. In addition to the criminal penalties provided herein, Jefferson County may, at its option, pursue injunctive relief in the Circuit Court of Jefferson County,

West Virginia".

Section 1201.2 insert April 1, 2003 where "[DATE TO BE INSERTED BY JURISDICTION J]" appears.

Attachment - A

Jefferson County, West Virginia Department of Planning, Zoning & Engineering SCHEDULE OF PERMIT FEES April 1, 2003		
RESIDENTIAL		
Type	Base Fee	Additional Square Foot Fee
Single Family Residence (Including Modular/Mobile Homes)	\$25 plus \$25 per deck	Finished \$0.18 Unfinished \$0.10
Additions	\$50	\$0.18
Internal Renovations to Existing Home	\$50 plus \$50 per required inspection	
Sheds, Decks, Detached Garages & Other Structures Ancillary to Residences	\$50	\$0.08
Attached Residential Structures (Duplexes & Town Homes less than 4 story)	\$25 per dwelling unit plus \$25 per deck	\$0.20
Swimming Pool	\$25	\$0.08/sq.-ft. of pool surface area
AGRICULTURAL		
Bona-fide Agricultural Structure (requires an affidavit)		\$50.00
COMMERCIAL		
Commercial/Industrial/Multi-Family Buildings	Value less than \$50,000	\$250 plus \$0.18 per sq.-ft. of building floor space.
	Value greater than \$50,000	\$500 plus \$0.18 per sq.-ft. of building floor space.
Signs	Value \$2500 or less	\$50.00/sign
	Value over \$2500	\$250.00/sign
Churches, church additions, pavilions, and other ancillary structures	Value less than \$25,000	\$50.00 per required inspection
	Value greater than \$25,000	\$250 plus \$0.18 per sq.-ft.
Demolition Permit - Commercial		\$200
Site Plan - Improvement Location Permit Only (No structures)		\$250.00 plus \$1.00 for every \$1,000 of value over \$50,000
Cell Towers & Electric Substation - Site Plan ILP		\$1,000.00/site
Cell Tower & Electric Substation Equipment - Building Permit		\$250
MISCELLANEOUS		
Chimney Additions		\$100/chimney
Temporary Construction Trailer		\$50
Reinspection of any component		\$50/reinspection
Permit Application Denied & resubmitted with 90 days for review.		\$75.00 reapplication fee only.
Plan Change After Permit is Issued		\$50 plus \$50 for each required inspection due to plan change
<u>Note:</u> The permit application fee for any application not specifically covered by this Fee Schedule shall be determined at the discretion of the Director of Planning, Zoning and Engineering.		

ATTACHMENT - B

Attachment – B
Title 87
Legislative Rule
State Fire Commission
State Building Code

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**WEST VIRGINIA
SECRETARY OF STATE
JOE MANCHIN, III
ADMINISTRATIVE LAW DIVISION**

Do Not Mark In This Box

FILED

2003 MAR 19 A 9 48

OFFICE WEST VIRGINIA
SECRETARY OF STATEForm #6 ☐

**NOTICE OF FINAL FILING AND ADOPTION OF A LEGISLATIVE RULE AUTHORIZED
BY THE WEST VIRGINIA LEGISLATURE**

AGENCY: WEST VIRGINIA STATE FIRE COMMISSION TITLE NUMBER: 87AMENDMENT TO AN EXISTING RULE: YES XXX NO IF YES, SERIES NUMBER OF RULE BEING AMENDED: 4TITLE OF RULE BEING AMENDED: STATE BUILDING CODEIF NO, SERIES NUMBER OF RULE BEING PROPOSED: TITLE OF RULE BEING PROPOSED:

THE ABOVE RULE HAS BEEN AUTHORIZED BY THE WEST VIRGINIA LEGISLATURE.

AUTHORIZATION IS CITED IN (house or senate bill number) HB 2615SECTION 64-6-1, PASSED ON MARCH 6, 2003THIS RULE IS FILED WITH THE SECRETARY OF STATE. THIS RULE BECOMES EFFECTIVE ON THE
FOLLOWING DATE: APRIL 1, 2003
Authorized Signature**RECEIVED****MAR 25 2003**JEFFERSON COUNTY
PLANNING, ZONING AND ENGINEERING

TITLE 87

FILED

LEGISLATIVE RULE

2003 MAR 19 A 9 48

STATE FIRE COMMISSION

OFFICE WEST VIRGINIA
SECRETARY OF STATE

SERIES 4

STATE BUILDING CODE

87-4-1 GENERAL

1.1 Scope: This rule establishes the standards considered necessary by the State Fire Commission for the safeguarding of life and property and to ensure the quality of construction of all structures erected or renovated throughout this state.

1.2 Authority: West Virginia Code 29-3-5b

1.3 Filing Date: March 19, 2003

1.4 Effective Date: April 1, 2003

1.5 Incorporation of other Documents: This rule does not include a reprinting of all the requirements imposed by statute or by the incorporation of various nationally recognized standards and codes cited in Subsection 4.1 of this rule. For ascertaining these additional standards and requirements, it is necessary to make reference to the other documents.

87-4-2 DEFINITIONS

2.1 "ANSI" means "American National Standards Institute, 11 West 42nd St., New York, NY 10036.

2.2 "ASTM" means American Society of Testing and Materials.

2.3 "BOCA" - refers to the "Building Officials & Code Administrators International", 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795.

2.4 "Building code" - includes all aspects of safe building construction and mechanical operations and all safety aspects related to building construction and mechanical operations.

2.5 "CABO" - refers to the "Council of American Building Officials", 5203 Leesburg Pike, Suite 708, Falls Church, Virginia 22041.

RECEIVED

MAR 25 2003

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PLANNING, ZONING AND ENGINEERING

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2.6 "Fire Commission" - means the thirteen (13) appointed members of the West Virginia State Fire Commission.

2.7 "Fire marshal" - means the West Virginia State Fire Marshal and/or his or her designated representatives.

2.8 "Local jurisdiction" - means municipal or county level government.

2.9 "ICC" or "International" means "International Code Council", 5203 Leesburg Pike, Suite 708, Falls Church, Virginia 22041-3401.

2.10 "NFPA" means "National Fire Protection Association", 1 Batterymarch Park, P. O. Box 9101, Quincy, MA 02269-9101.

2.11 "State Building Code" - means the entire contents of this rule and the referenced national codes.

87-4-3 CONFLICTS

3.1 Whenever there is a conflict between the State Fire Code and the State Building Code, the State Fire Code takes precedence.

3.2 Whenever there is a conflict between the International Plumbing Code section of the State Building Code and the rules of the West Virginia State Department of Health and Human Resources, the rules of the Department of Health and Human Resources take precedence.

3.3 Whenever there is a conflict between the State Building Code and statutory laws of the State of West Virginia, the West Virginia Code takes precedence.

87-4-4 NATIONAL STANDARDS AND CODES

4.1 The standards and requirements as set out and as published by the International Code Council, and American Standards Institute, as listed below, have the same force and effect as if set out verbatim in this rule, Except that any and all references to *ICC Electrical Code* mean NFPA 70, National Electric Code/1999.

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4.1.1 The International Building Code, First Edition, 2000, with the following exceptions:

4.1.1.A. Provided; that the section entitled "Fire Prevention" and identified as Section 101.4.6 is deleted and not considered to be a part of this rule.

4.1.1.B. Further provided that the section entitled "Duties and Powers of Building Official" and identified as Section 104.1 General is modified to read as follows:

"The building official shall enforce the provisions of this code. The building official may render interpretations of this code and adopt policies and procedures in order to clarify the application of its provisions. The interpretations, policies and procedures shall be in compliance with the intent and purpose of this code. The policies and procedures shall not have the effect of waiving requirements specifically provided for in this code."

4.1.1.C. Further provided that the entire section entitled "Board of Appeals" and identified as Section 112 is deleted and replaced with the following:

4.1.1.C. 1 Appeals Board: The current State Building Code establishes stringent qualifications for appeals board members. The 1996 BOCA National Building Code, Section 121.2.1 reads "The board of appeals shall consist of five individuals, one from each of the following professions or disciplines, with three forming a quorum at any appeal hearing.

A registered design professional who is a registered architect, or a builder or superintendent of building construction with at least ten years experience, five of which shall have been in responsible charge of work;

A registered design professional with structural engineering or architectural experience;

A registered design professional with mechanical or plumbing engineering experience; or a mechanical or plumbing contractor with at least ten years experience, five of which shall have been in responsible charge of work;

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A registered design professional with electrical engineering experience; or an electrical contractor with at least ten years experience, five of which shall have been in responsible charge of work; and

A registered design professional with fire protection engineering experience; or a fire protection contractor with at least ten years experience, five of which shall have been in responsible charge of work.

4.1.1.C.2 Time of Appeal: The Appeals Board shall render a decision within 30 days of receipt of the appeal.

4.1.2 The International Plumbing Code, First Edition, 2000

4.1.3 The International Mechanical Code, First Edition, 2000

4.1.4 International Fuel Gas Code, First Edition, 2000, with the following exception:

Section 404.9 Underground piping systems shall be installed a minimum depth of 12 inches (305 mm) below grade. If the minimum depth cannot be maintained, the piping system shall be installed in conduit or shielded in an approved manner.

4.1.5 The International Property Maintenance Code, First Edition, 2000. This Code may be rejected at the option of the local jurisdiction.

4.1.6 The International Energy Conservation Code, First Edition, 2000.

4.1.7 International Residential Code, First Edition, 2000, with the following exceptions:

Section G2414.9 Underground piping systems shall be installed a minimum depth of 12 inches (305 mm) below grade. If the minimum depth cannot be maintained, the piping system shall be installed in conduit or shielded in an approved manner.

Section R303.4.1 Light Activation – The control for activation of the required interior stairway lighting shall be accessible at the top and bottom of each stairway without traversing any steps. The illumination of exterior stairways shall be controlled from inside the dwelling unit. Exceptions: 1. Lights that are continuously illuminated or automatically controlled. 2. Interior stairways consisting of less than three steps.

Section R312.1.1 Landings at doors – Where a stairway of two or fewer risers is located on the exterior side of a door, other than the required exit door, a landing is not required for the exterior side of the door.

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Section R314.2 Stair Geometry – CABO One & Two Family Dwelling Code/1995 dimensions; maximum riser height of eight and one quarter (8 ¼) inches, minimum tread depth on nine (9) inches.

Section R315.1 Handrails – Handrails shall be provided on at least one side of stairways consisting of three or more risers. Handrails shall have a minimum height of 34 inches (864 mm) and a maximum height of 38 inches (96 mm) measured vertically from the nosing of the treads. All required handrails shall be continuous the full length of the stairs from a point directly above the top riser to a point directly above the lowest riser of the stairway. The ends of the handrail shall be returned into a wall or shall terminate in newel posts or safety terminals. A minimum clear space of 1 ½ inches (38 mm) shall be provided between the wall and the handrail.

Section R403.1.7.1: Building Clearances From Ascending Slopes is not applicable to this rule.

Section R403.1.7.1: Footings Setbacks From Descending Slope Surfaces is not applicable to this rule.

Section R403.3 Frost Protected Shallow Foundations – Frost protected shallow foundations shall not be used for unheated spaces such as porches, utility rooms, garages and carports, and shall not be attached to basements or crawl spaces that are not maintained at a minimum monthly mean temperature of 64 degrees F (18C).

NEW SECTIONS: R403.3.1.1 Foundations adjoining frost protected shallow foundations. Foundations that adjoin frost protected shallow foundations shall be protected from frost in accordance with Section R403.1.4.

R403.3.1.2 Attachment to unheated garage. Vertical wall insulation and horizontal insulation of frost protected shallow foundations that adjoin a garage that does not have a monthly mean temperature maintained at a minimum of 64 degrees F (18 C), shall be in accordance with Figure R403.3(3) and Table R403.3. Vertical wall insulation shall extend between the frost protected shallow foundation and the adjoining slab foundation. Required horizontal insulation shall be continuous under the adjoining slab foundation and through any foundation walls adjoining the frost protected shallow foundation.

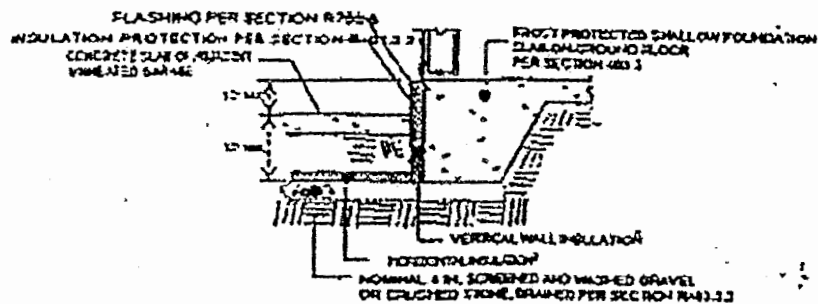
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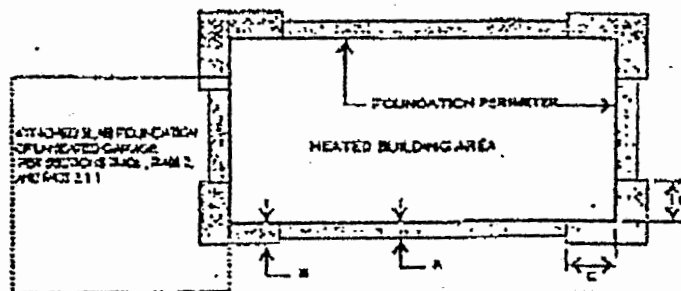
R403.3.1.3 Attachment to heated structure. Where a frost protected shallow foundation abuts a structure that has a monthly mean temperature maintained at a minimum of 64 degrees F (18 C), horizontal insulation and vertical wall insulation shall not be required between the frost protected shallow foundation abuts the heated structure, the horizontal insulation and vertical wall insulation shall extend along the adjoining foundation in accordance with Figure R 403.3(4) a distance of not less than Dimension A in Table R403.3.,

Exception: Where the frost protected shallow foundation abuts the heated structure to form an inside corner, insulation extending along the adjoining foundation is not required.

INSULATION DETAIL



HORIZONTAL INSULATION PLAN



For SI: 1 inch = 25.4 mm

- a. See Table R403.3 for required dimensions and R-values for vertical and horizontal insulation.

FIGURE R403.3(3)
INSULATION PLACEMENT FOR FROST-PROTECTED FOOTINGS ADJACENT TO
UNHEATED GARAGE

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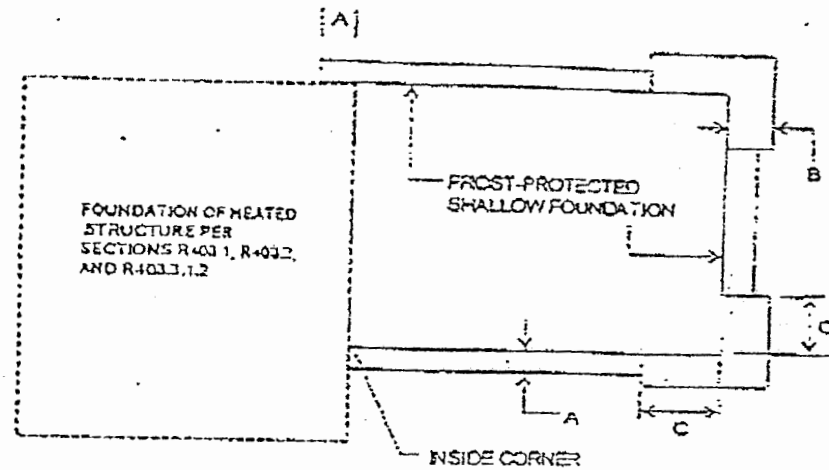


FIGURE R403.3(4)
INSULATION PLACEMENT FOR FROST-PROTECTED FOOTINGS ADJACENT TO
HEATED STRUCTURE

R5502.3.3 Floor cantilevers. NEW SECTION: Floor cantilever spans shall not exceed the nominal depth of the wood floor joist. Floor cantilevers constructed in accordance with Table R502.3.3 shall be permitted when supporting a light-frame bearing wall and roof only. The ratio of backspan to cantilever span shall be at least 3 to 1.

Table R502.3.3 NEW TABLE (attached)

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TABLE R502.3.3
CANTILEVER SPANS FOR FLOOR JOISTS
SUPPORTING LIGHT-FRAME EXTERIOR BEARING WALL AND ROOF ONLY a, b, c, d
(Floor Live Load ≤ 40 psf, Roof Live Load ≤ 20 psf)

Member & Spacing	Maximum Cantilever Span (Uplift Force at Backspan Support in lbs.) ^{a, c}											
	< 20 psf				30 psf				50 psf			
	Roof Width		Ground Snow Load		Roof Width		Ground Snow Load		Roof Width		Roof Width	
2 x 0 @ 12"	24 ft.	32 ft.	40 ft.	24 ft.	32 ft.	40 ft.	24 ft.	32 ft.	40 ft.	24 ft.	32 ft.	40 ft.
2 x 10 @ 16"	20" (177)	15" (227)	16" (364)	10" (209)	10" (354)	16" (324)	20" (375)	20" (484)	15" (356)	23" (471)	19" (462)	18" (379)
2 x 10 @ 12"	25" (220)	21" (297)	26" (270)	28" (198)	22" (283)	16" (324)	26" (277)	20" (484)	15" (356)	23" (471)	19" (462)	18" (379)
2 x 12 @ 16"	36" (156)	26" (216)	25" (356)	38" (263)	28" (420)	21" (387)	29" (387)	20" (484)	15" (356)	23" (471)	19" (462)	18" (379)
2 x 12 @ 12"	42" (209)	31" (283)	37" (253)	37" (253)	27" (253)	27" (253)	38" (271)	20" (484)	15" (356)	23" (471)	19" (462)	18" (379)
2 x 12 @ 0"	48" (136)	45" (159)	48" (184)	30" (206)	40" (233)	28" (294)	36" (220)	28" (304)	19" (379)	18" (379)	18" (379)	18" (379)

For Sfr: 1 in. = 25.4 mm, 1 psf = 0.0479 kN/m²

Notes:

- Tabulated values are for clear-span roof supported solely by exterior bearing walls.
- Spans are based on No. 2 Grade lumber or Douglas fir-larch, hem-fir, southern pine, and spruce-pine-fir for repetitive (3 or more) members.
- Ratio of backspan to cantilever span shall be at least 3:1.
- Connections capable of resisting the indicated uplift force shall be provided at the backspan support.
- Uplift force is for a backspan to cantilever span ratio of 3:1. Tabulated uplift values are permitted to be reduced by multiplying by a factor equal to 3 divided by the actual backspan ratio provided (3/backspan ratio).
- See Section R301.2.2.7.1 for additional limitations on cantilevered floor joists for detached one- and two-family dwellings in Sfr. The design cantilevered joist and D2 and D3 and townhouses in Seismic Design Categories C, D1, and D2.
- A full-depth rim joist shall be provided at the cantilevered end of the joist.
- Linear interpolation shall be permitted for building widths and ground snow loads other than shown.

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Chapter 11: Entire Chapter
Part IV - Energy Conservation

Chapter 11
Energy Efficiency

Section N1101

N1101.1 Performance Objective

To provide cost-effective, energy-related requirements for design and construction of the building thermal envelope and heating-ventilating-air conditioning (HVAC) systems for one- and two-family dwellings.

N1101.2 Building Thermal Envelope

The minimum required installed R-value or maximum required U-value for all elements in the building thermal envelope (fenestration, roof/ceiling, opaque wall, floor, slab edge, crawl space wall, and basement wall) shall be determined by Table N1101, based on the building type and the climate zone where the building is located. Alternative compliance based on heat loss/gain calculations or systems analysis shall comply with Section N1101.

TABLE N1101
PRESCRIPTIVE BUILDING ENVELOPE REQUIREMENTS

BUILDING LOCATION		MAXIMUM U-VALUE	MINIMUM INSULATION						
ZONE	HDD	FENESTRATION	ROOF/CEILING	FRAME WALLS	MASS WALLS	FLOOR OVER OUTDOOR AIR OR UNCONDITIONED SPACE	SLAB EDGE WIDTH/DEPTH	CRAWL SPACE WALL	BASEMENT WALL
1	0-1,499	ANY	R-19	R-11	R-4	R-11	R-0	R-0	R-0
2	1,500 - 2,999	0.90	R-22	R-13	R-5	R-13	R-0	R-4	R-0
3	3,000-3,999	0.75	R-26	R-13	R-6	R-13	R-4, 2 FT	R-5	R-2
4	4,000-4,999	0.65	R-26	R-13	R-7	R-13	R-4, 2 FT	R-8	R-4
5	5,000-6,999	0.55	R-30	R-13	R-8	R-19	R-4, 2 FT	R-3	R-4
6	7,000-8,999	0.45	R-30	R-13	R-8	R-19	R-5, 2 FT	R-3	R-8
7	9,000-12,999	0.40	R-38	R-19	R-14	R-19	R-8, 4 FT	R-10	R-8

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NOTES:

1. Building envelopes must also meet the air infiltration requirements of Section N1101.
2. Insulation materials shall be installed in accordance with the manufacturers instructions.
3. The sum of the R-values of cavity insulation and sheathing shall be used to determine the installed R-value.
4. For slabs that incorporate heating ducts or pipes in climates above 1,000 HDD, add R-2 to the table values.
5. The required R-value shall extend down to design frost depth in Zones 4 and 5, and down to the basement floor in zones 6 and 7.

N1101.3 Floors

N1101.3.1 Floors Over Outdoor Air or Unconditioned Areas – Floors over outdoor air or unconditioned areas shall meet the minimum R-value for Floor Over Outdoor Air or Unconditioned Space in Table N1101, based on the climate zone where the building is located.

N1101.3.2 Slabs-on-Ground – Slabs-on-ground, or slabs 12 inches or less below finished grade, shall meet the minimum R-value and depth/width dimension for Slab Edge in Table N1101, based on the climate zone where the building is located. The required R-value shall be applied to the exterior or interior of the foundation wall. Exterior insulation shall extend downward from the top of the slab and/or horizontally outward until the distance indicated in Table N1101 is reached. Interior insulation shall extend from the top of the slab downward and/or horizontally inward until the distance indicated in Table N1101 is reached. All horizontal insulation extending outward from the slab shall be covered by at least 10 inches of soil. The top edge of insulation installed between the exterior wall and the interior slab shall be permitted to be cut at a 45° angle to allow the concrete surface to extend to the wall. Slab edge insulation shall not be required in areas of "very heavy" termite infestation probability, in accordance with the Termite infestation Probability Map in Appendix A.

N1101.4 WALLS

N1101.4.1 Wall Insulation – Opaque walls and band joists exposed to outside air or to unconditioned space shall meet the minimum R-value for Frame Wall or Mass Wall in Table N1101, based on the wall type and the climate zone where the building is located. For Frame walls, the sum of the R-values of cavity insulation and insulated sheathing shall be used to determine the installed R-value. Walls exposed to unconditioned space shall have an R-value of R-13 when the minimum required R-value for the wall type in Table N1101 exceeds R-13.

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N1101.4.2 Wood Frame Walls – Where insulated sheathing is used on wood frame walls in areas not otherwise required to have structural sheathing, the entire opaque wall shall be considered to be covered with the insulated sheathing for purposes of determining compliance with the minimum R-value for Frame Wall in Table N1101.

N1101.4.3 Steel Frame Walls – When steel framing is used, insulated sheathing with an R-value not less than R-2.5 in Zones 3 and 4 (3,000 – 4,999 HDD), R-5 in Zone 5 (5,000 – 6,999 HDD) and R-10 in Zones 6 and 7 (7,000 – 12,999 HDD) shall be installed in addition to the minimum required R-value for Frame Wall in Table N1101.

N1101.4.4 Mass Walls – Masonry or concrete walls having a mass greater than or equal to 30 pounds per cubic foot (pcf), solid wall walls having a mass greater than or equal to 20 pcf, and any other walls having a heat capacity greater than or equal to 6 Btu/ft² shall be considered mass walls. Mass walls with exterior insulation or mass walls with integral insulation (insulation and mass mixed, such as log walls) shall be permitted to meet the Mass Wall criteria in Table N1101 based on the building type and the climate zone where the building is located. The R-value of mass walls with integral insulation shall be based on consideration of all elements of the wall assembly. Other mass walls shall meet the frame wall criteria for the building type and the climate zone where the building is located, based on the sum of the R-values of interior and exterior insulation.

N1101.4.5 Crawl Space Walls – All walls enclosing crawl spaces where the floor above the crawl space is not insulated in accordance with Table N1101 shall meet the minimum R-value for Crawl Space Wall in Table N1101, based on the climate zone where the building is located. The required R-value shall be applied to the inside or outside of the crawl space wall. The insulation shall extend downward from the sill plate to the level of the inside ground surface.

N1101.4.6 Basement Walls – All basement walls enclosing conditioned space shall meet the minimum R-value for Basement Wall in Table N1101, based on the climate zone where the building is located. The required R-value shall be applied on the inside or outside of the basement wall from the sill plate down to the design frost depth in Climate Zones 4 and 5, and to the basement floor in Zones 6 and 7. Buildings having basement walls with a maximum average exposure not greater than 12 inches above the adjacent grade, and having high efficiency equipment meeting the requirements specified in Table N1101.4.6 based on the climate zone where the building is located, are not required to meet the minimum R-value for Basement Wall in Table N1101.

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TABLE N1101.4.6
EQUIPMENT TRADE-OFF FOR BASEMENT WALL INSULATION

BUILDING LOCATION		GAS FURNACE WITH CENTRAL AIR CONDITIONING	AIR SOURCE HEAT PUMP
Zone	HDD	Minimum AFUE	Minimum HSPF
1-3	0-3,999	—	---
4-5	4,000 – 6,999	88	7.8
6-7	7,000 – 12,999	90	8.0

N1101.4.5 Masonry Veneer – When insulation is placed on the exterior of a slab edge, crawl space wall, or basement wall supporting masonry veneer, the horizontal surface supporting the veneer shall not be required to be insulated.

N1101.4.6 Protection of Foundation Insulation – Exposed insulating materials applied to the exterior of foundation walls shall be protected to prevent degradation of thermal performance. The protection shall extend at least 6 inches below finished grade. Plastic foam insulation used below grade shall comply with ASTM C578.

N1101.5 FENESTRATION

N1101.5.1 Labeling – The U-value of fenestration products (windows and glazed doors) shall be indicated on a label affixed to these products by the manufacturer or, where such values are not indicated, the U-value shall be determined in accordance with Table N1101.5.1.

TABLE N1101.5.1
ASSUMED U-VALUE FOR WINDOWS AND GLAZED DOORS

FRAME MATERIAL AND PRODUCT TYPE	SINGLE GLAZED	DOUBLE GLAZED
Metal Without Thermal Break	1.13	0.70
Metal with Thermal Break	1.07	0.63
Reinforced Vinyl/Metal-Clad Wood/ Wood/Vinyl Fiberglass	0.90	0.55

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N1101.5.2 Windows – For elements within the building thermal envelope, up to 6 square feet of glazed areas is exempt from the maximum required U-value in Table N1101.5.1

N1101.5.3 Skylights – Minimum skylight requirements will be as follows:

Zone 1 (0-1, 499 HDD): Any skylight is permitted.

Zones 2 3 (1,500 – 3,999 HDD): Any double glazed skylight is permitted; and

Zones 4 and above (4,000 HDD and above): Any double glazed skylight with a wood, vinyl or fiberglass frame. Metal clad frames will be permitted.

N1101.5.4 Opaque Doors – Opaque doors shall have a maximum U-value of 0.39 or minimum R-value of 2.5. When the U-value of the door is not provided by the manufacturer, it shall be determined in accordance with Table N1101.5.1. One opaque door per dwelling unit shall be permitted to be exempt from this U-value requirement.

DOOR CONSTRUCTION	WITH FOAM CORE	WITHOUT FOAM CORE
Steel Doors (1 ¾ inches thick)	0.35	0.60
Wood Doors (1 ¾ inches thick)	Without Storm Door	With Storm Door
Panel	0.54	0.36
Hollowcore flush	0.46	0.32
Solid core flush	0.40	0.26

N1101.6 ROOFS AND CEILINGS

Roof/ceiling assemblies, including ceilings below unconditioned attics and cathedral ceilings, shall meet the minimum R-value for Roof/Ceiling in Table N1101, based on the climate zone where the building is located. Insulation can be compressed or reduced at eaves to accommodate roof framing or ventilation.

Exception: R-30 shall be required for cathedral ceilings whenever the required R-value for Roof/Ceiling in Table N1101 exceeds R-30.

N1102 MOISTURE CONTROL

In all framed walls, floors and roof/ceilings comprising elements of the building thermal envelope, an approved vapor retarder having a maximum rating of 1.0 perm shall be installed on the warm-in-winter side of the insulation.

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Exception:

1. Where the insulated cavity of space is ventilated to allow moisture to escape.
2. In hot and humid climate areas as shown in Appendix A.

N1103- AIR INFILTRATION

The building envelope shall be designed and constructed to limit air infiltration to the conditioned area of the dwelling. All elements comprising the building thermal envelope, including all exterior joints, seams, or penetrations, shall be caulked, gasketed, taped or covered with moisture vapor permeable sheathing paper or house wrap on the exterior. All windows and doors installed in the building thermal envelope shall be weatherstripped, gasketed, or caulked.

N1104 HVAC SYSTEMS

N1104-1 HVAC AND WATER HEATING APPLIANCES

HVAC and service water heating appliances shall be labeled as complying with minimum efficiency requirements specified by the National Appliance Energy Conservation Act of 1987 and regulations adopted thereunder by the U. S. Department of Energy.

N1104-2 CONTROLS

Each heating, cooling, or combination heating and cooling system shall be provided with at least one adjustable thermostat for the regulation of temperature.

N1104-3 AIR HANDLING DUCT SYSTEM

N1104-3.1 DUCT SEALING – All supply and return ducts located outside the building thermal envelope shall have joints sealed with gaskets, mastics, tapes installed in accordance with the manufacturers instructions, or by other approved methods.

N1104-3.2 DUCT INSULATION – Minimum required duct insulation for all supply and return ducts located in unconditioned space shall be R-5 in all climatic zones.

N1104-4 HEATING AND COOLING PIPING INSULATION

All HVAC system piping carrying fluids with a temperature less than 55°F or greater than 120°F shall have minimum insulation thickness of ½ inch.

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N1105 ALTERNATIVE COMPLIANCE

N1105-1 HEAT GAIN/HEAT LOSS CALCULATIONS

Alternative compliance with the requirements of Table N1101 shall be permitted to be determined through a heat gain or heat loss calculation as follows: the required R-value or U-value of an element in the building thermal envelope in Table N1101 may be increased or decreased, provided the total heat gain or loss for the entire building does not exceed the total resulting from conformance to the values specified in Table N1101.

N1105-2 SYSTEMS ANALYSIS

Alternative compliance with the requirements of this chapter shall be permitted to be determined through the use of a systems analysis using a standard design in accordance with Table N1101, and Section N1104. A proposed design complies with this chapter if it has a projected annual energy use for heating, cooling and service water heating not greater than the energy use of the standard design, calculated in accordance with accepted engineering practices. Energy use for both homes shall be calculated based on the same assumptions and building location. The standard design shall have the same floor area, envelope component areas, building orientation, glazing orientation, door areas, and building geometry as the proposed design.

4.1.8 ICC/ANSI A1.1 Standards for Accessibility & Usable Buildings & Facilities
First Edition, 1998.

4.1.9 International Existing Building Code, 2003, with the following exception:

Omit reference to International Fire Code and substitute NFPA Life Safety
Code 2000 Edition.

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87-4-5 The following structures are not subject to inspection by local jurisdictions:

Group U utility structures and storage sheds comprising an area not more than 150 sq. ft. which have no plumbing or electrical connections and are used only for residential storage purposes. (Examples include sheds that are for the residential storage of lawnmowers, tools, bicycles or furniture.) Not included are those utility structures and storage sheds which have plumbing or electrical connections are a non-residential use or for the storage of explosives or other hazardous or explosive materials.

87-4-6. A copy of the codes listed in Subsection 4.1 of this rule have been filed with the Secretary of State. These code books, collectively or separately, may be obtained by contacting the Building Officials & Code Administrators International, 4051 West Flossmoor Road, Country Club Hills, Illinois 60477-5795, telephone 708/799-2300; or BOCA Mid-East Regional Office, 1245 South Sunbury Road, Suite 100, Westerville, OH 43081-9308, telephone (614) 890-1064.

87-4-7 ADOPTION BY LOCAL JURISDICTION

7.1 Each local jurisdiction adopting the State Building Code shall notify the State Fire Commission in writing. The local jurisdiction shall send a copy of the ordinance or order to the State Fire Marshal, West Virginia State Fire Commission, 1207 Quarrier Street, 2nd floor, Charleston, West Virginia 25301, within thirty (30) days of adoption.

7.2 Each local jurisdiction which adopts the State Building Code is responsible for the enforcement of the building code as provided in West Virginia Code 7-1-3n and 8-12-13.

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7.3 Throughout the national codes, adopted in subsection 4.1 of this rule, there are discretionary provisions which require further action by the adopting local jurisdiction in order to adapt these codes to various local conditions. It is therefore the intent of this rule to further authorize each local jurisdiction to further complete, by order or ordinance, those respective areas which are indicated to be completed by the adopting "jurisdiction".

7.4 Within the penalty sections of each of the national codes, adopted in Section 4.1 of this rule, there is a penalty for imprisonment. The provision of imprisonment for any violation of this rule is optional with each adopting local jurisdiction.

7.5 Each of the national codes, adopted in subsection 4.1 of this rule, provides for a separate appeals board. However, the intent and requirements for an appeal board may be met with the creation by the local jurisdiction of a single appeals board for the entire "State Building Code."

87-4-8 EXISTING BUILDING CODES

8.1 All building codes which have been adopted by local jurisdictions prior to the passage of West Virginia Code 29-3-5b, in 1988, are null and void.