North Dakota State Building Code

Effective
October 1, 2004

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Division of Community Services
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ALTERNATIVE FORMATS FOR PERSONS WITH DISABILITIES
ARE AVAILABLE UPON REQUEST

TABLE OF CONTENTS

ACKNOWLEDGMENTS

The updating of the North Dakota State Building Code would not have been possible without the assistance of the Building Code Advisory Committee and the cities, counties, and organizations that were deemed eligible under the Administrative Rule (Article 108-01) and N.D.C.C. 54-21.3-03 were available to vote during the updating process. Their interest and expertise have resulted in a state building code that not only consists of the most up-to-date codes (the 2003 International Codes), but also reflects the needs and concerns of the jurisdictions of the state in amendments to those codes. We would also like to thank the cities of Fargo, Devils Lake, Grand Forks, and Williston for proposing amendments to the 2003 International Codes for consideration in updating the State Building Code.

BUILDING CODE ADVISORY COMMITTEE (members who participated)

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INTRODUCTION

The purpose of this document is to identify the building and related codes and state amendments to those codes that together make up the North Dakota State Building Code. Also included in this document are a brief history of the state building code; information on how to obtain copies of the four codes that make up the state building code; the state law (N.D.C.C. 54-21.3) that provides for the state building code; the American with Disabilities Act Accessibility Guidelines (ADAAG) Conformance Statement; and a sample ordinance for local adoption of the state building code.

HISTORY OF THE NORTH DAKOTA STATE BUILDING CODE

In 1979, the 46th North Dakota Legislative Assembly created the North Dakota State Building Code. At the same time, the Legislature amended N.D.C.C. Sections 11-33-01, 40-47-01, and 58-03-11 relating to the authority of cities, townships, and counties to zone to reflect compliance with the state building code. The Legislature directed that the state building code would consist of the Uniform Building Code published by the International Conference of Building Officials. In 1985, the 49th Legislative Assembly added the Uniform Mechanical Code, also published by the International Conference of Building Officials.

Until 1991, the Legislature maintained the authority to update the state building code, but this process did not permit the state to update the state building code in a timely manner as new editions of the Uniform Building Code and Uniform Mechanical Code were published. In 1991, the Legislature provided for the state building code to be updated as new editions of the codes are published. This procedure, however, was later declared unconstitutional. As a result, in 1993 the Legislative Assembly shifted the responsibility for updating the state building code to the Office of Management and Budget, which then designated the Office of Intergovernmental Assistance (now the Division of Community Services) to adopt rules to implement and periodically update and to amend the code. The Legislative Assembly also directed in 1993, that effective August 1, 1994, any city, township, or county that elects to administer and enforce a building code shall adopt and enforce the state building code. However, the Legislative Assembly also provided for the ability for a city, county, or township to amend the state building code to conform to local needs. The first Administrative Rule (Article 4-08-01) for updating the state building code became effective December 1, 1994.

In 2001, the 57th Legislative Assembly amended N.D.C.C. 54-21.3-03, deleting the reference to the Uniform Building Code and Uniform Mechanical Code because they were no longer being published. In their place, the Legislative Assembly designated the International Building Code, International Residential Code, International Mechanical Code, and International Fuel Gas Code as the codes that would make up the state building code. The first version of these codes to be adopted was the 2000 edition. The Legislative Assembly also created a Building Code Advisory Committee to help write administrative rules and to develop recommendations on proposed code amendments. A new Administrative Rule (Article 108, Chapter 108-01) to implement, amend, and periodically update the state building code became effective July 22, 2002.

CURRENT NORTH DAKOTA STATE BUILDING CODE

Effective October 1, 2004, the North Dakota State Building Code consists of the 2003 International Building Code (IBC), International Residential Code (IRC), International Mechanical Code (IMC), and International Fuel Gas Code (IFGC) published by the International Code Council (ICC). **NO APPENDICES ARE ADOPTED**.

To obtain copies of these codes, contact:

International Code Council
4051 W. Flossmoor Road
County Club Hills, IL 60478
1-800-786-4452

We encourage each city, township, and county that has elected or elects to enforce building codes to contact the International Code Council to become a member. This will entitle the jurisdiction to certain free publications, member rates for books and materials, and free technical assistance.

REQUIREMENT TO ADOPT THE NORTH DAKOTA STATE BUILDING CODE

Effective August 1, 1994, N.D.C.C. 54-21.3-03 requires the governing body of a city township, or county that elects to administer and enforce a building code to adopt and enforce the state building code. However, the state building code may be amended by cities, townships, and counties to conform to local needs.

NORTH DAKOTA CENTURY CODE
CHAPTER 54-21.3-03
STATE BUILDING CODE

54-21.3-01. Purposes of Chapter.

The purposes of this chapter are to:

1. Provide the citizens of this state with nationally recognized standards and requirements for construction and construction materials.

2. Eliminate restrictive, obsolete, conflicting, and unnecessary construction regulations that tend to increase construction costs unnecessarily or restrict the use of new materials, products, or methods of construction or provide preferential treatment to types or classes of materials or products or methods of construction.

3. Ensure adequate construction of buildings throughout the state and to adequately protect the health, safety, and welfare of the people of this state.

54-21.3-02. Definitions.

As used in this chapter, unless the context requires otherwise:

1. "Agricultural purposes" includes purposes related to agriculture, farming, ranching, dairying, pasturage, horticulture, floriculture, viticulture, and animal and poultry husbandry.

2. "Building" means a combination of any materials fixed to form a structure and the related facilities for the use or occupancy by persons, or property. The word "building" shall be construed as though followed by the words "or part or parts thereof".

3. "City" means any city organized under the laws of this state.

4. "Construction" means the construction, erection, reconstruction, alteration, conversion, or repair of buildings.

5. "Jurisdictional area" means the area within which a city or township has zoning jurisdiction.

6. "State building code" means the state building code provided for in this chapter.

54-21.3-03. State Building Code.

1. The department of commerce, in cooperation with the state building code advisory committee, shall adopt rules to implement, amend, and periodically update the state building code, which must consist of the international building, residential, mechanical, and fuel gas codes.

2. The state building code advisory committee consists of:

   a. Two representatives appointed by the North Dakota building officials association, one of whom must be from a jurisdiction of fewer than ten thousand people.

   b. One representative appointed by the North Dakota chapter of the American institute of architects.

   c. One representative appointed by the North Dakota society of professional engineers.

   d. One representative appointed by the North Dakota association of builders.

   e. One representative appointed by the North Dakota association of mechanical contractors.

   f. One representative appointed by the associated general contractors.

   g. A fire marshal appointed by the state fire marshal.

   h. One individual appointed by the state electrical board.

3. The state building code advisory committee shall meet with the commissioner of the department of commerce or a designee of the commissioner at least once each calendar year to address proposed amendments to the state building code. The commissioner of the department of commerce may not adopt an amendment to the state building code unless the amendment is approved by a majority vote of:

   a. One representative appointed by the North Dakota chapter of the American institute of architects;

   b. One representative appointed by the North Dakota society of professional engineers;

   c. One representative appointed by the North Dakota association of builders;

   d. One representative appointed by the North Dakota association of mechanical contractors;

   e. One representative appointed by the associated general contractors; and

   f. Representatives of eligible jurisdictions as established by administrative rule.

4. For the purposes of manufactured homes, the state building code consists of the manufactured homes construction and safety standards under 24 CFR 3280 adopted pursuant to the Manufactured Housing Construction and Safety Standards Act [42 U.S.C. 5401 et seq.].

5. The governing body of a city, township, or county that elects to administer and enforce a building code shall adopt and enforce the state building code. However, the state building code may be amended by cities, townships, and counties to conform to local needs.

6. A modular residential structure or a prebuilt home placed in the state must be constructed in compliance with the state building code. A modular residential structure or a prebuilt home placed in a jurisdiction that has amended the state building code must be constructed in compliance with the state building code and the amendments adopted by that jurisdiction.

54-21.3-04. Exemptions.

1. The following statewide codes are exempt from this chapter:

   a. The Standards for Electrical Wiring and Equipment, as contained in North Dakota Administrative Code article 24-02.

   b. The State Plumbing Code, as contained in North Dakota Administrative Code article 62-03.

   c. The State Fire Code, as contained in the rules of the state fire marshal as provided in section 18-01-04.

2. The following buildings are exempt from this chapter:

   a. Buildings which are neither heated nor cooled.

   b. Buildings used whose peak design rate of energy usage is less than one watt per square foot [929.0304 square centimeters] or three and four-tenths British thermal units an hour per square foot [929.0304 square centimeters] of floor area.

   c. Restored or reconstructed buildings deliberately preserved beyond their normal term of use because of historical associations, architectural interests, or public policy, or buildings otherwise qualified as a pioneer building, historical site, state monument, or other similar designation pursuant to state or local law.

3. Any building used for agricultural purposes, unless a place of human habitation or for use by the public, is exempt from this chapter.

54-21.3-05. Enforcement of Code by City, Township, or County - Relinquishment.

A city or township may administer and enforce the state building code only within its jurisdictional area. A county may administer and enforce the state building code within those areas of the county in which the state building code is not administered by a city or township. Cities and townships may relinquish their authority to administer and enforce the state building code to the county in which they are located in the manner provided by section 11-33-20. The governing body of a city, township, or county electing to administer and enforce the state building code may designate an enforcement agency. Cities, townships, and counties may provide by agreement for joint administration and enforcement and may contract for private enforcement of the state building code.

SCOPE OF THE STATE BUILDING CODE

Administrative Rule Article 108, Chapter 108-01, provides for the following scope for the state building code:

1. It supplements all laws defined within the North Dakota Century Code relating to construction, alterations, improvements, and siting of buildings unless specifically exempted.

2. It applies to all cities, townships, and counties that elect to adopt and enforce building codes within their jurisdictional boundaries.

3. It applies to all state and local government buildings.

4. It applies to all public and private schools.

HOW TO USE THE NORTH DAKOTA STATE BUILDING CODE

FIRST: You must purchase the 2003 edition of the IBC, IRC ,IMC, and IFGC. See page 4 for ordering these codes.

SECOND: Wherever the International Plumbing Code and International Electrical Code are referenced, you must substitute the reference with the North Dakota State Plumbing Code and the Wiring Standards of North Dakota.. Also note that the State Building Code does not include the International Property Maintenance Code, the International Fire Code, or the International Energy Code. These codes, to be in effect, must be adopted separately by each city, county, or township.

THIRD: When using the IBC, IRC, IMC, and IFGC you should first identify if a particular section or chapter is amended by the state. State agencies, local governments, and schools must use the state building code and may only use less restrictive code provisions contained in the state amendments. Local jurisdictions may not impose more restrictive code provisions on state buildings unless they are included in the state amendments.

CHAPTER 1 OF EACH INTERNATIONAL CODE AND FEE SCHEDULE

Chapter 1 of each of the four International Codes that make up the state building code is entitled Administration. The provisions in the Chapter provide for the administration and enforcement of each code by the enforcing jurisdiction. Since administration and enforcement of the state building code is the responsibility of each city, township, and county that elects to administer and enforce a building code, the state building code does not contain any amendments to Chapter 1. **It is up to each jurisdiction to determine how it wants to administer and enforce the state building code.**

One area no longer included in the International Codes is the suggested permit fee schedule. For your reference, included below is the suggested fee schedule from the 1997 Uniform Building Code:

Table 1-A Building Permit Fees

Total Valuation	Fee
$1.00 to $500	$23.50
$501to $2,000.00	$23.50 for the first $500.00 plus $3.05 for each additional $100.00, or fraction thereof, to and including $2,000.00.
$2,001to $25,000.00	$69.25 for the first $2,000.00 plus $14.00 for each additional $1,000.00, or fraction thereof, to and including $25,000.00.
$25,001to $50,000.00	$391.25 for the first $25,000.00 plus $10.10 for each additional $1,000.00, or fraction thereof, to and including $50,000.00.
$50,001to $100,000.00	$643.75 for the first $50,000.00 plus $7.00 for each additional $1,000.00, or fraction thereof, to and including $100,000.00.
$100,001to $500,000.00	$993.75 for the first $100,000.00 plus $5.60 for each additional $1,000.00, or fraction thereof, to and including $500,000.00.
$500,001to $1,000,000.00	$3,233.75 for the first $500,000.00 plus $4.75 for each additional $1,000.00, or fraction thereof, to and including $1,000,000.00.
$1,000,001.00 and up	$5,608.75 for the first $,1,000,000.00 plus $3.65 for each additional $1,000.00, or fraction thereof.

Other Inspections and Fees:

1. Inspections outside of normal business hours. . . . . $47.00 per hour[1] (minimum charge – two hours)
2. Reinspection fees assessed under provisions of Section 305.8. . . . . $47.00 per hour[1]
3. Inspections for which no fee is specifically indicated. . . . . $47.00 per hour[1] (minimum charge – one-half hour)
4. Additional plan review required by changes, additions or revisions to plans. . . . . $Actual Costs[2] (minimum charge – one-half hour)
5. For use of outside consultants for plan checking and inspections, or both. . . . . $47.00 per hour[1]

[1]Or the total hourly cost to the jurisdiction, whichever is the greatest. This cost shall include supervision, overhead, equipment, hourly wages and fringe benefits of the employees involved.

[2]Actual costs include administrative and overhead costs.

IDENTIFICATION OF AMENDMENTS

This section presents the adopted state amendments to the 2003 edition of the International Building Code, International Residential Code, International Mechanical Code, and International Fuel Gas Code. These amendments were approved through the voting procedures in Article 108-01 of the North Dakota Administrative Code on August 10, 2004. The amendments to each code are presented separately, with each Chapter and section containing an amendment highlighted in bold letters and numbers. The type of amendment made to the section, table, or figure is indicated by the terms revise, add, or delete underneath the section, table, or figure number. Wherever a new section is added, the notice to add appears in bold letters above the new section designation. The following describes what each designation means:

- Revise – indicates that a chapter, section, table, or figure has been changed due to a deletion or substitution. Substituted language or specifications are underlined, and new tables or figures are identified

- Add – indicates new language or specifications have been added, without changing existing language or specifications. Additions are underlined.

- Delete – indicates complete deletion of a chapter, section, table, or figure or reassignment as an Appendix.

FLOOD RESISTANCE PROVISIONS

A number of proposed amendments called for deleting all references to the flood resistance provisions in the IBC and IRC. The Building Code Advisory Committee recommended disapproving these proposed amendments, but the cities, counties, and organizations that participated in the voting process, elected to overturn the committee's recommendations and delete the flood resistance provisions from the State Building Code. Their reasoning is based on the fact that most jurisdictions participate in the National Flood Insurance Program (NFIP) and are subject to similar requirements. They may in fact have additional local requirements. They felt that to retain the flood resistance provisions in the codes would be confusing. However, even though these provisions are deleted from the State Building Code, a local jurisdiction may still refer to them.

The following flood related sections are deleted from the adoption of the 2003 IBC and IRC.

2003 International Building Code	2003 International Residential Code
1403.6	R301.2.4
1403.7	R309.5
1603.1.6	R323
1612	R408.6
1803.4	M1601.3.8
1807.1.2.1	M1701.6
3407.2	M2001.4
	M2201.6
	M2404.7

2003 INTERNATIONAL BUILDING CODE AMENDMENTS

NOTE: Wherever the International Plumbing Code and International Electrical Code are referenced, substitute the reference with the North Dakota State Plumbing Code and Wiring Standards of North Dakota.

CHAPTER 3

USE AND OCCUPANCY CLASSIFICATION

305.2 Day care.

Revise as follows:

The use of a building or structure, or portion thereof, for educational, supervision or personal care services for more than twelve children older than 2½ years of age, shall be classified as a Group E occupancy.

308.5 Group I-4, day care facilities.

Revise as follows:

This group shall include buildings and structures occupied by persons of any age who receive custodial care for less than 24 hours by individuals other than parents or guardians, relatives by blood, marriage, adoption, and in a place other than the home of the person cared for. A facility such as the above with twelve or fewer persons shall be classified as a Group R-3 or shall comply with the International Residential Code in accordance with 101.2. Places of worship during religious functions are not included.

308.5.1 Adult care facility.

Revise as follows:

A facility that provides accommodations for less than 24 hours for more than twelve unrelated adults and provides supervision and personal care services.

308.5.2 Child care facility.

Revise as follows:

A facility that provides supervision and personal care on less than a 24 hour basis for more than twelve children 2½ years of age or less shall be classified as a Group I-4.

Exception: A child care facility that provides care for more than twelve but not more than 100 children 2½ years or less of age, when the rooms where such children are cared for are located on the level of exit discharge and each of these child care rooms has an exit door directly to the exterior, shall be classified as Group E.

310.1 Residential group R.

Revise as follows:

R-3 residential occupancies where the occupants are primarily permanent in nature and not classified as R-1, R-2 or I and where buildings do not contain more than two dwellings units, or adult and child care facilities that provide accommodations for twelve or fewer persons of any age for less than 24 hours. Adult and childcare facilities that are within a single-family home are permitted to comply with the International Residential Code in accordance with 101.2.

CHAPTER 4

SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY

406.1.4 Separation.

Add as follows:

1. The private garage shall be separated from the dwelling unit and its attic area by means of a minimum ½-inch (12.7 mm) Type X gypsum board applied to the garage side. Garages beneath habitable rooms shall be separated from all habitable rooms above by not less than ⅝-inch Type X gypsum board or equivalent. Door openings between a private garage and the dwelling unit shall be equipped with either solid wood doors, or solid or honeycomb core steel doors not less than 1⅜-inches (34.9 mm) thick, or doors in compliance with Section 715.3.3. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Where the separation is a floor-ceiling assembly, the structure supporting the separation shall also be protected by not less than ½- inch Type X gypsum board or equivalent.

CHAPTER 7

FIRE-RESISTANCE AND RATED CONSTRUCTION

705.6 Vertical continuity.

Add **Exception** as follows:

6. Fire walls installed within detached structures of Group U occupancy may terminate at the underside of the roof sheathing provided such walls are not required to be resistive construction due to proximity to property lines.

711.3 Fire resistance rating.

Add second paragraph to the **Exception** as follows:

The roof/ceiling assembly of a Group R-2 apartment otherwise required to be one hour fire-rated construction may be protected at its ceiling with a single layer of ⅝" fire code sheetrock provided the building is protected with an automatic sprinkler system complying with section 903.3.1.1. For the purpose of use of this exception only, use of Exceptions 1 and 2 of Section 2-6 of NFPA 13-R will not be allowed.

CHAPTER 9

FIRE PROTECTION SYSTEMS

903.2.7 Group R.

Add **Exception** as follows:

Exception: Group R-2 apartment or condominium buildings that are two stories or less in height, including basements, and have no more than 16 dwelling units.

903.3.1.2.1 Balconies.

Delete entire section:

907.2.10.1.1 Group R-1.

Add as follows:

4. In dwelling units where the ceiling height of a room open to the hallway serving the bedrooms exceeds that of the hallway by 24 inches (610mm) or more, smoke detectors shall be installed in the hallway and in the adjacent room.

907.2.10.1.2 Groups R-2, R-3, R-4, and I-1.

Add as follows:

4. In dwelling units where the ceiling height of a room open to the hallway serving the bedrooms exceeds that of the hallway by 24 inches (610 mm) or more, smoke detectors shall be installed in the hallway and in the adjacent room.

CHAPTER 10

MEANS OF EGRESS

1009.1 Stairway widths.

Add **Exception** as follows:

5. Stairways used to attend equipment or private stairways serving an occupant load of 10 or fewer persons and which are not accessible to the public.

1009.3 Stair treads and risers.

Revise and add as follows:

5. In occupancies in Group R-3, as applicable in Section 101.2, within dwelling units in occupancies in Group R-2, as applicable in Section 101.2, and in occupancies in Group U, which are accessory to an occupancy in Group R-3, as applicable in Section 101.2, the maximum riser height shall be 8 inches (203.3 mm) and the minimum tread depth shall be 9 inches (229 mm), and the minimum winder thread depth at the walk lines shall be 10 inches (254 mm), and the minimum winder thread depth shall be 6 inches (152 mm). A nosing not less then 0.75 inch (19.1 mm) but not more than 1.25 inches (32 mm) shall be provided on stairways with solid risers where the tread depth is less than 11 inches (279 mm).

6. See Chapter 34 Existing Structures for the replacement of stairways.

7. Private stairways serving an occupant load of less than ten (10) and stairways to unoccupied roofs, maximum riser height shall be 8 inch (203.3 mm) and the minimum trad depth shall be 9 inch (229 mm).

Add new section as follows:

1014.7 Electrical equipment room.

Where any room having electric panels rated 1200 amps or more has an exit access door(s), the door(s) shall open in the direction of egress and be equipped with a panic device, or other devices that are normally latched but open under simple pressure as required in 1008.1.9.

1025.1 General.

Delete **Exception** 1 and renumber other exceptions accordingly.

1025.2 Minimum size.

Delete entire **Exception**

CHAPTER 11
ACCESSIBILITY

1107.6.2 Group R-2.

Revise as follows:

Type B units shall be provided in occupancies in Group R-2 in accordance with Section 1107.6.2.2

1107.6.2.1 Apartment houses, monasteries and convents.

Revise as follows:

Type B units shall be provided in apartment houses, monasteries and convents in accordance with Section 1107.6.2.1.2.

1107.6.2.1.1 Type A units.

Delete entire section.

1107.6.2.2 Boarding houses, dormitories, fraternity houses and sorority houses.

Revise as follows:

Type B dwelling units shall be provided in boarding houses, dormitories, fraternity houses and sorority houses in accordance with Section 1107.6.2.2.2.

CHAPTER 12
INTERIOR ENVIRONMENT

SECTION 1207 – SOUND TRANSMISSION

Delete entire **SECTION**

CHAPTER 13
ENERGY EFFICIENCY

Delete entire **CHAPTER** and reassign it as **Appendix K**.

CHAPTER 14
EXTERIOR WALLS

1403.6 Flood resistance.

Delete entire section and refer to page 13.

1403.7 Flood resistance for high-velocity way action areas.

Delete entire section and refer to page 13.

1406.3 Balconies and similar projections.

Add **Exception** as follows:

5. Private balconies and similar appendages serving individual dwelling units on buildings of type V construction.

CHAPTER 15
ROOF ASSEMBLIES AND ROOFTOP STRUCTURES

1507.2.6 Fasteners.

Add as follows:

Fasteners for asphalt shingles shall be galvanized, stainless steel, aluminum, or copper roofing nails, minimum 12 gage [0.105 inch (2.67 mm)] shank with a minimum 0.375 inch diameter (9.5 mm) head, of a length to penetrate through the roofing materials and a minimum of 0.75 inch (19.1 mm) into the roof sheathing or other fasteners as approved by the building official and shingle manufacturer. Where the roof sheathing is less than 0.75 inches (19.1 mm) thick, the nails shall penetrate through the sheathing. Fasteners shall comply with ASTM 1667.

SECTION 1510 – REROOFING

Delete entire **SECTION** and reassign as **Appendix L**.

CHAPTER 16

STRUCTURAL DESIGN

1601.1 Scope.

Add as follows:

It shall not be the responsibility of the building official to determine engineering requirements of this code. Exclusive of the conventional light-frame wood construction provisions referenced in Section 2308, the method to resist loads as referenced in this chapter is the responsibility of a structural engineer or other qualified design professional.

1603.1.6 Flood load.

Delete entire section and refer to page 13.

1608.1 General.

Add as follows:

Design snow loads shall be determined in accordance with Section 7 of ASCE 7, but the design roof load shall not be less than that determined by Section 1607 nor less than 30 psf.

1610.1 General.

Revise **Exception** as follows:

Exception: Basement walls extending not more than 9 feet below grade and supporting flexible floor systems shall be permitted to be designed for active pressure.

1612 Flood loads.

Delete entire section and refer to page 13.

CHAPTER 17

STRUCTURAL TESTS AND SPECIAL INSPECTIONS

1704.1 General.

Add **Exception** as follows:

4. The frequency and amount of special inspections shall be as determined by the design professional of record. The continuous and periodic inspections referenced in Tables 1704.3, 1704.4, 1704.5.1 and 1704.5.3 shall be considered as a guideline.

CHAPTER 18
SOILS AND FOUNDATIONS

1803.4 Grading and fill in floodways.

Delete entire section and refer to page 13.

1805.4.2 Concrete footings.

Delete entire **Exception**.

Table 1805.4.2 Footings supporting walls of light-frame construction.

Delete entire Table.

1805.4.3 Masonry-unit footings.

Delete entire **Exception**.

1807.1.2.1 Flood hazard areas.

Delete entire section and refer to page 13.

CHAPTER 29

PLUMBING FIXTURES

Table 2902.1 – Minimum Number of Plumbing Facilities

Revise as follows:

TABLE 2902.1
MINIMUM NUMBER OF PLUMBING FACILITIES (a)

OCCUPANCY		WATER CLOSETS (h)		LAVATORIES (i)	BATHTUBS/ SHOWERS	DRINKING FOUNTAINS (g)	OTHERS
		MALE	FEMALE				
Nightclubs		1 per 40	1 per 40	1 per 75	---		1 service sink
ASSEMBLY	Restaurants (j)	1 per 60	1 per 60	1 per 120	---		1 service sink
	Theaters, halls, museums, etc.	1 per 125	1 per 65	1 per 200	---	1 per 500	1 service sink
	Coliseums, arenas (less than 3,000 seats)	1 per 75	1 per 40	1 per 150	---	1 per 1000	1 service sink
	Coliseums, arenas (3,000 seats or greater)	1 per 120	1 per 60	Male 1 per 200 Female 1 per 150	---	1 per 1000	1 service sink
	Churches	1 per 150	1 per 75	1 per 200	---	1 per 1000	1 service sink
	Stadiums (less than 3,000 seats) pools, etc.	1 per 100	1 per 50	1 per 150	---	1 per 1000	1 service sink
	Stadiums (3,000 seats or greater)	1 per 150	1 per 75	Male 1 per 200 Female 1 per 150	---	1 per 1000	1 service sink
Mercantile		1 per 300		1 per 600	---	1 per 1000	1 service sink
Business		1 per 40		1 per 80	---	1 per 100	1 service sink
Educational		1 per 50		1 per 50	---	1 per 100	1 service sink
Factory and Industrial		1 per 100		1 per 100	---	1 per 400	1 service sink
Passenger terminals and transportation facilities		1 per 500		1 per 750	---	1 per 1000	1 service sink
INSTITUTIONAL	Residential care	1 per 10		1 per 10	1 per 8	1 per 100	1 service sink
	Hospitals, ambulatory nursing home patients (c)	1 per room (d)		1 per room (d)	1 per 15	1 per 100	1 service sink
	Day nurseries, sanitariums, non-ambulatory nursing home patients, etc. (c)	1 per 15		1 per 15	1 per 15 (e)	1 per 100	1 service sink

	Employees, other than residential care (c)	1 per 25	1 per 35	---------	1 per 100	---------

MINIMUM NUMBER OF PLUMBING FACILITIES (a)
TABLE 2902.1 (Continued)

	OCCUPANCY	WATER CLOSETS (h) MALE	WATER CLOSETS (h) FEMALE	LAVATORIES (i)	BATHTUBS/ SHOWERS	DRINKING FOUNTAINS (g)	OTHERS
	Visitors, other than residential care	1 per 75		1 per 100	---------	1 per 500	---------
	Prisons (c)	1 per cell		1 per cell	1 per 15	1 per 100	1 service sink
	Asylums, reformatories, etc. (c)	1 per 15		1 per 15	1 per 15	1 per 100	1 service sink
	Hotels, Motels	1 per guestroom	1 per guestroom	1 per guestroom	---------	1 service sink	
RESIDENTIAL	Lodges	1 per 10	1 per 10	1 per 8	1 per 100	1 service sink	
	Multiple Family	1 per dwelling unit	1 per dwelling unit	1 per dwelling unit	---------	1 kitchen sink per dwelling unit; 1 automatic clothes washer connection per 20 dwelling units	
	Dormitories	1 per 10	1 per 10	1 per 8	1 per 100	1 service sink	
	One-and Two -Family Dwellings	1 per dwelling unit	1 per dwelling unit	1 per dwelling unit	---------	1 kitchen sink per dwelling unit; 1 automatic clothes washer connection per dwelling unit (f)	
	Storage	1 per 100	1 per 100		1 per 1000	1 service sink	

a. The fixtures shown are based on one fixture being the minimum required for the number of persons indicated or any fraction of the number of persons indicated. The number of occupants shall be determined by this code.

   1. Types of occupancies not shown on this table shall be considered individually by the Administrative Authority.

   2. The occupant load shall be composed of 50 percent of each sex.

b. Toilet facilities for employees shall be separate from facilities for inmates or patients.

c. A single-occupant toilet room with one water closet and one lavatory serving not more than two adjacent patient rooms shall be permitted where such room is provided with direct access from each patient room and with provisions for privacy.

d. For day nurseries, a maximum of one bathtub shall be required.

e. For attached one-and two-family dwellings, one automatic clothes washer connection shall be required per 20 dwelling units.

f. There shall be a minimum of one (1) drinking fountain per occupied floor in schools, theaters, auditoriums, dormitories, and businesses.

    1. Where food is consumed indoors, water stations may be substituted for drinking fountains. Where bottled water coolers are provided, drinking fountains shall not be required.

    2. Drinking fountains shall not be required in occupancies with less than 30 persons.

    3. Drinking fountains shall not be installed in toilet rooms.

g. The provision of urinals may offset water closets otherwise required but the number of water closets required may not be reduced in this manner by more than fifty (50) percent.

    1. Walls and floors within two (2) feet (610 mm) of the sides and front of urinals must be finished with a smooth, hard, nonabsorbent finish of a material approved by the Administrative Authority.

h. Where circular or similar hand washing appliances are provided, twenty-four (24) lineal inches (610 mm) of wash sink or eighteen (18) inches (457 mm) of a circular basin, when provided with water outlets for such space, shall be considered equivalent to one (1) lavatory.

I. For the purpose of this table, a restaurant is defined as a business that sells food to be consumed on premises. The number of occupants for a drive in restaurant shall be considered as equal to the number of parking stalls.

    1. A hand sink is required to be available to employees in a restaurant or other food preparation occupancy.

CHAPTER 31
SPECIAL CONSTRUCTION

3407.2 Flood hazard areas.

Delete entire section and refer to page 13.

2003 INTERNATIONAL RESIDENTIAL CODE AMENDMENTS

NOTE: Wherever the International Plumbing Code and International Electrical Code are referenced, substitute the reference with the North Dakota State Plumbing Code and Wiring Standards of North Dakota.

CHAPTER 3
BUILDING PLANNING

R301.2.4 Floodplain construction.

Delete entire section and refer to page 13.

R303.6.1 Light activation.

Add as follows:

The control for activation of the required interior stairway lighting shall be accessible at the top and bottom of each stairway having more than five risers without traversing any steps of the stair. The illumination of exterior stairways shall be controlled from inside the dwelling unit.

Exception: Lights that are continuously illuminated or automatically controlled.

R307.1 Space required.

Add as follows:

Fixtures shall be spaced as per Figure R307.2, with the exception of the clearance in front of water closets and bidets which must be 24 inches.

R309.2 Separation required.

Add as follows:

The garage shall be separated from the residence and its attic area by not less than ½-inch Type X gypsum board applied to the garage side. Garages beneath habitable rooms shall be separated from all habitable rooms above by not less than ⅝-inch (15.9 mm) Type X gypsum board or equivalent. Where the separation is a floor-ceiling assembly, the structure supporting the separation shall also be protected by not less than ½-inch (12.7 mm) Type X gypsum board or equivalent.

R309.5 Flood hazard areas.

Delete entire section and refer to page 13.

R310.1 Emergency escape and rescue required.

Add **Exception** as follows:

Exception: Below grade emergency escape and rescue windows may have a maximum sill height of 48 inches.

R310.1.1 Minimum opening area.

Delete entire **Exception**:

R310.2.1 Ladders and steps.

Add as follows:

Window wells with a vertical depth greater than 44 inches (1118 mm) shall be equipped with a permanently affixed ladder or steps usable with the window in the fully open position, or install a minimum 30" X 16" permanently attached platform, in the window well, that will reduce the vertical depth of the window well to no more than 42" below the top of the window well and that will not impede the operation of the window. Ladders or steps required by this section shall not be required to comply with Sections R311.5 and R311.6. Ladders or rungs shall have an inside width of at least 12 inches (305 mm), shall project at least 3 inches (76 mm) from the wall and shall be spaced not more than 18 inches (457 mm) on center vertically for the full height of the window well.

Exception: Terraced window wells with a maximum of 24" per vertical rise and minimum of 12" horizontal projection on each level shall also be allowed in accordance with Figures 310.2.1(1) and 310.2.1(2).

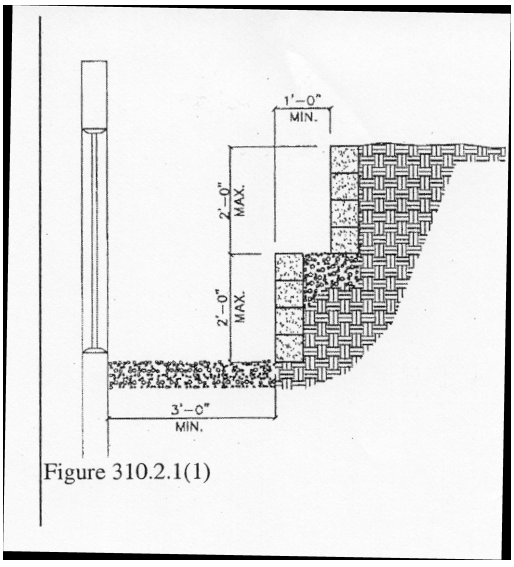


Figure 310.2.1(1)

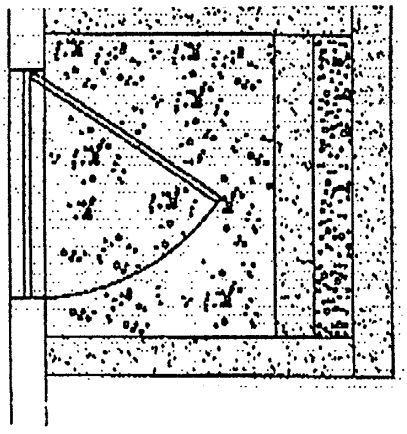


Figure 310.2.1(2)

R311.5.3.1 Riser height.

Revise as follows:

The maximum riser height shall be 8.0 inches (203.2 mm) and minimum of 4.0 inches (101.6 mm). The riser shall be measured vertically between leading edges of the adjacent trends. The greatest riser height within any flight of stairs shall not exceed the smallest by more than ⅜-inch (9.5 mm).

R311.5.3.2 Tread depth.

Revise as follows:

The minimum tread depth shall be 9 inches (229 mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than ⅜-inch (9.5 mm). Winder treads shall have a minimum tread depth of 9 inches (299 mm) measured as above at a point 12 inches (305 mm) from the side where the treads are narrower. Winder treads shall have a minimum tread depth of 6 inches (152 mm) at any point. Within any flight of stairs, the greatest winder tread depth at the 12 inch (305 mm) walk line shall not exceed the smallest by more than ⅜-inch (9.5 mm).

R311.5.4 Landings for stairways.

Add **Exception** as follows:

There shall be a floor or landing at the top and bottom of each stairway.

Exceptions:

1. A floor or landing is not required at the top of an interior flight of stairs, provided a door does not swing over the stairs.

2. A floor or landing is not required at the exterior side of sliding doors and in-swinging doors opening onto a patio and in-swinging doors opening into an attached garage.

R312.1 Guards required.

Add as follows:

Porches, balconies, ramps, or raised floor surfaces located more than 30 inches (762 mm) above the floor or grade below shall have guards not less than 36 inches (914 mm) in height. Open sides of stairs with a total rise of more than 30 inches (762 mm) above the floor or grade below shall have guards not less than 34 inches (864 mm) in height measured vertically from the nosing of the treads.

Porches and decks which are enclosed with insect screening shall be provided with guards where the walking surface is located more than 30 inches (762) above the floor or grade below.

R313.1 Smoke alarms.

Add to **Exception** 3 as follows:

3. On each additional story of the dwelling, including basements but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level. In dwelling units where the ceiling height of a room open to the hallway serving the bedrooms exceeds that of the hallway by 24 inches (610 mm) or more, smoke detectors shall be installed in the hallway and in the adjacent room.

R323 Flood-resistance construction.

Delete entire section and refer to page 13.

CHAPTER 4

FOUNDATION

R403.1 General.

Add as follows:

All exterior walls and interior bearing walls shall be supported on continuous solid or fully grouted masonry or concrete footings, wood foundations, or other approved structural systems which shall be of sufficient design to accommodate all loads according to Section R301 and to transmit the resulting loads to the soil within the limitations as determined from the character of the soil. Footings shall be supported on undisturbed natural soils or engineered fill.

R403.1.4.1 Frost protection.

Revise **Exception 1** as follows:

Exceptions:

1. Free standing accessory structures shall not be required to be protected.

R404.1.1 Masonry foundation walls.

Revise as follows:

Concrete masonry and clay masonry foundation walls shall be constructed as set forth in Tables R404.1(1), R404.1(2), or R404.1.1(3) and Figure 404.1(1) or Figure 404.1(2) and shall also comply with the provisions of Sections R606, R607 and R608. In Seismic Design Categories D_1 and D_2, concrete masonry and clay masonry foundation walls shall comply with Section R404.1.4. Rubble stone masonry foundation walls shall be constructed in accordance with Sections 404.18 and R606.2.2. Rubble stone masonry walls shall not be used in Seismic Design Categories D_1 and D_2.

R404.1.2 Concrete foundation walls.

Revise as follows:

Concrete foundation walls shall be constructed as set forth in Tables R404.1.1(1), R404.1.1(2), and R404.1.1(3), and Figures R404.1(1) and R404.1(2) and shall also comply with the provisions of this section and the applicable provisions of Section R402.2. In Seismic Design Categories D_1 and D_2, concrete foundation walls shall comply with Section R404.1.4.

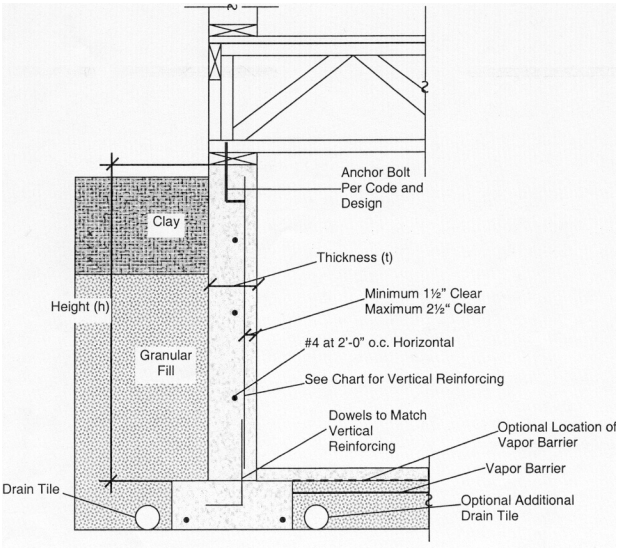


Figure R404.1(1)

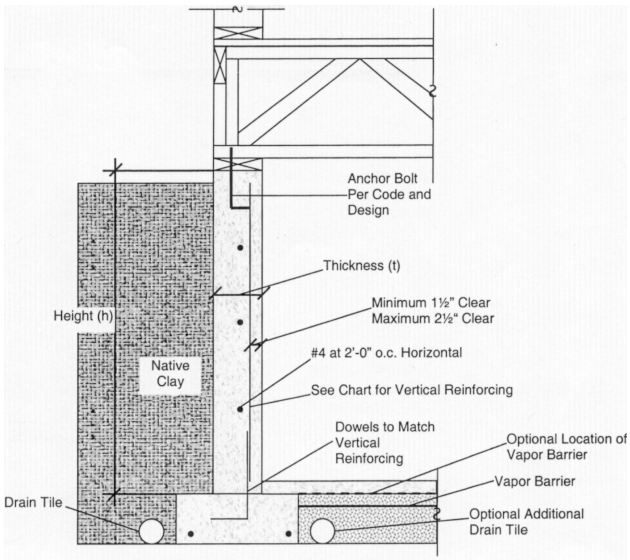


Figure R404.1(2)

Table R404.1.1(2) Reinforced Concrete and Masonry[a] Foundation Walls.

Revise as follows:

Table R404.1.1(2)
Foundation Wall Reinforcing

Active Pressure - 45 pcf

Minimum Reinforcement for Concrete Foundation Walls		
Wall Height (h) feet	Wall Thickness (t) inches	Vertical Reinforcing
8	8	#4 @ 24" o.c. #5 @ 40" o.c.
	10	#4 @ 30" o.c. #5 @ 50" o.c.
9	8	#4 @ 18" o.c. #5 @ 28" o.c.
	10	#4 @ 24" o.c. #5 @ 36" o.c.
10	10	#4 @ 16" o.c. #5 @ 26" o.c.

Notes:

1. Chart is based on an active soil pressures of 45 pounds per cubic foot (pcf)
2. Reinforcing steel shall be ASTM A615Fy - 60,000 pounds per square inch (psi)
3. The vertical reinforcing bars are to be located on the inside face.
4. Minimum concrete strength Fc^{1} = 3,000 pounds per square inch (psi)
5. Backfill shall not be placed until first floor framing and sheathing is installed and fastened or adequately braced and the concrete floor slab is in place or the wall is adequately braced.

Table R404.1.1(3) Reinforced Concrete and Masonry[a] Foundation Walls.

Revise as follows:

Table R404.1.1(3)
Foundation Wall Reinforcing

Active Pressure - 65 pcf

Minimum Reinforcement for Concrete Foundation Walls		
Wall Height (h) feet	Wall Thickness (t) inches	Vertical Reinforcing
8	8	#4 @ 18" o.c. #5 @ 26" o.c. #6 @ 40" o.c.
	10	#4 @ 24" o.c. #5 @ 36" o.c. #6 @ 52" o.c.
9	8	#4 @ 12" o.c. #5 @ 18" o.c. #6 @ 26" o.c.
	10	#4 @ 16" o.c. #5 @ 24" o.c. #6 @ 36" o.c.
10	10	#4 @ 12" o.c. #5 @ 18" o.c. #6 @ 24" o.c.

Notes:

1. Chart is based on an active soil pressures of 65 pounds per cubic foot (pcf)
2. Reinforcing steel shall be ASTM A615Fy - 60,000 pounds per square inch (psi)
3. The vertical reinforcing bars are to be located on the inside face.
4. Minimum concrete strength Fc^{1} = 3,000 pounds per square inch (psi)
5. Backfill shall not be placed until first floor framing and sheathing is installed and fastened or adequately braced and the concrete floor slab is in place or the wall is adequately braced.

Table R404.1.1(4) Reinforced Concrete and Masonry[a] Foundation Walls.

Delete entire **Table**

R405.2.3 Drainage Systems.

Revise as follows:

In other than Group I soils, a sump shall be provided to drain the porous layer and footings. The sump shall be at least 18 inches (457 mm) in diameter or 16 inches square, shall extend at least 24 inches (610 mm) below the bottom of the basement floor and shall be capable of positive gravity or mechanical drainage to remove any accumulated water. The drainage system shall discharge into an approved sewer system or to daylight.

R408.6 Flood resistance.

Delete entire section and refer to page 13.

CHAPTER 5

FLOORS

R506.2.3 Vapor retarder.

Add **Exception** as follows:

4. Attached garages.

CHAPTER 7

WALL COVERING

R703.6.2 Plaster.

Add as follows:

Plastering with portland cement plaster shall be not less than three coats when applied over metal lath or wire and shall not be less than two coats when applied over masonry, concrete or gypsum backing. If the plaster surface is completely covered by veneer or other facing material or is completely concealed, plaster application need be only two coats, provided the total thickness is as set forth in Table R702.1(1). Approved decorative coatings applied to concrete or masonry surface shall be installed in accordance with the manufacturer's installation instructions.

On wood frame construction with an on grade floor slab system, exterior plaster shall be applied in such a manner as to cover, but not extend below, lath, paper and screed.

The proportion of aggregate to cementitious materials shall be as set forth in Table R702.1(3).

CHAPTER 8

ROOF CEILING CONSTRUCTION

R808.1 Combustible insulation.

Revise **Exception** as follows:

Exception: When heat producing devices are listed for lesser clearances, combustible insulation complying with the listing requirements shall be separated in accordance with the conditions stipulated in the listing. Recessed lighting fixtures installed in the building thermal envelope shall meet the requirements of the National Electrical Code and Wiring Standards of North Dakota.

CHAPTER 9

ROOF ASSEMBLIES

R905.2.5 Fasteners.

Add as follows:

Fasteners for asphalt shingles shall be galvanized steel, stainless steel, aluminum or copper roofing nails, minimum 12 gage [0.105 inch (2.67 mm)] shank with a minimum ⅜-inch (9.5 mm) diameter head, ASTM F 1667, of a length to penetrate through the roofing materials and a minimum of ¾-inch (19.1 mm) into the roof sheathing or other fasteners as approved by the building official and shingle manufacturer. Where the roof sheathing is less than ¾-inch (19.1 mm) thick, the fasteners shall penetrate through the sheathing. Fasteners shall comply with ASTM F 1667.

SECTION R907 – Reroofing

Delete entire **SECTION** and reassign as **Appendix M**

CHAPTER 11

ENERGY EFFICIENCY

Delete entire **CHAPTER**

CHAPTER 13

GENERAL MECHANICAL SYSTEMS REQUIREMENTS

M1305.1 Appliance access for inspection, service, repairs, and replacement.

Add as follows:

Appliances shall be accessible for inspection, service, repair and replacement without removing permanent construction. Thirty inches (762 mm) of working space shall be provided in front of the control side to service an appliance. Room heaters shall be permitted to be installed with at least and 18 inch (457 mm) working space. A platform shall not be required for room heaters. Means shall be provided to gain access to hot tub, massage bathtub, and other equipment requiring maintenance or repair without damaging the building structure or building finish.

CHAPTER 15

EXHAUST SYSTEMS

M1501.3 Length limitation.

Add as follows:

The maximum length of a clothes dryer exhaust duct shall not exceed 25 feet (7620 mm) from the dryer location including two 90 degree elbows to the wall or roof termination. The maximum length of the duct shall be reduced 2.5 feet (769 MM) for each additional 45 degree (0.79 rad) bend and 5 feet (1524 mm) for each additional 90 degree (1.6 rad) bend. The maximum length of the exhaust duct does not include the transition duct.

Exceptions:...

CHAPTER 16

DUCT SYSTEMS

M1601.3.1 Joints and seams.

Adds as follows:

When located outside of conditioned space, joints of duct systems shall be made substantially airtight by means of tapes, mastics, gasketing or other approved closure systems. Closure systems used with rigid fibrous glass ducts shall comply with UL 181A and shall be marked "181A-P" for pressure-sensitive tape, "181A-M" for mastic or "181A-H" for heat-sensitive tape. Closure systems used with flexible air ducts and flexible air connectors shall comply with UL 181B and shall be marked "181B-FX" for pressure-sensitive tape or "181B-M" for mastic. Duct connections to flanges of air distribution system equipment or sheet metal fittings shall be mechanically fastened. Crimp joints for round ducts shall have a contact lap of at least 1.5 inches (38 mm) and shall be mechanically fastened by means of at least three sheet metal screws or rivets equally spaced around the joint.

M1601.3.4 Duct insulation.

Add as follows:

4. All portions of the air distribution system shall be installed in accordance with Section M1601 and be insulated to an R-4.2 when system components are located within the building but outside of conditioned space, and R-8 when located outside of the building. When located within a building envelope assembly, at least R-8 shall be applied between the duct and that portion of the assembly furthest from conditioned space.

M1601.3.8 Flood hazard areas.

Delete entire section and refer to page 13.

Add new Section as follows:

SECTION M1603
MINIMUM DUCT SIZE

M1603.1 General. The minimum unobstructed total area of supply and return ducts from a warm-air furnace shall be in accordance with the manufacturer's installation instructions, but shall be less than 2 square inches (1290 mm sq) for each 1,000 Btu/h (293W) output rating of the furnace. The minimum unobstructed total area of supply and return air ducts from a central air-conditioning unit and/or heat pump shall be in accordance with the manufacturer's installation instructions, but shall not be less than 6 square inches (3870 mm sq) for each 1,000 Btu/h (293W) nominal cooling output rating. Dampers, grilles or registers installed for the purpose of controlling the supply airflow shall not be considered as obstructions.

CHAPTER 17
COMBUSTION AIR

M1701.6 Opening location.

Delete entire section and refer to page 13.

M1703.2 Two openings or ducts.

Revise as follows:

Outside combustion air shall be supplied through openings or ducts, as illustrated in Figures M1703.2(1), M1703.2(2), M1703.2(3) and M1703.2(4). One opening shall be within 12 inches (305 mm) of the top of the enclosure, and one within 12 inches (305 mm) of the bottom of the enclosure. Openings are permitted to connect to spaces directly communicating with the outdoors, such as ventilated crawl spaces. The same duct or opening shall not serve both combustion air openings. The duct serving the upper opening shall be level or extend upward from the appliance space.

Figure M1703.2(3)

Delete entire **Figure**

Figure M1703.2(4)

Delete entire **Figure**

M1703.3 Attic combustion air

Delete entire section

Figure M1703.3

Delete entire **Figure**

CHAPTER 18

CHIMNEYS AND VENTS

M1801.1 Venting required.

Revise as follows:

Fuel-burning appliances shall be vented to the outside in accordance with their listing and label and manufacturer's installation instructions. Venting systems shall consist of approved chimneys or vents, or venting assemblies that are integral parts of labeled appliances. Gas fired appliances shall be vented in accordance with Chapter 24.

CHAPTER 20

BOILERS AND WATER HEATERS

M2001.4 Flood-resistant installation.

Delete entire section and refer to page 13.

CHAPTER 21

HYDRONIC PIPING

M2101.3 Protection of potable water.

Revise as follows:

The potable water system shall be protected from backflow in accordance with the provisions listed in the North Dakota State Plumbing Code.

M2101.10 Tests.

Add as follows:

New installations of hydronic piping shall be isolated and tested hydrostatically at a pressure of not less than 100 pounds per square inch (psi) (689kPa) for a duration of not less than 15 minutes.

CHAPTER 22

FUEL GAS

M2201.6 Flood-resistant installation.

Delete entire section and refer to page 13.

CHAP ER 24

FUEL GAS

M2404.7 Flood hazard.

Delete entire section and refer to page 13.

G2406.2 (303.3) Prohibited locations.

Delete **Exceptions** 3 and 4.

Figure G2407.6.1(1)

Delete entire **Figure**

Figure G2407.6.1(2)

Delete entire **Figure**

Figure G2407.6.2

Delete reference to alternate opening location in the **Figure G2407.6.2**

G2407.11 (304.11) Combustion air ducts.

Delete **Exception** 5 and renumber accordingly.

G2417.4.1 (406.4.1) Test pressure.

Revise as follows:

The test pressure to be used shall be not less than one and one-half times the proposed maximum working pressure, but not less than 25 psig, irrespective of design pressure. Where the test pressure exceeds 125 psig (862 kPa gauge), the test pressure shall not exceed a value that produces a hoop stress in the piping greater than 50 percent of the specified minimum yield strength of the pipe.

G2419.2 (408.2) Drips.

Revise as follows:

Where wet gas exists, a drip shall be provided at any point in the line of pipe where condensate could collect.

G2425.8 (501.8) Equipment not required to be vented.

Delete item 7

G2425.12 (501.12) Residential and low-heat appliances flue lining systems.

Add as follows:

Flue lining systems for use with residential-type and low-heat appliances shall be limited to the following:

1. Clay flue lining complying with the requirements of ASTM C 315 or equivalent when each appliance connected into the masonry chimney has a minimum input rating greater than 400,000 Btu/hr. Clay flue lining shall be installed in accordance with Chapter 10.

2. Listed chimney lining systems complying with UL 1777.

3. Other approved materials that will resist, without cracking, softening or corrosion, flue gases and condensate at temperatures up to 1,800°F (982° C).

    a. Aluminum (1100 or 3003 alloy or equivalent) not less than 0.032 inches thick to 8 inches diameter.

    b. Stainless steel (304 or 430 alloy or equivalent) not less than 26 gauge (0.018 inches thick) to 8 inches diameter or not less than 24 gage (0.024 inches thick) 8 inches diameter and larger.

    When a metal liner is used other than a listed chimney liner a condensation drip tee shall be installed and supported in an approved manner.

G2427.5.2 (503.5.3) Masonry chimney.

Add as follows:

Masonry chimneys shall be built and installed in accordance with this code and shall be lined with approved clay flue lining, a listed chimney lining system, or other approved material that will resist corrosion, erosion, softening or cracking from vent gases at temperatures up to 1,800°F (982 C). Masonry chimneys shall be lined in accordance with Section 2425.12.

G2439.5.1 (614.6.1) Maximum length.

Add as follows:

The maximum length of a clothes dryer exhaust duct shall not exceed 25 feet (7620 mm) from the dryer location including two 90 degree elbows to the outlet terminal. The maximum length shall be reduced 2½ feet (762 mm) for each additional 45 degree (0.79 rad) bend and 5 feet (1524 mm) for each 90 additional degree (1.6 rad) bend.

Exception:....

G2442.6 (618.6) Screen.

Revise as follows:

Required outdoor air inlets shall be covered with a screen having ¼-inch (6.4 mm) openings. Required outdoor air inlets serving a nonresidential portion of a building shall be covered with screen having openings larger than ¼-inch (6.4 mm) and not larger than ½- inch.

SECTION G2445 (621) – UNVENTED ROOM HEATERS

Delete entire **SECTION**

CHAPTER 25
PLUMBING ADMINISTRATION

Delete entire **CHAPTER**

CHAPTER 26
GENERAL PLUMBING REQUIREMENTS

Delete entire **CHAPTER**

CHAPTER 27
PLUMBING FIXTURES

Delete entire **CHAPTER**

CHAPTER 28
WATER HEATERS

Delete entire **CHAPTER**

CHAPTER 29
WATER SUPPLY AND DISTRIBUTION

Delete entire **CHAPTER**

CHAPTER 30
SANITARY DRAINAGE

Delete entire **CHAPTER**

CHAPTER 31
VENTS

Delete entire **CHAPTER**

CHAPTER 32
TRAPS

Delete entire **CHAPTER**

CHAPTER 33
GENERAL REQUIREMENTS

Delete entire **CHAPTER**

CHAPTER 34
ELECTRICAL DEFINITIONS

Delete entire **CHAPTER**

CHAPTER 35
SERVICES

Delete entire **CHAPTER**

CHAPTER 36

BRANCH CIRCUIT AND FEEDER REQUIREMENTS

Delete entire **CHAPTER**

CHAPTER 37

WIRING METHODS

Delete entire **CHAPTER**

CHAPTER 38

POWER AND LIGHTING DISTRIBUTION

Delete entire **CHAPTER**

CHAPTER 39

DEVICES AND LIGHTING FIXTURES

Delete entire **CHAPTER**

CHAPTER 40

APPLIANCE INSTALLATION

Delete entire **CHAPTER**

CHAPTER 41

SWIMMING POOLS

Delete entire **CHAPTER**

CHAPTER 42

CLASS 2 REMOTE CONTROL SIGNALING AND POWER LIMITED CIRCUITS

Delete entire **CHAPTER**

2003 INTERNATIONAL MECHANICAL CODE AMENDMENTS

NOTE: Wherever the International Plumbing Code and International Electrical Code are referenced, substitute the reference with the North Dakota State Plumbing Code and Wiring Standards of North Dakota.

CHAPTER 4

VENTILATION

305.4 Interval of support.

Add as follows:

Piping shall be supported at distances not exceeding the spacing specified in Table 305.4, or in accordance with MSS SP-69. In addition to the requirements of Table 305.4, piping and tubing shall be supported within 2 feet (610 mm) of every bend or angle.

Table 401.6 Opening Sizes in Louvers, Grilles and Screens Protecting Outdoor Exhaust and Air Intake Openings

Revise third row, second column as follows:

> ¼ inch and not > ½

403.2 Ventilation rate.

Revise as follows:

Ventilation systems shall be designed to have the capacity to supply the minimum outdoor airflow rate determined in accordance with ANSI/ASHRAE Addendum *n* to ANSI/ASHRAE STANDARD 62-2001 based on the occupancy of the space and the occupant load or other parameter as stated therein. The occupant load utilized for design of the ventilation system shall not be less than the number determined from the estimated maximum occupant load rate indicated in ANSI/ASHRAE Addendum *n* to ANSI/ASHRAE STANDARD 62-2001. Ventilation rates for occupancies not represented in ANSI/ASHRAE Addendum *n* ANSI/ASHRAE STANDARD 62-2001 shall be determined by an approved engineering analysis. The ventilation system shall be designed to supply the required rate of ventilation air continuously during the period the building is occupied, except as otherwise stated in other provisions of the code.

403.3.1 System operations.

Revise as follows:

The minimum flow rate of outdoor air that the ventilation system must be capable of supplying during its operation shall be permitted to be based on the rate per person indicated in ANSI/ASHRAE Addendum *n* ANSI/ASHRAE STANDARD 62-2001 and the actual number of occupants present.

403.3.2 Common ventilation system.

Revise as follows:

Where spaces having different ventilation rate requirements are served by a common ventilation system, the ratio of outdoor air to total supply air for the system shall be determined based on the space having the largest outdoor air requirement or shall be determined in accordance with ANSI/ASHRAE Addendum *n* ANSI/ASHRAE STANDARD 62-2001.

404.2 Minimum ventilation.

Add **Exception** as follows:

Exception: A system capable of providing .75 cfm per square foot of floor area may be installed provided the ventilation system is operated on a timer in such a manner as to provide 15 minutes operation in each hour, 24 hours per day. Exhaust openings may not terminate within 3 feet of any other exterior opening.

CHAPTER 5

EXHAUST SYSTEMS

504.6.1 Maximum length.

Add as follows:

The maximum length of a clothes dryer exhaust duct shall not exceed 25 feet (7620 mm) from the dryer location including two 90-degree elbows to the outlet terminal. The maximum length of the duct shall be reduced 2.5 feet (762 mm) for each additional 45-degree (0.79 rad) bend and 5 feet (1524 mm) for each additional 90-degree (1.6 rad) bend. The maximum length of the exhaust duct does not include the transition duct.

505.1 Domestic systems.

Add as follows:

Where domestic range hoods and domestic appliances equipped with downdraft exhaust are located within dwelling units, such hoods and appliances shall discharge to the outdoors through ducts constructed of galvanized steel, stainless steel, aluminum, or copper. Such ducts shall have smooth inner walls and shall be air tight and equipped with a backdraft damper at the point of termination.

507.2.2 Type II hoods.

Add as follows:

Type II hoods shall be installed where cooking or dishwashing appliances produce heat or steam and do not produce grease or smoke, such as steamers, kettles, pasta cookers, pizza ovens, and dishwashing machines.

Exceptions:

1. Under-counter type commercial dishwashing machines and low temperature chemical dishwashing machines.

2. A type II hood is not required for dishwashers and potwashers that are provided with hear and water vapor exhaust systems that are supplied by the appliance manufacturer and are installed in accordance with the manufacturers instructions.

508.2 Compensating hoods.

Add as follows:

Manufacturers of compensating hood shall provide a label indicating minimum exhaust flow and/or maximum makeup airflow that provides capture and containment of the exhaust effluent. Short-circuit compensating hoods are prohibited

Add new section as follows:

508.2.1 Compensating hood makeup air.

Compensating hoods shall extract at least 40 percent of the required exhaust air flow from the kitchen area.

CHAPTER 7
COMBUSTION AIR

701.4 Crawl space and attic space.

Revise as follows:

701.4 Crawl space. For the purposes of this chapter, an opening to a naturally ventilated crawl space shall be considered equivalent to an opening to the outdoors.

701.4.2 Attic space.

Delete entire section.

701.5 Prohibited sources.

Add as follows:

Openings and ducts shall not connect appliance enclosures with a space in which the operation of a fan will adversely affect the flow of combustion air. Combustion air shall not be obtained from a hazardous location, except where fuel fired appliances are located within the hazardous location and are installed in accordance with this code. Combustion air shall not be taken from a refrigeration machinery room, except where a refrigerant vapor detector system is installed to automatically shut off the combustion process in the event of refrigerant leakage. Combustion air shall not be obtained from any location below the design flood elevation or an attic.

706.1 General.

Revise as follows:

Where all combustion air and dilution air is provided by a mechanical forced-air system, the combustion air and dilution air shall be supplied at the minimum rate of 0.35 cubic feet per minute per 1,000 Btu/h (0.034 m^3/min per kW) of combined input rating of all the fuel-burning appliances served. Each of the appliances served shall be electrically interlocked to the mechanical forced-air system so as to prevent operation of the appliances when the mechanical system is not in operation. Where combustion air and dilution air is provided by the building's mechanical ventilation system, the system shall provide the specified combustion/dilution air rate in addition to the required ventilation air.

CHAPTER 10

BOILERS, WATER HEATERS AND PRESSURE VESSELS

1001.1 Scope.

Add as follows:

Exception: 7. Any boiler or pressure vessel subject to inspection by federal or state inspectors. (Refer to North Dakota Boiler Law Rules and Regulations.)

CHAPTER 11

REFRIGERATION

1104.2 Machinery room.

Add **Exception** as follows:

3. If an existing refrigerating system is replaced or if an existing refrigeration plan is increased by not more than 50 percent of its original capacity, but not more than 100 tons per system using a nonflammable class A1 or B1 refrigerant and the refrigeration machinery room was not provided in the original installation prior to 1994, a refrigeration machinery room shall not be required. If the existing refrigeration is not located in a general machinery room separated from occupied spaces, a refrigeration machinery room shall be provided. The space containing the refrigeration machinery shall meet the requirements of Section 1104.3.4, protection from refrigerant decomposition, and Section 1105.3, requiring refrigerant detector. If the requirements of 1104.3.4 and 1105.3 cannot be met, a refrigeration machinery room shall be provided.

2003 INTERNATIONAL FUEL GAS CODE
AMENDMENTS

NOTE: Wherever the International Plumbing Code and International Electrical Code are referenced, substitute the reference with the North Dakota State Plumbing Code and Wiring Standards of North Dakota.

CHAPTER 3

GENERAL REGULATIONS

303.3 Prohibited locations.

Delete **Exception** 3

304.6.1 Two-permanent -openings method.

Revise 2nd paragraph follows:

Where directly communicating with the outdoors, or where communicating with the outdoors through vertical ducts, each opening shall have a minimum free area of 1 square inch per 4,000 Btu/h (550 mm^2kw) of total input rating of all equipment in the enclosure.

Figure 304.6.1(1)

Delete entire **Figure**

Figure 304.6.1(2)

Delete entire **Figure**

304.6.2 One-permanent-opening method.

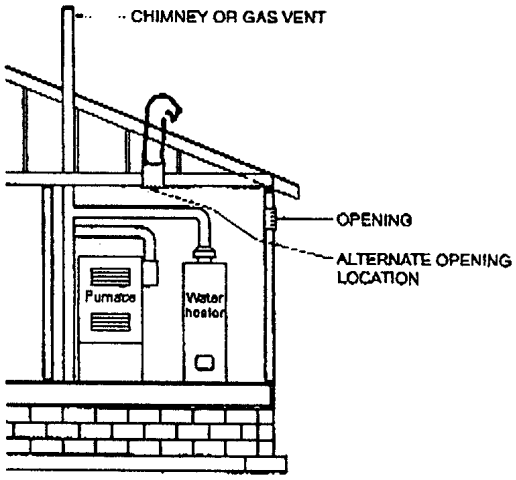
Revise as follows:

One permanent opening, commencing within 12 inches (305 mm) of the top of the enclosure, shall be provided. The equipment shall have clearances of at least 1 inch (25 mm) from the sides and back and 6 inches (152 mm) from the front of the appliance. The opening shall directly communicate with the outdoors or through a vertical or horizontal duct to the outdoors and shall have a minimum free area of 1 square inch per 3,000 Btu/h (734 mm^2kw) of the total input rating of all equipment located in the enclosure, and not less than the sum of the areas of all vent connectors in the space.

Figure 304.6.2

Revise **Figure** as follows:

Combustion air duct extending through roof instead of open to the attic.



305.7 Clearances from grade.

Add as follows:

Equipment and appliances installed at grade level shall be supported on a level concrete slab or other approved material extending a minium of 4 inches above adjoining grade or shall be suspended a minimum of 6 inches (152 mm) above adjoining grade.

308.4.6. Clearance from supply ducts.

Delete entire section

CHAPTER 4

GAS PIPING INSTALLATION

403.10.1 Pipe joints.

Add as follows:

Pipe joints shall be threaded, flanged, brazed or welded. Where nonferrous pipe is brazed, the brazing materials shall have a melting point in excess of 1,000° F (538°C). Brazing alloys shall not contain more than 0.05-percent phosphorus. Gas supply systems with pressures 5 psig or greater and gas pipe joints 2½ inches or larger, regardless of pressure, shall be welded.

403.10.4 Metallic fittings.

Revise 1 as follows:

1. Threaded fittings in sizes 2 ½ inches or larger shall not be used except where approved.

406.4 Test pressure measurement.

Revise as follows:

Test pressure shall be measured with a manometer or with a pressure-measuring device designed and calibrated to read, record, or indicate a pressure loss caused by leakage during he pressure test period. The source of pressure shall be isolated before the pressure tests are made. Mechanical gauges used to measure test pressures shall have a range such that the highest end of the scale is not greater than five times the test pressure. Dial gauges used to measure test pressures shall be utilized that have graduation of 2 psi (13.8 kpa) or less and have a range not exceeding 100 psi unless otherwise approved.

406.4.1 Test pressure.

Revise as follows:

The test pressure to be used shall be no less than 1½ times the proposed maximum working pressure, but not less than 25 psig, irrespective of design pressure. Where the test pressure exceeds 125 psig (862 kPa gauge), the test pressure shall not exceed a value that produces a hoop stress in the piping greater than 50 percent of the specified minimum yield strength of the pipe.

408.2 Drips.

Revise as follows:

Where wet gas exists, a drip shall be provided at any point in the line of pipe where condensate could collect.

411.1.3 Movable appliances.

Add as follows:

Where appliances are equipped with casters or are otherwise subject to periodic movement or relocation for purposes such as routine cleaning and maintenance, such appliances shall be connected to the supply systems piping by means of an approved flexible connector designed and labeled for the application. Such flexible connectors shall be installed and protected against physical damage in accordance with the manufacturers installation instructions. Connectors shall have listed and labeled quick - disconnect devices and shall have retaining cable attached to structure and equipment.

415.1 Interval of support.

Add as follows:

Piping shall be supported at intervals not exceeding the spacing specified in Table 415.1 Spacing of supports for CSST shall be in accordance with the CSST manufacturer's instructions. In addition to the requirements of Table 415.1, piping and tubing shall be supported within 2 feet (610 mm) of every bend or angle.

CHAPTER 5
CHIMNEYS AND VENTS

501.8 Equipment not required to be vented.

Revise as follows:

The following appliances shall not be required to be vented.

1. Ranges
2. Built-in domestic cooking units listed and marked for optional venting.
3. Hot plates and laundry stoves.
4. Type 1 clothes dryers (Type 1 clothes dryers shall be exhausted in accordance with the requirements of Section 613).
5. A single booster-type automatic instantaneous water heater, where designed and used solely for the sanitizing rinse requirements of a dishwashing machine, provided that the heater is installed in a commercial kitchen having a mechanical exhaust system. Where installed in this manner, the draft hood, if required, shall be in place and unaltered and the draft hood outlet shall be not less than 36 inches (914) vertically and 6 inches (152 mm) horizontally from any surface other than the heater.
6. Refrigerators
7. Counter appliances.
8. Direct-fired make-up air heaters.
9. Other equipment listed for unvented use and not provided with flue collars.
10. Specialized equipment of limited input such as laboratory burners and gas lights.

Where the appliances and equipment....

501.12 Residential and low-heat appliances flue lining systems.

Add as follows:

Flue lining systems for the use with residential-type and low-heat appliances shall be limited to the following:

1. Clay flue lining complying with the requirements of ASTM C 315 or equivalent when each appliance connected into the masonry chimney has a minimum input rating greater than 400,000 Btu/h. Clay flue lining shall be installed in accordance with the *International Building Code*.

2. Listed chimney lining systems complying with UL 1777.

3. Other approved materials that will resist, without cracking, softening or corrosion, flue gases and condensate at temperatures up to 1,800°F (982° C).

    a. Aluminum (1100 or 3003 alloy or equivalent) not less than 0.032 inches thick to 8 inches diameter.

    b. Stainless steel (304 or 430 alloy or equivalent) not less than 26 gauge (0.018 inches thick) to 8 inches diameter or not less than 24 gage (0.024 inches thick) 8 inches diameter and larger.

    When a metal liner is used other than a listed chimney liner a condensation drip tee shall be installed and supported in an approved manner.

503.5.3 Masonry chimneys.

Revise as follows:

Masonry chimneys shall be built and installed in accordance with NFPA 211 and shall be lined as per Section. 501.12.

CHAPTER 6

SPECIFIC APPLIANCES

614.6.1 Maximum length.

Revise and add as follows:

The maximum length of a clothes dryer exhaust duct shall not exceed 25 feet (7620 mm) from the dryer location, including two 90-degree elbows, to the outlet terminal. The maximum length of the duct shall be reduced 2½ feet (762 mm) for each additional 45-degree (0.79 rad) bend and 5 feet (1524 mm) for each additional 90-degree (1.6 rad) bend.

618.6 Screen.

Revise as follows:

Required outdoor air inlets for residential portions of a building shall be covered with a screen having ¼-inch (6.4 mm) openings. Required outdoor air inlets serving a nonresidential portion of a building shall be covered with a screen having openings larger than ¼-inch (6.4mm) and not larger than ½-inch.

SECTION 621 (IFGC)
UNVENTED ROOM HEATERS

621.1 General.

Revise as follows:

621.1 Unvented log heaters.

An unvented log heater shall not be installed in a factory-built fireplace unless the fireplace system has been specifically tested, listed and labeled for such use in accordance with UL 127.

621.2 Prohibited use.

Delete entire section

621.3 Input rating.

Delete entire section

621.4 Prohibited locations.

Delete entire section

621.5 Room or space volume.

Delete entire section

621.6 Oxygen depletion safety system.

Delete entire section

621.7 Unvented log heaters.

Redesignate as 620.1

623.1 Cooking appliances.

Add as follows:

Cooking appliance that are designed for permanent installation, including ranges, ovens, stoves, broilers, grills, fryers, griddles, hot plates and barbecues, shall be tested in accordance with ANSI Z21.1, ANSI Z21.58, or ANSI Z83.11 and shall be listed, labeled, and shall be installed in accordance with the manufacturer's installation instructions.

CHAPTER 8

REFERENCED STANDARDS

Revise as follows:

ASME CSD-1 2002 Controls and Safety Devices for Automatically Fired Boilers

AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG)

N.D.C.C 54-21.3-04.1 requires that every building or facility subject to the federal Americans with Disabilities Act must conform to the accessibility standards of the Americans with Disabilities Act Accessibility Guidelines ADAAG). The law also requires a state agency or the governing body of a political subdivision to obtain from any person preparing plans and specifications for a building or facility subject to the Americans with Disabilities Act, a statement that the plans and specifications are, in the professional judgment of that person, in conformance with the ADAAG. This form must then be submitted to the Division of Community Services. Page 57 of this document contains the ADAAG Conformance Statement that is required.

ADAAG CONFORMANCE STATEMENT

NORTH DAKOTA DIVISION OF COMMUNITY SERVICES

SFN 19701 (06/03)

(This form must be submitted for new construction, alternations and additions to buildings and facilities subject to the Americans with Disabilities Act)

AMERICAN WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG) CONFORMANCE STATEMENT	
Name & Building Address	Owner City/County
Date Construction to Start	Projected Completion Date
Type of Construction New Building ☐ Sq. Ft. _____ Addition ☐ Sq. Ft. _____ Alteration ☐ Sq. Ft. _____	
Describe Alteration:	
Type of Occupancy/Use (Refer to Occupancies and Divisions defined in the Uniform Building Code):	
I certify, to the best of my professional judgement, that the plans and specifications for the above referenced building or facility conforms with the Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities as adopted in North Dakota Century Code Section 54-21.3-04.1.	
_____ Name of Design Professional	_____ Firm
_____ Signature	_____ Phone Number Date

Send To: **Division of Community Services**
1600 East Century Avenue, Suite 20
PO Box 2057
Bismarck, ND 58502-2057

SAMPLE MODEL ORDINANCE

The following is a Sample Model Ordinance for the adoption of the State Building Code for those cities, townships, and counties that elect to administer and enforce a building code.

Adoption of Code

The erection, construction, enlargement, alteration, repair, moving, removal, demolition, conversion, occupancy, equipment, uses, height, area and maintenance of buildings or structures in the City/Township/County of _____ shall meet with the provisions of the rules and regulations of the North Dakota State Building Code and any future updates and amendments to that code, _____ copies of which are on file with the City Auditor/Township Board/County Auditor and are hereby made a part of this chapter by reference with the exception of the sections hereinafter set forth affecting local conditions in the City/Township/County, which are amended, for use and application in the City/Township/County, and the City/Township/County hereby adopts said code as so modified.

Amendments

Sec. ____ Shall be revised to read as follows:

Sec. ____ Shall be added to read as follows:

Sec. ____ Shall be deleted

Fees

Fees under the Building Code shall be as follows:

NOTE: A suggested Building Permit Fees schedule can be found on page 11 of this document.