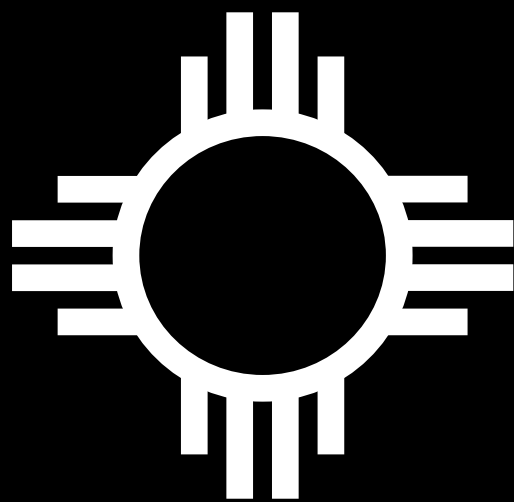


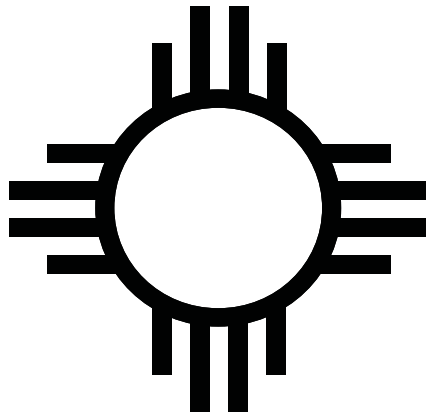
**NEW
MEXICO
REGISTER**



Volume XXII
Issue Number 3
February 14, 2011

New Mexico Register

**Volume XXII, Issue Number 3
February 14, 2011**



The official publication for all notices of rulemaking and filings of adopted, proposed and emergency rules in New Mexico

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Administrative Law Division
Santa Fe, New Mexico
2011

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New Mexico Register

Volume XXII, Number 3

February 14, 2011

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Rules published in this issue of the New Mexico Register are effective on the publication date of this issue unless otherwise specified. “No rule shall be valid or enforceable until it is filed with the records center and published in the New Mexico register as provided by the State Rules Act. Unless a later date is otherwise provided by law, the effective date of a rule shall be the date of publication in the New Mexico register.” Section 14-4-5 NMSA 1978.

A=Amended, E=Emergency, N=New, R=Repealed, Rn=Renumbered

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Notices of Rulemaking and Proposed Rules

NEW MEXICO PUBLIC REGULATION COMMISSION

BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

Case No. 10-00389-UT & 10-00390-TR-P

IN THE MATTER OF AMENDING THE COMMISSION'S PROCEDURAL RULE ON WHEN A PARTY MAY BE REPRESENTED BY A NON- ATTORNEY

NOTICE OF PROPOSED RULEMAKING

NOTICE IS HEREBY GIVEN that the New Mexico Public Regulation Commission (Commission) proposes to amend its existing rule regarding under what circumstances a non-attorney may represent an entity appearing before the Commission in a formal proceeding. This rule is currently codified in the New Mexico Administrative Code (NMAC) at 1.2.2.9. This matter comes before the Commission on its own motion; whereupon, being duly advised,

THE COMMISSION FINDS AND CONCLUDES:

1. The Commission's current procedural rule at 1.2.2.9 NMAC restricts practice before the Commission to attorneys in "formal proceedings" except under limited circumstances, set forth in 1.2.2.9(F) NMAC including, for example, persons representing associations of residential consumers, small water utilities, and water and sanitation districts.

2. The Commission has from time to time been asked to waive its procedural rule on non-attorney representation in order to permit various entities other than those enumerated in 1.2.2.9(F) NMAC with limited financial resources to participate in Commission adjudicatory proceedings.

3. In the Final Order in Case Number 05-00472-UT, In the Matter of the Complaint by Computer Network Service Professionals, Inc. Against Qwest Corporation, issued July 30, 2009, the Commission discussed the origin of the rule regarding non-attorney representation, and specified criteria to be applied in determining whether to waive the rule. The Order explains that the blanket ban on non-attorney representation in judicial

matters flows from the statutes barring unauthorized practice of law, but that appearances before administrative bodies are not necessarily reserved to attorneys. The Order goes on state four principles for waiving rule 1.2.2.9 NMAC and allowing non-attorney representation in Commission proceedings. The four principles are that (i) the representative has the ability to clearly state the nature of the entity's position in writing; (ii) the representative has formal written authorization of the entity to act on its behalf in all proceedings of the Commission on a specific matter.; (iii) the entity and the representative are familiar with the Commission's rules and agree to abide by those rules; (iv) extraordinary circumstances exist which make waiver of the rule in the best interest of administrative fairness. Final Order, Case No. 05-00472-UT, pages 3, 4.

4. Entities having a legitimate interest in matters before the Commission, but lacking the financial resources to secure attorney representation, should be encouraged to participate in Commission adjudicatory proceedings. This is particularly true for not-for-profit corporations and associations representing public policy positions, but it is also true for small, for-profit entities. Some entities may be discouraged from pursuing opportunities to participate in adjudicatory proceedings in which they have an interest because the plain language of the procedural rules prohibit non-attorney representation, and they are unaware of the potential for waiver of the rule.

5. The Commission intends to use the criteria from the Final Order in Case No. 05-00472-UT as precedent in evaluating future requests for non-attorney representation. However, Commission final orders are not as accessible to the general public as the New Mexico Administrative Code.

6. The Commission should consider amending rule 1.2.2.9 NMAC to explicitly state the conditions under which non-attorney representation will be permitted in Commission adjudicatory proceedings. The Commission should issue a notice of proposed rulemaking (NOPR) to consider the proposed revisions to 1.2.2.9 NMAC contained in Exhibit 1, attached to and incorporated by reference in this NOPR, and conduct a public hearing on the proposed revisions.

7. The Commission will accept written comments on the rule contained in Exhibit 1 and proposed in this NOPR from any interested person.

Interested persons shall file their written

comments on the proposed rules no later than March 29, 2011. Any response comments shall be filed no later than **April 22, 2011.** Comments suggesting changes to the proposed rule shall state and discuss the particular reasons for the suggested changes and shall include all specific language necessary or appropriate to effectuate the changes being suggested. Specific proposed language changes to the proposed rule shall be in legislative format. All pleadings, including comments and suggested changes to the proposed rules, shall bear the caption and docket number contained at the top of this NOPR.

8. Written comments or written response comments shall be sent to:
Melanie Sandoval
Records and Docketing Division
New Mexico Public Regulation
Commission

Attention: Case No. 10-00389-UT
AND 10-00390-TR-P
1120 Paseo de Peralta
Santa Fe, NM 87504

9. Copies of the proposed rules may be downloaded from the Commission's website, www.nmCommission.state.nm.us.

10. The Commission will review all timely submitted written comments and will hold a public comment hearing beginning at **2:00 p.m. on May 11, 2011**, at the Commission Hearing Room, 4th Floor, PERA Building, 1120 Paseo de Peralta, Santa Fe, New Mexico.

11. Any person with a disability requiring special assistance in order to participate in a hearing should contact Cecilia Rios at 827-4501 at least 48 hours prior to the commencement of the hearing.

12. 1.2.3.7(B) NMAC ("Ex Parte Communications") draws a distinction applicable to rulemaking proceedings between communications occurring before the record has been closed and communications occurring after the record has been closed. It defines only the latter as "ex parte communications." In order to assure compliance with 1.2.3.7(B) NMAC, the Commission should set a date on which it will consider the record to be closed. The Commission finds that date shall be the earlier of thirty (30) days following the Public Hearing; that is, June 10, 2011, or the date a Final Order is issued in this case. The setting of that record closure date will permit Commissioners and Commission Counsel to

conduct follow-up discussions with parties who have submitted initial or response comments to the Commission's proposed rules or responses to any bench requests. However, this action should not be interpreted as extending the time during which parties may file comments or response comments, or as allowing the filing of other types of documents in this case.

13. Copies of this Notice should be sent to all persons on the attached Certificate of Service.

IT IS THEREFORE ORDERED:

A. A rulemaking proceeding should be, and hereby is, instituted in this Docket concerning under what circumstances a non-attorney may represent an entity appearing before the Commission in a formal proceeding, as currently codified in at 1.2.2.9 NMAC. The proposed rule, attached to this NOPR as Exhibit 1, is proposed for adoption as a permanent rule as provided by this NOPR.

B. This NOPR shall constitute due and lawful notice to all potentially interested parties.

C. Initial comments on the proposed rule must be filed by **March 29, 2011** and response comments must be filed by **April 22, 2011**.

D. A **public hearing** on the proposed rule amendments shall be held beginning at **2:00 p.m. on May 11, 2011** at the offices of the Commission, at the following location:

**4th Floor Hearing Room
1120 Paseo de Peralta
Santa Fe, New Mexico 87501
Tel. 1-888-4ASK-PRC (1-888-427-5772)**

E. Pursuant to 1.2.3.7(B) NMAC, the record in this case will be closed on the earlier of thirty (30) days following the Public Hearing; that is, June 10, 2011, or the date a Final Order is issued in this case.

F. Persons providing public comment and/or participating in this public hearing are encouraged to provide specific comment on the proposed rule. Those wishing to make comments are also encouraged to address any other topic that may be relevant to this rulemaking.

G. Interested persons should contact the Commission to confirm the date, time and place of any public hearing, because hearings are occasionally rescheduled. Any person with a disability requiring special assistance in order to participate in the Hearing should contact Ms. Cecilia Rios at (505) 827-4501 at least 48 hours prior to the commencement of the Hearing.

H. In accordance with NMSA 1978, § 8-8-15(B), this NOPR, including Exhibit 1, shall be mailed **at least thirty days prior to the first hearing date** to all persons who have made a written request for advance notice.

I. In addition, copies of this NOPR, including Exhibit 1, shall be e-mailed to all persons on the attached Certificate Of Service if their e-mail addresses are known. If their e-mail addresses are not known, then the same materials shall be mailed to such persons via regular mail.

J. This NOPR, without Exhibit 1, pursuant to NMSA 1978 14.4.7.1.B(1) shall be published in at least two newspapers of regular circulation in the State of New Mexico, and in the NEW MEXICO REGISTER. Affidavits attesting to the publication of this NOPR as described above shall be filed in this docket.

K. In addition, this NOPR shall be posted on the Commission's official Website.

L. This NOPR is effective immediately.

ISSUED under the Seal of the Commission at Santa Fe, New Mexico, this 4th day of January, 2011.

**NEW MEXICO PUBLIC REGULATION COMMISSION
DAVID W. KING, CHAIRMAN
JEROME D. BLOCK, VICE CHAIRMAN
JASON A. MARKS, COMMISSIONER
THERESA BECENTI-AGUILAR, COMMISSIONER
SANDY JONES, COMMISSIONER**

End of Notices and Proposed Rules Section

Adopted Rules

NEW MEXICO COUNCIL FOR PURCHASING FROM PERSONS WITH DISABILITIES

This is an amendment to 2.40.5 NMAC, Sections 7, 8, 9, 10, 11, 14 and 15, effective January 15, 2011.

2.40.5.7 DEFINITIONS:

A. "Appreciable contribution" means significant labor of individuals with disabilities applied to a service.

B. "Brokering" means negotiating contracts, as an agency, between organizations or individuals, for compensation.

C. "Central [non-profit] nonprofit agency" means a nonprofit agency approved pursuant to rules of the council to facilitate the equitable distribution of orders and services of:

- (1) qualified individuals; and
- (2) community rehabilitation programs.

D. "Council" means the New Mexico council for purchasing from persons with disabilities.

E. "Community rehabilitation program" means a nonprofit entity:

- (1) that is organized under the laws of the United States or this state, operated in the interest of person with disabilities and operated so that no part of the income which inures to the benefit of any shareholder or other person;

- (2) that complies with applicable occupational health and safety standards as required by federal or state law; and

- (3) that, in the provision of services, whether or not procured under the State Use Act, employs during the state fiscal year at least seventy-five percent [person] (75%) persons with disabilities in direct labor for the provision of services. Hours of work shall be used to calculate number of persons working in order to determine compliance to the seventy -five percent (75%) ratio, based on standard full time equivalent of 2080 hours per year equating to one person.

F. "Integration" means equal access for non-disabled and individuals with disabilities: the process of ensuring employment opportunities to all regardless of disability.

G. "Local public body" means a political subdivision of the state and political subdivision agencies, instrumentalities and institutions.

H. [~~Individual with a~~

disability²²] "Persons with disabilities" means persons who have a mental, intellectual or physical impairment that constitutes or results in substantial impediment to employment as defined by the federal Rehabilitation Act of 1973, and shall be certified eligible for participation by completing council approved documentation through the central nonprofit agency, unless the person has prior presumptive eligibility as follows. A person who is receiving services pursuant to an individualized plan for employment from the vocational rehabilitation division of the public education department or from the commission for the blind or the federal veterans affairs administration shall be presumed to be a person with a disability, as shall a person who is receiving supplemental security income or social security benefits based on disability.

I. "Provider" means a community rehabilitation program or qualified individual who has been approved to offer services under contract to the central nonprofit agency.

[H.] J. "Qualified individual" means a person with a disability who is a business owner, or a business that is primarily owned and operated by persons with disabilities that employs at least seventy-five percent (75%) persons with disabilities in the provision of direct labor, which has been approved by the council to provide services to state agencies and local public bodies.

[J.] K. "State use eligible services" means [~~those~~] all services which are to be provided by persons with disabilities and which the council determines are suitable for sale to state agencies and local public bodies.

[K.] L. "State purchasing [office] agent" means the director of the state purchasing division of the general services department.

[L.] M. "State Use Act program" means a program enacted through legislation by the New Mexico state legislature that allows meaningful employment opportunities through state and local government contracts to [~~person~~] persons with disabilities.

[M.] N. "Value added" means direct labor involved in delivering services performed by persons with disabilities.

[2.40.5.7 NMAC - N, 03/30/3007; A, 01/15/2011]

2.40.5.8 DETERMINATION OF WHICH SERVICES PROVIDED BY PERSONS WITH DISABILITIES ARE SUITABLE FOR SALE TO STATE AGENCIES AND LOCAL PUBLIC BODIES [~~BY PERSONS WITH~~

DISABILITIES]:

A. Services provided by persons with disabilities suitable for sale to state agencies and local public bodies:

(1) must be within the competency of the prospective provider;

(2) must have potential to provide positive, integrated employment outcome for persons with disabilities;

(3) may be approved as statewide, or by specific contract offering [or] by a state agency or local public body;

(4) require the approval by the council prior to being offered.

B. Council determination of suitability extends to specific individual contracts procured under a given service; the council may accept or reject a given contract as suitable based on criteria established under rule and statute, such as meeting appreciable contribution requirements, ratio requirements, impact or fair market pricing requirements.

[B:] C. Any [service] potential contract that entails brokering solely on the part of the community rehabilitation program is not suitable for the State Use Act program. An appreciable contribution to the services must be made by persons with disabilities.

[C:] D. The decision that the labor of persons with disabilities constitutes appreciable contribution shall be at the discretion of the council.

[D.] ~~Create a list of the identified services.]~~

[2.40.5.8 NMAC - N, 03/30/2007; A, 01/15/2011]

2.40.5.9 ESTABLISHING, MAINTAINING AND PUBLISHING OF A LIST OF ALL SUITABLE SERVICES:

A. The council shall establish, approve and revise a list of suitable services through a contract with a [~~community not-profit~~] central nonprofit agency on an as needed basis.

B. Copies of the list shall be published at the state purchasing office and on-line at appropriate state websites, on a website maintained by the central [~~non-profit~~] nonprofit agency, and may also be advertised in New Mexico business publications.

C. The council requires that the central [~~non-profit~~] nonprofit agency to establish procedures to submit a given service for council approval. The central [~~non-profit~~] nonprofit agency shall be responsible for providing the council with information to substantiate the conditions for service determination.

D. Once approved by the council, services shall be included in a master list of approved services.

E. New services may be added to the list upon a majority vote at any council meeting. [2.40.4.9 NMAC - N, 03/30/2007; A, 01/15/2011]

2.40.5.10 ESTABLISHING AND VERIFYING FAIR MARKET PRICE:

A. The council shall verify and revise the fair market prices [through a contract with the central non-profit agency,] on an as needed basis.

B. The council shall revise the fair market prices in accordance with the changing market conditions to ensure that contracted services offer the best value for state agencies and local public bodies.

C. The pricing standard for services should be as close as possible to prevailing market price not including the central [non-profit] nonprofit agency fee.

D. The council shall set the price within a range submitted by the central [non-profit] nonprofit agency taking into consideration the benefits associated with employment of persons with disabilities.

E. Fair market price may be established based on:

(1) prices paid for similar services by federal, state and local public bodies and by private businesses; or

(2) the actual cost of performing the services at a community rehabilitation program, determined by use of a council approved cost analysis worksheet, taking into consideration the benefits associated with employing persons with disabilities; or

(3) any other accepted business method acceptable to the council.

F. When considering a contract award, in order to ensure that services offer the best value for state agencies and other public bodies, the central nonprofit agency shall determine suitability of individual contracts to be provided under each service, including, but not necessarily limited to:

(1) external requirements that proscribe the use of a specific provider, such as:

(a) contracts which must be awarded to providers who are sanctioned by the federal corporation for national and community services;

(b) mandated projects that must be awarded to an area agency on aging pursuant to federal law;

(2) significant adverse impact to a state agency or local public body, when contracting for professional services, resulting in the loss of content knowledge associated with confidential, proprietary, or attorney/client privileged information; in such instances the government's central purchasing office shall notify the central nonprofit in writing prior to contract award.

G. The council chairperson shall have the authority to give tentative approval for specific contracts for work by the central nonprofit agency, between council meetings, subject to ratification by the full council at its next scheduled meeting, when time is of the essence for the purchaser.

H. The council shall establish procedures for verifying fair market price, which shall be published on the central nonprofit agency's website. [2.40.5.10 NMAC - N, 03/30/2007; A, 01/15/2011]

2.40.5.11 PROCEDURE TO CERTIFY ELIGIBLE COMMUNITY REHABILITATION PROGRAMS AND QUALIFIED INDIVIDUALS:

The certification procedure to determine eligible [services] provider members shall consist of a two part process:

A. Certification of eligibility as a qualified individual with a disability or community rehabilitation program as defined by statute.

B. Verification of ability to perform the service.

[2.40.5.11 NMAC - N, 03/30/2007; A, 01/15/2011]

2.40.5.14 OTHER MATTERS RELATED TO THE STATE USE ACT:

A. It is the council's [policy] responsibility to identify, respond to, and equitably distribute, to as broad a base of eligible participants as possible, all relevant contract opportunities.

B. The council reserves the authority to make final contract distribution decisions based on the above policy and process, as well as any other unique factors or special circumstances. The central nonprofit agency shall establish an appeals process for contract distribution or disputes, and for resolving price and quality-related disputes between parties in the exercise and administration of the State Use Act program, with the council being the final determining body. This process shall be applicable to state and local public body purchasers obtaining services under the State Use Act program, and nonprofit agencies and qualified individuals with a disability who own businesses certified by New Mexico abilities and providing services under state use contracts.

C. All regular meetings of the council shall include an agenda item for an open public forum. The council shall set aside a specific time at each meeting for the public, government officials, and businesses to address the council regarding any issues and concerns related to the State Use Act and its implementation. The council shall use this ongoing mechanism to solicit ongoing feedback, to promote the intention of the State Use Act to create employment

opportunities for persons with disabilities, while promoting efficiency and best value for state and local government purchasing entities.

D. Meetings shall be conducted according to requirements of the Open Meetings Act.

[E-] E. The council shall address any other matter necessary to the proper administration of the State Use Act.

[2.40.5.14 NMAC - N, 03/30/2007; A, 01/15/2011]

2.40.5.15 INTEGRATION, FAIR PAY AND ADDED VALUE:

A. [It is the council's policy to] The council shall ensure that the:

[A-] (1) work provides opportunities for integration with non-disabled persons;

[B-] (2) work provides fair pay based on prevailing wages;

[C-] (3) work provides equitable opportunities for the employment of people with disabilities; and

[D-] (4) services provide added value.

B. Community rehabilitation programs and qualified individuals must employ during the state fiscal year at least seventy-five percent (75%) persons with disabilities in the provision of direct labor. In determining ratio calculation, all employees providing direct labor on all state use contracts shall be counted. Hours of work shall be used to calculate the ratio.

C. In the event of failure to meet the ratio requirement, the council may request a remediation plan from the provider specifying actions and timelines to meet requirement, which the council must approve. In the event of provider failure to provide an adequate remediation plan, or meet remediation plan commitments, the council may place a moratorium on new state use work by that provider, or assign the contract to another provider, or in the event of persistent ratio problems, ban the provider from eligibility to participate in the State Use Act program for up to a two year period.

[2.40.5.15 NMAC - N, 03/30/2007; A, 01/15/2011]

NEW MEXICO REAL ESTATE APPRAISERS BOARD

This is an amendment to 16.62.1 NMAC, Section 14, effective 01/16/2011

16.62.1.14 APPRAISAL MANAGEMENT COMPANIES:

A. An appraiser may not perform an appraisal for an appraisal management company (AMC) unless that company is registered pursuant to the Appraisal Management Company Registration Act 47-14-1 NMSA 1978.

B. In the body of an appraisal report completed for an AMC, the appraiser must include:

(1) the required minimum information contained within the engagement letter as set forth in AMC 16.65.2.12 NMAC; a copy of the engagement letter will meet this requirement;

(2) any additional scope of work requirements.

C. An appraiser engaged with an AMC must provide the AMC with their combined reporting system (CRS) identification number.

[16.62.1.14 NMAC - N, 08/21/2010; A, 01/16/2011]

NEW MEXICO REAL ESTATE APPRAISERS BOARD

This is an amendment to 16.62.7 NMAC, Section 10, 12 & 13 effective 01/16/2011

16.62.7.10 RENEWAL PROCESS:

A. A completed renewal application, accompanied by the required fee as defined in 16.62.12.8 NMAC and documentation of ~~[28]~~ 32 hours of continuing education. Renewal applications must be post-marked or delivered to the board office on or before April 30 of the renewal year.

B. Deferrals may not be granted to credential holders, except in the case of individuals returning from active military duty. Licensees returning from active military duty may be placed in active status for a period of up to 90 days pending completion of all continuing education requirements.

C. The board shall audit a percentage of renewal applications each renewal period to verify the continuing education requirement has been met. The licensee must maintain proof of continuing education courses taken for the past four (4) years. The board reserves the right to audit a licensee's continuing education records as it deems necessary.

[10/1/97; 16.62.7.10 NMAC - Rn & A, 16 NMAC 62.7.10, 09/13/2004; A, 11/25/2006; A, 06/13/2008; A, 01/16/2011]

16.62.7.12 R E Q U I R E D CONTINUING EDUCATION:

A. Thirty-two (32) classroom hours of continuing education in courses approved by the board are required in each two-year renewal period. Four (4) of these hours must be achieved through a board approved renewal update course.

B. Each license holder is required to submit a list of continuing education courses with each renewal ~~[with copies of certificate(s) of successful completion for the continuing education taken]~~ application. Continuing education requirements are pro-rated at ~~[fourteen]~~ sixteen hours per full year and ~~[1-17]~~ 1.33 hours for each additional month of the initial licensing period. Ten (10) percent of continuing education will be audited.

C. Effective with the first biennial renewal period and each subsequent renewal, a seven (7) hour class in the national uniform standards of professional appraisal practice update course is required as part of the continuing education requirement. Successful completion includes passing an exam, if required, by the appraiser qualifications board (AQB).

D. Educational offerings taken by an individual in order to fulfill the class hour requirement for a different classification than his/her current classification may be simultaneously counted towards the continuing education requirement of his/her current classification.

E. Credit towards the continuing education hour requirements for each appraiser classification may be granted only where the length of the educational offering is at least two (2) hours.

[10/1/97; 16.62.7.12 NMAC - Rn & A, 16 NMAC 62.7.12, 09/13/2004; A, 11/25/2006; A, 08/21/2010; A, 01/16/2011]

16.62.7.13 RENEWAL AFTER DEADLINE: A license not renewed ~~[within the 30 days immediately following]~~ on the renewal date is expired.

[10/1/97; 16.62.7.13 NMAC - Rn, 16 NMAC 62.7.13, 09/13/2004; A, 01/16/2011]

NEW MEXICO REAL ESTATE APPRAISERS BOARD

This is an amendment to 16.62.8 NMAC, Section 12, 14 & 15, effective 01/16/2011

16.62.8.12 C O N T I N U I N G EDUCATION REQUIREMENTS:

Thirty-

two (32) ~~[classroom]~~ hours of continuing education are required each biennial renewal period. Continuing education requirements for initial apprentices, licenses or certificates issued for less than two full years are pro-rated as defined in 16.62.7.12 NMAC.

A. Individuals must successfully complete the seven (7) hour national uniform standards of professional appraisal practice (USPAP) update course, or its equivalent as approved by the appraiser qualifications board (AQB). Successful completion includes passing an exam if required by the appraiser qualifications board (AQB).

B. Successful completion of ~~[this] the AQB approved seven (7) hour national USPAP update course and the four (4) hour board approved renewal update course~~ will be required of every apprentice, license and certificate holder as a condition of renewal in each biennial renewal.

[3/14/00; 16.62.8.12 NMAC - Rn & A, 16 NMAC 62.8.12, 09/13/2004; A, 11/25/2006; A, 08/21/2010; A, 01/16/2011]

16.62.8.14 APPROVAL OF SPONSORS: The board may approve individuals or organizations as course sponsors. Colleges and universities offering credit courses in real estate appraisal are also considered approved sponsors.

A. Requests for approval must be made on board approved forms and include a code of conduct for instructors.

B. The instructor selection and retention policy will include, at a minimum, the following requirements:

(1) instructors of qualifying education courses must be licensed by exam or certified at the same or a higher category than the level of classes they are engaged to teach;

(2) instructors engaged to teach the national uniform standards of professional appraisal practice (USPAP) course must qualify under the instructor evaluation policy for instructor selection for the national USPAP course developed by the appraisal foundation;

(3) instructors must teach only the appraisal foundation-approved national uniform standards of professional appraisal practice (USPAP) course;

(4) student critiques must be requested and maintained for each class given;

(5) a summary of the critiques and the pass rate of the class must be submitted to the board within 30 days after the course is completed;

(6) the sponsor shall provide a procedure for periodic monitoring of instructors in the classroom setting along with the sponsor application.

C. Approved sponsors shall comply with the following requirements to

maintain approved status; the school must be conducted in accordance with these rules:

(1) to permit the board or its representative access to the school or classes being conducted and to make available to the board, upon request, all information pertaining to the activities of the school required for the administration of the rules and regulations, including its financial condition;

(2) to advertise the school at all times in a form and manner free from misrepresentation, deception or fraud;

(3) assure that all representations made by anyone authorized by the school to act as its agent or solicitor for prospective students are free from misrepresentation, deception or fraud;

(4) when a school closes, all student records shall be submitted to the board within 30 days;

(5) to maintain current, complete, and accurate student records and instructor critiques or summaries which shall be accessible at all times to the board or its authorized representative; these records shall include, in addition to other information, a record of payments made, a record of attendance, and a record of units of work completed;

(6) to conduct all courses in accordance with outlines submitted to and approved by the board;

(7) to only certify course completion for students who have successfully taken and passed the course; credit cannot be given for students who pass a course by challenging the course;

(8) sponsors will be subject to renewal of approval every three (3) years; the board assumes no responsibility for renewal courses not received from the sponsor for any reason; it is the sponsor's responsibility to make timely request(s) for the renewal of course(s) for board approval;

(9) sponsors must assure that all instructors:

(a) conduct all classes in accordance with board rules;

(b) ensure that all instruction is free from misrepresentation;

(c) instruct only from board-approved outlines;

(d) allow access to any class being instructed to any duly appointed representative of the board; and

(e) certify to his/her sponsor a true and correct record of students' attendance in his/her classes;

(10) failure to comply with this rule may result in the loss of approval of the sponsor; and

(11) the board reserves the right to disapprove an instructor.

[3/14/00; 16.62.8.14 NMAC - Rn, 16 NMAC 62.8.14, 09/13/2004; A, 11/25/2006; A, 01/16/2011]

16.62.8.15 APPROVAL OF COURSES:

A. All real estate appraisal courses except the appraisal qualifications board (AOB) approved fifteen (15) hour and seven (7) hour USPAP courses, must have prior approval by the board if they are to be approved for credit towards continuing education or qualifying education. Beginning January 1, 2008 all qualifying education courses for pre-apprentice, pre-licensing and pre-certification must have been approved through the [~~appraiser qualifications board (AOB)~~] AOB course approval program. The AOB approved fifteen (15) hour national USPAP course and the seven (7) hour national USPAP update course do not require prior approval by the board with proof that the course was taught by an AOB certified USPAP instructor. The course sponsor may certify in the form of a certificate provided to the student that the instructor meets the above board criteria.

B. All board approved real estate courses except the AOB approved fifteen (15) hour national USPAP course and the seven (7) hour national USPAP update course, as defined in Subsection A of this section accepted for pre apprentice, pre-licensing and pre-certification credit must: be a minimum length of at least fifteen (15) hours and include successful completion of an approved closed-book examination pertinent to that educational offering.

C. Application for course approval must be made to the board. No classes for credit may commence prior to board approval. The education advisory committee will review the application and make a recommendation to the board in accordance with 16.62.8.13 NMAC.

D. All course outlines approved by the board for pre-apprenticeship, pre-licensing, pre-certification or continuing education credit shall become the property of the board and the outlines shall be available to all those board approved sponsors wishing to teach said courses.

E. All existing courses are subject to periodic review by the board. The board may at any time change the approval status of any course.

[3/14/00; 16.62.8.15 NMAC - Rn & A, 16 NMAC 62.8.15, 09/13/2004; A, 11/25/2006; A, 01/16/2011]

NEW MEXICO REAL ESTATE APPRAISERS BOARD

This is an amendment to 16.62.12 NMAC, Section 8, effective 01/16/2011

16.62.12.8 FEES: All fees required under the Real Estate Appraiser Act or these regulations are non-refundable unless otherwise noted.

A. Application fee for apprenticeship is \$200, which includes the initial apprenticeship period.

B. Application fee for a license is \$300, which includes the initial licensing period.

C. Application fee for residential certification is \$300, which includes the initial licensing period.

D. Application fee for general certification is \$400, which includes the initial licensing period.

E. The fee for all examinations will be paid directly to the company who provides the exam.

F. The biennial renewal fee for apprentice appraisers is \$200. During the implementation of the biennial renewal schedule, renewals issued for less than a two-year period will be pro-rated at \$55 per year or portion of a year. Any renewal issued for less than six months will be charged \$30.

G. The biennial renewal fee for licensed appraisers is \$300. During the implementation of the biennial renewal schedule, renewals issued for less than a two-year period will be pro-rated at \$110 per year or portion of a year. Any renewal issued for less than six months will be charged \$55.

H. The biennial renewal fee for residential certified appraisers is \$300. During the implementation of the biennial renewal schedule, renewals issued for less than a two-year period will be pro-rated at \$110 per year or portion of a year. Any renewal issued for less than six months will be charged \$55.

I. The biennial renewal fee for general certified appraisers is \$355. During the implementation of the biennial renewal schedule, renewals issued for less than a two-year period will be pro-rated at \$155 per year or portion of a year. Any renewal issued for less than six months will be charged \$80.

J. The current fee for listing on the federal registry [~~is \$50 per biennial renewal~~] as charged by the appraisal subcommittee (ASC).

K. The application fee for a temporary practice certificate is \$200.

L. The fee for replacement of apprentice, license or certificate is \$50.

M. The fee for a certificate of good standing is \$25.

N. Administrative reinstatement fee is \$200.

O. Administrative late fee is \$100.00.

~~[-]~~ P. Administrative fees as follows:

(1) approved continuing education course is [~~\$25~~] \$50;

(2) [~~duplicate is \$25~~] approval of continuing education sponsorship is \$75;

(3) licensee list is \$150;

(4) [~~verification is \$25~~];

~~[-]~~ miscellaneous is \$25 up to a max of \$100.

[2/29/96; 16.62.12.8 NMAC - Rn, 16 NMAC 62.12.8, 09/13/2004; A, 08/21/2010; A, 01/16/2011]

NEW MEXICO REAL ESTATE APPRAISERS BOARD

This is an amendment to 16.62.13 NMAC, Section 15, effective 01/16/2011

16.62.13.15 DELEGATION OF AUTHORITY:

The authority of the real estate appraisers board to issue a notice of contemplated action against any licensee/registrant or applicant for licensure/registration whose name appears on the certified list issued by the New Mexico department of human services, as provided in NMSA 1978, 40-5A-1, et seq. and to refer cases in which notices of contemplated action have been issued for administrative prosecution, is delegated to the administrator of the board. This section shall not be construed to deprive the board of its authority and power to issue a notice of contemplated action for any apparent violation of the Parental Responsibility Act, and to refer any such case for administrative prosecution.

[16.62.13.15 NMAC - N, 01/16/2011]

NEW MEXICO REAL ESTATE APPRAISERS BOARD

This is an amendment to 16.65.2 NMAC, Section 8, 11, 12, 13 & 14, effective 01/16/2011

16.65.2.8 AMC REGISTRATION REQUIREMENTS:

Each AMC applying to the board for registration shall:

A. designate one controlling person (CP) that will submit to service of process;

B. designate one employee in charge (EIC) that will be the main contact for all communication between the board

and the AMC (CP may be designated as the EIC, if that person meets all [qualification] qualifications required by the board);

C. specify all entities doing business as (DBA) under the AMC;

~~[-]~~ D. certify that all appraisers added to the panel of the AMC hold a New Mexico license and certificate in good standing as an appraiser;

~~[-]~~ E. the AMC shall evaluate all appraisers within the renewal period to ensure that the real estate appraisal services are being conducted in accordance with the uniform standards of professional appraisal practices and board rules;

~~[-]~~ E. [maintain] maintains a board file, containing:

(1) a detailed record of each service request and the independent appraiser that performs the real estate appraisal services for the AMC;

(2) certification and evaluation of all appraisers, as required under [Subsection] Subsections C and D;

(3) list of all non-taxable transaction certificates issued;

(4) a [detail] detailed record of the process and criteria that the AMC has in place to review the work of appraisers; and

(5) written procedure for contracting with and paying appraisers;

G. maintain a bond or other equivalent means of surety:

(1) a bond of ten thousand dollars (\$10,000) shall be underwritten by a corporate surety authorized to transact business in New Mexico; such bond shall meet the following conditions:

(a) payments from a bond required pursuant to this section shall only be used to cure violations caused by a registrant, confirmed by the board;

(b) claims against the bond shall be made within two years following the board's final decision and order, finding a violation;

(c) the total aggregate liability of the surety for all claims shall be limited to the face amount of the board;

(d) the bond carrier shall provide to the board and to the AMC thirty day's prior written notice of intent to cancel a bond required pursuant to this section; the surety for such a bond shall remain liable under the provisions of the bond for all obligations of the principal pertaining to bond terms that occur before the bond is canceled, expires or otherwise becomes ineffective;

(e) failure to maintain the bond for the period required by law is cause for revocation of the AMC registration; and

(f) if the bond is canceled, expires or otherwise becomes ineffective during the period of the registration, the AMC shall immediately notify the board; if the AMC has not provided proof of a new bond before the fortieth day after the date on which the

bond was canceled, expired or otherwise became ineffective, the AMC shall be subject to revocation of its registration for failure to maintain a bond;

(2) as an equivalent means of surety, an AMC may maintain an agreement of cash collateral assignment executed with a state or national bank or federally insured savings association authorized to do business in New Mexico as trustee; interest, if any, accumulating on the cash collateral assignment shall accrue to the AMC.

[16.65.2.8 NMAC - N, 10/16/09; A, 01/16/11]

16.65.2.11 EMPLOYEE IN CHARGE (EIC) REGISTRATION REQUIREMENTS: In order to serve as the EIC for a registered AMC, a designee shall:

A. not have had a license to practice as an appraiser refused, denied, canceled or revoked in this state or in any other state;

B. be of good moral character;

C. submit to a state background investigation; and

D. shall be responsible for;

(1) the selecting of appraisers for the performance of real estate appraisal services which includes: ensuring that each appraiser is licensed and provides a combined reporting system (CRS) identification number;

(2) have the responsibility of reviewing completed appraisals as part of the board file;

(a) shall ensure clerical review is conducted on all appraisals completed within the renewal period;

(b) shall randomly select a statistically significant number, but not less than five percent, all fractions rounded up, of outsource appraisal reviews on appraisals completed within the renewal period;

(c) outsource appraisal reviews shall be completed by an appraiser with licensure equal to or greater than that of appraiser that is being reviewed.

(3) maintaining required documentation as part of the board file.

E. successfully complete a board approved 15 hour USPAP course for registration and a board approved 7 hour USPAP update for renewals; the appraisal qualifications board (AOB) approved 15 hour national USPAP course and the 7 hour national USPAP update course do not require prior approval by the board with proof that the course was taught by an AOB certified USPAP instructor; the course sponsor may certify in the form of a certificate provided to the student that the instructor meets AOB criteria; the instructor must be affiliated with a sponsor approved in at least one state of the United States.

[16.65.2.11 NMAC - N, 10/16/09; A, 01/16/11]

16.65.2.12 LETTERS OF

ENGAGEMENT: Prior to placing an assignment for real estate appraisal services, the AMC shall give the appraiser a written letter of engagement that shall include the following minimum requirements. The written letter may be in electronic format.

A. An AMC must clearly indicate on each engagement letter that it is a requirement for an appraiser to be both product and geographically competent to complete the assignment. The acceptance of an assignment will serve as the appraiser's attestation that they are competent to accept the assignment. An AMC must clearly disclose its registration number on each engagement letter sent to an appraiser.

B. An AMC must disclose the following fees within the engagement letter sent to an appraiser:

(1) the total fee that will be collected by the AMC for the assignment; and

(2) the total amount that the AMC will retain from the fee charged, disclosed as a dollar amount; and

(3) direct the appraiser who performs the real estate appraisal activity to disclose in the body of the appraisal report:

(a) the total compensation, stated as a dollar amount, paid to the appraiser or, if the appraiser is employed by an appraisal company, to the appraiser's employer; and

(b) the total compensation retained by the AMC in connection with the real estate appraisal activity, stated as a dollar amount.

[16.65.2.12 NMAC - N, 10/16/09; 16.65.2.12 NMAC - N, 01/16/11]

~~[16.65.2.12]~~ **16.65.2.13 AUDITS :**

~~[Upon]~~ At the time of registration renewal, ten percent of ~~[AMC]~~ AMC's shall be subject to audit. Audited AMC's shall be with required to submit to the board ~~[file]~~ files for the 12 month period prior to renewal and any other documentation the board requests. Any costs incurred by the board during an audit may be attributed to the AMC.

[16.65.2.12 NMAC - N, 10/16/09; 16.65.2.13 NMAC - Rn & A, 16.65.2.12 NMAC, 01/16/11]

~~[16.65.2.13]~~ **16.65.2.14**

KNOWLEDGE OF THE RULES: All AMC's and designees shall have knowledge of the board rules, and by acceptance ~~[to]~~ of registration shall agree to abide by these rules.

[16.65.2.13 NMAC - N, 10/16/09; 16.65.2.14 NMAC - Rn & A, 16.65.2.13 NMAC, 01/16/11]

NEW MEXICO REAL ESTATE APPRAISERS BOARD

This is an amendment to 16.65.3 NMAC, Section 8 & 10, effective 01/16/2011

16.65.3.8 APPLICATION FOR

REGISTRATION: Incomplete application and fees will be ~~[return]~~ returned to the applicant for supplementation of necessary documentation. All applicants must submit the following documentation to the board:

A. a completed application on a form prescribed by the board;

B. registration fee as provided in Part 5;

C. a notarized authorization for criminal background check for each person that owns, is an officer of or has a financial interest in the AMC with the prescribed fee;

D. a notarized authorization for criminal background check for the CP with the prescribed fee;

E. a notarized authorization for criminal background check for the EIC with the prescribed fee;

F. an irrevocable consent to service of process completed by the CP;

G. proof that the EIC has successfully completed ~~[a-board]~~ an AQB approved 15 hour USPAP course.

[16.65.3.8 NMAC - N, 10/16/09; A, 01/16/11]

16.65.3.10 RENEWAL

PROCESS: Incomplete applications will be returned to the applicant for supplementation of necessary documentation. All ~~[AMC]~~ AMC's shall submit a renewal form on or before their expiration date.

A. Renewals shall submit proof that the EIC has successfully completed ~~[a-board]~~ an AQB approved 7 hour USPAP course.

B. Registrations shall be renewed on-line. If on-line renewal is a hardship the registrant must contact the board office and request an official renewal form.

C. On-line renewal must be completed on or before the expiration date ~~[and]~~. Completed renewal forms must be post-marked or delivered to the board office on or before the expiration date.

D. It is the registrant's responsibility to renew on or before the expiration date.

E. Incomplete renewal forms will be returned to the registrant. Returned renewal forms not completed and returned to the board office on or before the expiration date will be considered late and the registrant must pay a late fee.

F. Ten percent of all

renewals will be audited and must submit all documentation requested by the board.

[16.65.3.10 NMAC - N, 10/16/09; A, 01/16/11]

NEW MEXICO REGULATION AND LICENSING DEPARTMENT

The Regulation and Licensing Department repeals its rule entitled Parental Responsibility Act Compliance, 16 NMAC 1.1 (filed 11/03/95) and replaces it with 16.1.1 NMAC entitled Parental Responsibility Act Compliance, effective 01/23/11.

NEW MEXICO REGULATION AND LICENSING DEPARTMENT

TITLE 12 TRADE , COMMERCE AND BANKING CHAPTER 2 CONSUMER PROTECTION PART 15 SALE OF RECYCLED METALS

12.2.15.1 ISSUING AGENCY: New Mexico Regulation and Licensing Department.

[12.2.15.1 NMAC - N, 01/23/11]

12.2.15.2 STATUTORY AUTHORITY: These rules are promulgated pursuant to the Sale of Recycled Metals Act, Sections 57-30-1 through 57-30-13 NMSA 1978

[12.2.15.2 NMAC - N, 01/23/11]

12.2.15.3 SCOPE: This part sets forth reporting procedures to the department pursuant to the Sale of Recycled Metals Act, Sections 57-30-1 through 57-30-13 NMSA 1978.

[12.2.15.3 NMAC - N, 01/23/11]

12.2.15.4 DURATION : Permanent.

[12.2.15.4 NMAC - N, 01/23/11]

12.2.15.5 EFFECTIVE DATE: January 23, 2011 unless a later date is cited at the end of a section.

[12.2.15.5 NMAC - N, 01/23/11]

12.2.15.6 OBJECTIVE: The purpose of this part is to standardize the reporting procedures to the department required pursuant to 57-30-8 NMSA 1978.

[12.2.15.6 NMAC - N, 01/23/11]

12.2.15.7 DEFINITIONS : [Reserved]

[12.2.15.7 NMAC - N, 01/23/11]

12.2.15.8 ELECTRONIC FILING:

A. Effective January 23, 2011, all secondhand metal dealers that are required to report to the department must file electronic reports using department approved electronic media on or before the due date of the report.

B. Reports shall be submitted in English in accordance with the frequency required by the Sale of Recycled Metals Act and must be transmitted to the departments' agent by computer modem, computer disk, or other approved electronic format.

C. Information submitted shall include:

(1) the place and date of the purchase;

(2) the name and address of each person from whom the regulated material is purchased or obtained;

(3) the identifying number of the personal identification document of each person from whom the regulated material is purchased or obtained;

(4) the year, make, model and license plate number of the motor vehicle used to transport the regulated material;

(5) a description made in accordance with the custom of the trade of the type and quantity of regulated material purchased; and

(6) the statement required by Paragraph (2) of Subsection A of Section 4 (57-30-4 NMSA 1978) of the Sale of Recycled Metals Act.

D. A secondhand metal dealer may request an exception to the requirement of electronic reports. The request must be in writing, addressed to the superintendent of the regulation and licensing department and must be received by the department at least 30 days before the electronic report is due. Exceptions will be granted in writing and only upon a showing of hardship including that there is no reasonable access to a computer in the secondhand metal dealer's community. The secondhand metal dealer must also show a good faith effort to comply with the electronic reporting requirements before an exception will be considered. The request for an exception must include the secondhand metal dealer to which the exception if granted will apply; a clear statement of the reason for the exception; and the signature of the secondhand metal dealer.

[12.2.15.8 NMAC - N, 01/23/11]

HISTORY OF 12.2.15 NMAC: [RESERVED]

NEW MEXICO REGULATION AND LICENSING DEPARTMENT

TITLE 16 OCCUPATIONAL AND PROFESSIONAL LICENSING CHAPTER 1 OCCUPATIONAL AND PROFESSIONAL LICENSING GENERAL PROVISIONS PART 1 PARENTAL RESPONSIBILITY ACT COMPLIANCE

16.1.1.1 ISSUING AGENCY: New Mexico Regulation and Licensing Department, on behalf of the department, its divisions, and all administratively attached boards and commissions.

[16.1.1.1 NMAC - Rp, 16 NMAC 1.1.1.100, 01/23/11]

16.1.1.2 SCOPE: This part applies to disciplinary proceedings by an issuing agency pursuant to the Parental Responsibility Act against a license, certificate, registration or permit required to engage in a profession or occupation.

[16.1.1.2 NMAC - Rp, 16 NMAC 1.1.1.101, 01/23/11]

16.1.1.3 STATUTORY AUTHORITY: This part is adopted pursuant to the Parental Responsibility Act, Sections 40-5A-1 to 40-5A-13 NMSA 1978.

[16.1.1.3 NMAC - Rp, 16 NMAC 1.1.1.102, 01/23/11]

16.1.1.4 DURATION: Permanent.

[16.1.1.4 NMAC - Rp, 16 NMAC 1.1.1.103, 01/23/11]

16.1.1.5 EFFECTIVE DATE: January 23, 2011, unless a later date is cited at the end of a section.

[16.1.1.5 NMAC - Rp, 16 NMAC 1.1.1.104, 01/23/11]

16.1.1.6 OBJECTIVE: This part is intended to implement the requirements of the Parental Responsibility Act as they apply to the issuance, renewal, suspension or revocation of any license, certificate, registration or permit required to engage in a profession or license by an issuing agency under this part.

[16.1.1.6 NMAC - Rp, 16 NMAC 1.1.1.105, 01/23/11]

16.1.1.7 DEFINITIONS:

A. All terms defined in the Parental Responsibility Act shall have the same meanings in this part unless defined below.

B. As used in this part:

(1) "agency" means as the

context requires, the issuing agency that is implementing the Parental Responsibility Act;

(2) "HSD" means the New Mexico human services department;

(3) "license" means a license, certificate, registration or permit issued by an agency that a person is required to have to engage in a profession or occupation in New Mexico;

(4) "statement of compliance" means a certified statement from HSD stating that an applicant or licensee is in compliance with a judgment and order for support;

(5) "statement of non-compliance" means a certified statement from HSD stating that an applicant or licensee is not in compliance with a judgment and order for support.

[16.1.1.7 NMAC - Rp, 16 NMAC 1.1.1.106, 01/23/11]

16.1.1.8 DISCIPLINARY PROCEEDINGS:

A. Disciplinary action: If an applicant or licensee is not in compliance with a judgment and order for support, the agency:

(1) shall deny an application for a license;

(2) shall deny the renewal of a license; and

(3) has grounds for suspension or revocation of a license.

B. Certified list: Upon receipt of HSD's certified list of obligors not in compliance with a judgment and order for support, the agency shall match the certified list against the current list of agency applicants and licensees. Upon the later receipt of an application for licensure or renewal, the agency shall match the applicant against the current certified list. By the end of the month in which the certified list is received, the agency shall report to HSD the names of agency applicants and licensees who are on the certified list and the action the agency has taken in connection with such applicants and licensees.

C. Initial action: Upon determination that an applicant or licensee appears on the certified list, the agency shall:

(1) commence a formal proceeding under Subsection D of 16.1.1.8 NMAC to take the appropriate action under Subsection A of 16.1.1.8 NMAC; or

(2) for current licensees only, informally notify the licensee that the licensee's name is on the certified list, and that the licensee must provide the agency with a subsequent statement of compliance by the earlier of the application for license renewal or a specified date not to exceed six months; if the licensee fails to provide the statement, the agency shall commence a formal proceeding under Subsection D of 16.1.1.8 NMAC.

D. Notice of contemplated action: Prior to taking any action specified in Subsection A of 16.1.1.8 NMAC, the agency shall serve upon the applicant or licensee a written notice stating that:

(1) the agency has grounds to take such action, and that the agency shall take such action unless the licensee or applicant:

(a) mails a letter (certified mail, return receipt requested) within 20 days after service of the notice requesting a hearing; or

(b) provides the agency, within 30 days of the date of the notice, with a statement of compliance, and

(2) if the applicant or licensee disagrees with the determination of non-compliance, or wishes to come into compliance, the applicant or licensee should contact the HSD child support enforcement division.

E. Evidence and proof: In any hearing under this part, relevant evidence is limited to the following:

(1) a statement of non-compliance is conclusive evidence that requires the agency to take the appropriate action under Subsection A of 16.1.1.8 NMAC, unless;

(2) the applicant or licensee can provide the agency with a subsequent statement of compliance which shall preclude the agency from taking any action based solely on the prior statement of non-compliance.

F. Order: When an action is taken under this part solely because the applicant or licensee is not in compliance with a judgement and order for support, the order shall state that the application or license shall be reinstated upon presentation of a subsequent statement of compliance. The agency may also include any other conditions necessary to comply with agency requirements for reapplication or reinstatement of lapsed licenses.

G. Procedures: Proceedings under this part shall be governed by the Uniform Licensing Act, Section 61-1-1 NMSA 1978, et seq., or any other adjudicatory procedures adopted by the agency.

[16.1.1.8 NMAC - Rp, 16 NMAC 1.1.II.200-206, 01/23/11]

HISTORY OF 16.1.1 NMAC:

Pre-NMAC History: None

History of Repealed Material:

16 NMAC 1.1 NMAC, Parental Responsibility Act Compliance (filed 11/03/1995) repealed 1/23/2011.

NMAC History:

16 NMAC 1.1, Parental Responsibility Act Compliance, (filed 11/03/1995) was repealed and replaced by 16.1.1 NMAC, Parental Responsibility Act Compliance, effective 1/23/2011.

**NEW MEXICO
REGULATION AND
LICENSING DEPARTMENT
CONSTRUCTION INDUSTRIES
DIVISION**

14.7.2 NMAC, 2006 New Mexico Commercial Building Code (filed 08-16-07) repealed 1-28-2011 and replaced by 14.7.2 NMAC, 2009 New Mexico Commercial Building Code, effective 1-28-2011.

14.7.3 NMAC, 2006 New Mexico Residential Building Code (filed 08-16-07), repealed 1-28-2011 and replaced by 14.7.3 NMAC, 2009 New Mexico Residential Building Code, effective 1-28-2011.

14.7.4 NMAC, 2006 New Mexico Earthen Building Materials Code (filed 8-16-2007) repealed 1-28-11 and replaced by 14.7.4 NMAC, 2009 New Mexico Earthen Building Materials Code, effective 1-28-11.

14.7.6 NMAC, 2006 New Mexico Energy Conservation Code (filed 8-16-2007) repealed 1-28-11 and replaced by 14.7.6 NMAC, 2009 New Mexico New Mexico Energy Conservation Code, effective 1-28-11.

14.8.2 NMAC, 2006 New Mexico Plumbing Code (filed 8-16-07) repealed 1-28-11 and replaced by 14.8.2 NMAC, 2009 New Mexico Plumbing Code, effective 1-28-11.

14.9.2 NMAC, 2006 New Mexico Mechanical Code (filed 8-16-07) repealed 1-28-11 and replaced by 14.9.2 NMAC, 2009 New Mexico Mechanical Code, effective 1-28-11.

**NEW MEXICO
REGULATION AND
LICENSING DEPARTMENT
CONSTRUCTION INDUSTRIES
DIVISION**

**TITLE 14 HOUSING AND
CONSTRUCTION
CHAPTER 7 BUILDING CODES
GENERAL
PART 2 2009 NEW MEXICO
COMMERCIAL BUILDING CODE**

14.7.2.1 ISSUING AGENCY: Construction Industries Division (CID) of the Regulation and Licensing Department. [14.7.2.1 NMAC - Rp, 14.7.2.1 NMAC, 1-28-11]

14.7.2.2 SCOPE: This rule applies to the construction, alteration, relocation, enlargement, replacement, repair, equipment, use and occupancy,

location, removal and demolition of every building or structure or any appurtenances connected or attached to such building or structure performed in New Mexico on or after January 28, 2011, that is subject to the jurisdiction of CID, unless performed pursuant to a permit for which an application was received by CID before that date.

A. Exception 1. Detached one- and two-family dwellings and multiple single-family dwellings (town houses) not more than three (3) stories high with separate means of egress, and their accessory structures shall comply with the 14.7.3 NMAC, 2009 New Mexico residential building code (NMRBC).

B. Exception 2. Existing buildings, not subject to the NMRBC, undergoing a change of occupancy, repair, alterations or additions shall comply with either 14.7.2 NMAC, 2009 New Mexico commercial building code, or 14.7.7 NMAC, 2009 New Mexico existing building code, as applicable.

[14.7.2.2 NMAC - Rp, 14.7.2.2 NMAC, 1-28-11]

14.7.2.3 STATUTORY AUTHORITY: NMSA 1978 Sections 60-13-9 and 60-13-44.

[14.7.2.3 NMAC - Rp, 14.7.2.3 NMAC, 1-28-11]

14.7.2.4 DURATION: Permanent.

[14.7.2.4 NMAC - Rp, 14.7.2.4 NMAC, 1-28-08]

14.7.2.5 EFFECTIVE DATE: January 28, 2011, unless a later date is cited at the end of a section.

[14.7.2.5 NMAC - Rp, 14.7.2.5 NMAC, 1-28-11]

14.7.2.6 OBJECTIVE: The purpose of this rule is to establish minimum standards for the general construction of commercial buildings in New Mexico.

[14.7.2.6 NMAC - Rp, 14.7.2.6 NMAC, 1-28-11]

14.7.2.7 DEFINITIONS: See 14.5.1 NMAC, General Provisions and chapter 2 of the 2009 international building code (IBC) as amended in 14.7.2.10 NMAC. [14.7.2.7 NMAC - Rp, 14.7.2.7 NMAC, 1-28-11]

14.7.2.8 ADOPTION OF THE 2009 INTERNATIONAL BUILDING CODE:

A. This rule adopts by reference the 2009 international building code, as amended by this rule.

B. In this rule, each provision is numbered to correspond with the numbering of the 2009 international

building code.

C. This rule is to be applied in conjunction with 14.7.6 NMAC, the 2009 New Mexico energy conservation code. [14.7.2.8 NMAC - Rp, 14.7.2.8 NMAC, 1-28-11]

**14.7.2.9 CHAPTER 1
ADMINISTRATION:**

A. Section 101 - General.

(1) 101.1 Title. Delete this section of the IBC and substitute: This code shall be known as the 2009 New Mexico commercial building code (NMCBC).

(2) 101.2 Scope. Delete this section of the IBC and see 14.7.2.2 NMAC, Scope.

(3) 101.2.1 Appendices. This rule adopts the following appendices as amended herein:

(a) appendix C - group U-agricultural buildings;

(b) appendix E - supplementary accessibility requirements; and

(c) appendix G - flood-resistant construction;

(d) appendix H - signs;

(e) appendix I - patio covers; and

(f) appendix J - grading.

(4) 101.3 Intent. Delete this section of the IBC and see the scope section above, at 14.7.2.6 NMAC, Objective.

(5) 101.4 Referenced codes. The codes referenced in the NMCBC are.

(a) 101.4.1 Electrical. Delete this section of the IBC and substitute: the 2008 New Mexico electrical code (NMEC) applies to all electrical wiring as defined in CILA Section 60-13-32. All references in the IBC to the ICC electrical code are deemed references to the NMEC.

(b) 101.4.2 Gas. Delete this section of the IBC and substitute: 2009 New Mexico mechanical code (NMMC) applies to "gas fittings" as that term is defined in CILA Section 60-13-32. All references in the IBC to the international fuel gas code are deemed references to the NMMC or the LPG standards, 19.15.40 NMAC and NMSA 1978 70-5-1 et seq., collectively. Gas piping, systems and appliances for use with liquefied propane gas (LPG), or compressed natural gas (CNG), shall be governed by the LPG standards.

(c) 101.4.3 Mechanical. Delete this section of the IBC and substitute: The 2009 NMMC applies to the installation, repair and replacement of mechanical systems including equipment, appliances, fixtures, fittings and appurtenances including ventilating, heating, cooling, air conditioning and refrigeration systems, incinerators and other energy related systems. All references in the IBC to the international mechanical code are deemed references to the NMMC.

(d) 101.4.4 Plumbing. Delete this section of the IBC and substitute: the

2009 New Mexico plumbing code (NMPC) applies to the installation, alterations, repairs and replacement of plumbing systems, including equipment, appliances, fixtures, fittings and appurtenances, and where connected to a water or sewage system and all aspects of a medical gas system. All references in the IBC to the international plumbing code are deemed references to the NMPC.

(e) 101.4.5 Property maintenance. Delete this section of the IBC.

(f) 101.4.6 Fire prevention. Delete this section of the IBC.

(g) 101.4.7 Energy. Delete this section of the IBC and substitute: the provisions of the 2009 New Mexico energy conservation code (NMECC) shall apply to the energy conservation aspects of general commercial construction.

B. Section 102 - Applicability.

(1) Section 102.1 General. Delete this section of the IBC and see 14.5.1 NMAC, General Provisions.

(2) Section 102.2 Other laws. Delete this section of the IBC and see 14.5.1 NMAC, General Provisions.

(3) Section 102.3 Application of references. Delete this section of the IBC and see 14.5.1 NMAC, General Provisions.

(4) Section 102.4 Referenced codes and standards. Delete this section of the IBC and see 14.5.1 NMAC, General Provisions.

(5) Section 102.5 Partial invalidity. Delete this section of the IBC and see 14.5.1 NMAC, General Provisions.

(6) Section 102.6 Existing structures. Delete this section of the IBC and substitute: the legal occupancy of any structure existing on the effective date of this rule shall be permitted to continue without change, except as is specifically provided otherwise in this rule, in the 2009 New Mexico existing building code, or by the building official in consideration of the general safety and welfare of the occupants of any such building and the general public.

C. Section 103 - Department of building safety. Delete this section of the IBC.

D. Section 104 - Duties and powers of building official. Delete this section of the IBC and see 14.5.1 NMAC, General Provisions.

E. Section 105 - Permits. Delete this section of the IBC except as provided in 14.5.2 NMAC, Permits.

F. Section 106 - Construction documents. Delete this section of the IBC except as provided in 14.5.2 NMAC, Permits.

G. Section 107 - Temporary structures and uses. Delete this section of the IBC and see 14.5.2

NMAC, Permits.

H. Section 108 - Fees. Delete this section of the IBC and see 14.5.5 NMAC, Fees.

I. Section 109 - Inspections.

(1) 109.1 General. Delete this section of the IBC except as provided in 14.5.3 NMAC, Inspections.

(2) 109.2 Preliminary inspection. Delete this section of the IBC except as provided in 14.5.2 NMAC, Permits.

(3) 109.3 Required inspections. Delete this section of the IBC except as provided in 14.5.3 NMAC, Inspections.

(4) 109.4 Inspection agencies. Delete this section of the IBC and see 14.5.3 NMAC, Inspections.

(5) 109.5 Inspection requests. Delete this section of the IBC except as provided in 14.5.3 NMAC, Inspections.

(6) 109.6 Approval required. Delete this section of the IBC except as provided in 14.5.3 NMAC, Inspections.

J. Section 110 - Certificate of occupancy. Delete this section of the IBC and see 14.5.3 NMAC, Inspections.

K. Section 111 - Service utilities. Delete this section of the IBC and see 14.5.2 NMAC, Permits.

L. Section 112 - Board of appeals. Delete this section of the IBC and see 14.5.1 NMAC, General Provisions.

M. Section 113 - Violations. Delete this section of the IBC and see 14.5.3 NMAC, Inspections.

N. Section 114 - Stop work order. Delete this section of the IBC and see 14.5.3 NMAC, Inspections.

O. Section 115 - Unsafe structures and equipment. Delete this section of the IBC and see 14.5.1 NMAC, General Provisions.

[14.7.2.9 NMAC - Rp, 14.7.2.9 NMAC, 1-28-11]

**14.7.2.10 CHAPTER 2
DEFINITIONS:** See this section of the IBC except as provided below.

A. Section 201.1 Scope. See this section of the IBC except add the following: If the same term is defined in the New Mexico construction codes and in the IBC, it shall have the meaning given it in the New Mexico construction codes.

B. Section 201.3 Terms defined in other codes. Delete this section of the IBC and substitute: If a term is not defined in this code and is defined in a New Mexico construction code, the term shall have the meaning given it in the New Mexico construction code.

C. Section 202. Definitions. See this section of the IBC and add the following definitions.

(1) Unbalanced backfill height means the difference in height between the

exterior finish ground level and the lower of the top of the concrete footing that supports the foundation wall or the interior finish ground level. Where an interior concrete slab on grade is provided and is in contact with the interior surface of the foundation wall, the unbalanced backfill height is permitted to be measured from the exterior finish ground level to the top of the interior concrete slab.

(2) **Primary entrance.** The entrance through which most people enter the building or facility. A building or facility may have more than one primary entrance. [14.7.2.10 NMAC - Rp, 14.7.2.10 NMAC, 1-28-11]

14.7.2.11 CHAPTER 3 USE AND OCCUPANCY CLASSIFICATION: See this chapter of the IBC except:

A. section 304.1 is amended to add fire and police stations to the business "B" occupancy group;

B. section 308.5.1 - see this section of the IBC except delete the exception. [14.7.2.11 NMAC - Rp, 14.7.2.11 NMAC, 1-28-11]

14.7.2.12 CHAPTER 4 SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY: See this chapter of the IBC with the following exception: Section 404.1.1, the definition of the term "ATRIUM," is amended to substitute the words "floor levels" for the word "stories." [14.7.2.12 NMAC - Rp, 14.7.2.12 NMAC, 1-28-11]

14.7.2.13 CHAPTER 5 GENERAL HEIGHTS AND BUILDING AREAS: See this chapter of the IBC. [14.7.2.13 NMAC - Rp, 14.7.2.13 NMAC, 1-28-11]

14.7.2.14 CHAPTER 6 TYPES OF CONSTRUCTION: See this chapter of the IBC. [14.7.2.14 NMAC - Rp, 14.7.2.14 NMAC, 1-28-11]

14.7.2.15 CHAPTER 7 FIRE-RESISTANCE-RATED CONSTRUCTION: See this chapter of the IBC except as provided below.

A. Section 702 is amended to change the definition of "shaft" by deleting the reference to "stories" and substituting the words "floor levels."

B. Section 712.2 Installation details. A minimum of three, three-inch (3") diameter sleeved penetrations shall be installed in the mechanical room, or from an accessible point or designated solar equipment location. The sleeves shall be listed and sealed with a listed fitting or box

on both ends in compliance with this chapter. [14.7.2.15 NMAC - Rp, 14.7.2.15 NMAC, 1-28-11]

14.7.2.16 CHAPTER 8 INTERIOR FINISHES: See this chapter of the IBC.

[14.7.2.16 NMAC - Rp, 14.7.2.16, NMAC, 1-28-11]

14.7.2.17 CHAPTER 9 FIRE PROTECTION SYSTEMS:

A. Section 901 - General. See this section of the IBC.

B. Section 902 -

Definitions. See this section of the IBC with the following exception: the definition of "standpipe system, classes of" is amended by adding the following provision: 1.5-inch hoses and hose cabinets shall not be provided, unless required by the New Mexico laws applicable to fire protection for class II and class III standpipe systems.

C. Section 903 - Automatic sprinkler systems. See this section of the IBC except in section 903.2 delete the paragraph entitled "exception" in its entirety.

D. Section 904 - Alternative automatic fire-extinguishing systems. See this section of the IBC except in section 904.11 delete the paragraph entitled "exception" in its entirety.

E. Sections 905 through 908. See these sections of the IBC.

F. Section 909 - Smoke control systems.

(1) 909.1 through 909.7 See these sections of the IBC.

(2) 909.8 Exhaust method.

(a) 909.8.1 Exhaust rate. Delete the text of this provision of the IBC and substitute: the height of the lowest horizontal surface of the accumulating smoke layer shall be maintained at least six feet (1829 mm) above any walking surface which forms a portion of a required egress system within the smoke zone. The required exhaust rate for the zone shall be the largest of the calculated plume mass flow rates for the possible plume configurations. Provisions shall be made for a natural or mechanical supply of air from outside or adjacent smoke zones to make up for the air exhausted. Makeup airflow rates, when measured at the potential fire locations shall not increase the smoke production rate beyond the capabilities of the smoke control system. The temperature of the makeup air shall be such that it does not expose temperature-sensitive fire protection systems beyond their limits.

(b) 909.8.2 through 909.8.5. See these sections of the IBC.

(3) 909.9 Design fire. Delete this section of the IBC and substitute: the design fire shall be based on a rational analysis performed by a registered design

professional and approved by the building official. The design fire shall be based on the analysis in accordance with section 909.4 and this section.

(4) 909.10 through 909.19. See these sections of the IBC.

(5) 909.20 Smokeproof enclosures. See this section of the IBC.

(6) 909.21 Underground building smoke exhaust system. See this section of the IBC.

G. Sections 910 and 911. See these sections of the IBC.

[14.7.2.17 NMAC - Rp, 14.7.2.17 NMAC, 1-28-11]

14.7.2.18 CHAPTER 10 MEANS OF EGRESS:

A. Sections 1001 through 1003. See these sections of the IBC.

B. Section 1004, Table 1004.1.1. See this section of the IBC and amend table 1004.1.1 maximum floor area allowances per occupant as follows: under the *function of space* column, in the *institutional areas* block, below sleeping areas add "correctional facilities and detention centers 60 square feet gross floor area per person".

C. Sections 1004 through 1007. See these sections of the IBC.

D. Section 1008 - Doors, gates and turnstiles. See this section of the IBC exception as provided below.

(1) Section 1008.1.2 door swing. See this section of the IBC except delete exception #9 and add the following after the last paragraph: a double-acting door shall be provided with a view panel of not less than 200 square inches (0.129 m²): double-acting doors shall not be used as *exits* where any of the following conditions exist:

(a) 1. the *occupant load* served by the door is 100 or more;

(b) 2. the door is part of a fire assembly;

(c) 3. the door is part of a smoke- and draft-control assembly;

(d) 4. panic hardware is required or provided on the door;

(2) Section 1008.1.4.4 access-controlled egress doors. See this section of the IBC and add the words "when approved by the building official" at the beginning of the section.

(3) Section 1008.19.7. Delayed egress locks. See this section of the IBC and add the words "when approved by the building official" at the beginning of the section.

(4) Section 1008.3 Turnstiles. See this section of the IBC and add the words "when approved by the building official" at the beginning of the section.

E. Sections 1009 through 1021. See these sections of the IBC.

F. Section 1022 Exit

enclosures. See this section of the IBC and add the following two exceptions to section 1022.1.

(1) 8. In other group H and I occupancies, a maximum of 50 percent of egress stairways serving one adjacent floor are not required to be enclosed, provided at least two means of egress are provided from both floors served by the unenclosed stairways. Any two such interconnected floors shall not be open to other floors. Unenclosed exit stairways shall be remotely located as required in section 1015.2 and complies with section 1016.1 for travel distance locations.

(2) 9. In other than group H and I occupancies, interior egress stairways serving only the first and second stories of a building equipped throughout with an automatic sprinkler system in accordance with section 903.3.1.1 are not required to be enclosed, provided at least two means of egress are provided from both floors served by the unenclosed stairways. Such inter-connected stories shall not be open to other stories. Unenclosed exit stairways shall be remotely located as required in section 1015.2 and complies with section 1016.1 for travel distance locations.

G. Section 1023 through 1025. See these sections of the IBC.
[14.7.2.18 NMAC - Rp, 14.7.2.18 NMAC, 1-28-11]

14.7.2.19 CHAPTER 11 ACCESSIBILITY:

A. Section 1101 General. See this section of the IBC.

B. Section 1102 Definitions. See this section of the IBC and add the following definition: **primary entrance** means the entrance through which most people enter the building or facility. A building may have more than one primary entrance.

C. Section 1103 - Scoping requirements. See this section of the IBC.

D. Section 1104 - Accessible route. See this section of the IBC except as provided below. Delete the text to exception number 1 of section 1104.4 and substitute with the following: an accessible route is not required to stories and mezzanines that have an area of less than 3,000 square feet (278.7m²) and are located above and below accessible levels in a building or buildings that are less than three stories. This exception shall not apply to:

- (1) 1.1 multiple tenant facilities of group M occupancies containing five or more tenant spaces;
- (2) 1.2 levels containing offices of health care providers (group B or group I);
- (3) 1.3 passenger transportation facilities and airports (group A-3 or group B); or
- (4) 1.4 the facility that is owned or leased by a government agency; and delete exception #5 without substitution.

E. Section 1105 - Accessible entrances. See this section of the IBC except as provided below. Delete the text of section 1105.1, public entrances, and substitute: in addition to accessible entrances required by sections 1105.1.1 through 1105.1.6, at least 60% of all public entrances, but not less than one primary entrance shall be accessible. **Exceptions:**

- (1) except an accessible entrance is not required to areas that are not required to be accessible;
- (2) loading and service entrances that are not the only entrance to a tenant space are not required to be accessible.

F. Section 1106 - Parking and passenger loading facilities. See this section of the IBC except that table 1106.1 is deleted from the IBC and the following table is substituted:

Table 1106.1 Accessible Parking Spaces		
Total Parking Spaces	Total Required Accessible Parking Spaces	Number Required to be Van Accessible
1-25	1	1
26-35	2	1
36-50	3	1
51-100	4	1
101-300	8	2
301-500	12	2
501-800	16	3
801-1000	20	3
1,001 and over	20 spaces plus 1 space for every 100 spaces, or fraction thereof, over 1,000	1 of every 6 accessible parking spaces, or fraction thereof

G. Section 1107 - Dwelling units and sleeping units. See this section of the IBC except as provided below.

(1) **Table 1107.6.1.1 - Accessible dwelling and sleeping units.**

(2) Delete the text of section 1107.6.2.1.1 and substitute: In occupancies in group R-2 containing more than 20 dwelling units or sleeping units, at least two percent, but not less than one of the units shall be a type A unit. In type A units, one in five, but not less than one of the units shall provide a roll-in shower including a permanently mounted folding shower seat. All units on a site shall be considered to determine the total number of units and the required number of type A units. Type A units shall be dispersed among the various classes of units.

(3) The following provision is inserted after table 1107.6.1.1: for publicly funded projects, the total number of accessible dwelling units and sleeping units shall be five percent, or fraction thereof. Of these accessible dwelling units and sleeping units, one percent, or fraction thereof, shall be provided with roll-in showers.

H. Section 1108 - Special occupancies. See this section of the IBC except **1108.4.1.4 employee work stations.** Delete the last sentence of this section without substitution.

I. Section 1109 - Other features and facilities. See this section of the IBC except as provided below.

(1) 1109.2 - Toilet and bathing facilities. See this section of the IBC except.

(a) Insert the following sentence at the end of section 1109.2: when 20 or more fixtures of any type are installed in an *accessible* toilet room or bathing room, at least two of that type shall be accessible.

(b) Add the following provision to the exceptions to section 1109.2: exception 6: toilet fixtures and bathing facilities that are in excess of those required by the minimum number of plumbing fixtures pursuant to the New Mexico construction codes and located in private restricted areas in other than government owned or leased facilities.

(2) Add the following provision after the first sentence to section **1109.2.3 lavatories**: where only one accessible sink is provided, it shall **NOT** be located in a toilet compartment.

(3) Add the following exception to section 1109.6: limited-use/limited-application elevators may be used to access spaces or areas that have five or fewer occupants.

J. Section 1110 - Signage. See this section of the IBC except as provided below.

(1) Amend section 1110.1 item #1 as follows: *accessible* parking spaces required by section 1106.1 shall provide signage in compliance with section 1.1 though 1.2, except where the total number of parking spaces provided is four or less.

(a) 1.1 *Accessible* parking spaces shall be identified by a sign centrally located at the head of each parking space.

(b) 1.2 Van accessible parking spaces shall have an additional sign mounted below the international symbol of access identifying the space as "van accessible". **Exception:** Where all the accessible parking spaces comply with the standards for van accessible parking spaces.

(2) Add the following exception to section 1110.1, Item #4: **exception:** entrances to individual dwelling units and sleeping units.

(3) Add the following new provision at the end of section 1110.3:

(a) 7. accessible parking spaces required by section 1106 shall provide pavement markings in compliance with the following sections 7.1 and 7.2;

(b) 7.1 accessible parking spaces shall be identified by the international symbol of accessibility; a clearly visible depiction of the symbol shall be painted in blue on the pavement surface, except where the total number of parking spaces provided is four or less;

(c) 7.2 the access aisle shall be clearly marked by diagonal, blue pavement striping.

[14.7.2.19 NMAC - Rp, 14.7.2.19 NMAC, 1-28-11]

14.7.2.20 CHAPTER 12 INTERIOR ENVIRONMENT: See this chapter of the IBC.

[14.7.2.20 NMAC - Rp, 14.7.2.20 NMAC, 1-28-11]

14.7.2.21 CHAPTER 13 ENERGY EFFICIENCY: Delete this chapter of the IBC and see the 2009 New Mexico energy conservation code.

[14.7.2.21 NMAC - Rp, 14.7.2.21 NMAC, 1-28-11]

14.7.2.22 CHAPTER 14 EXTERIOR WALLS: See this chapter of the IBC.

[14.7.2.22 NMAC - Rp, 14.7.2.22 NMAC, 1-28-11]

14.7.2.23 CHAPTER 15 ROOF ASSEMBLIES AND ROOFTOP STRUCTURES:

A. Section 1501. General. See this section of the IBC.

B. Section 1502.1. Definitions. See this section of the IBC except that the following definitions are amended as indicated.

(1) "Roof replacement" is amended to read: The process of removing the existing roof covering to the structural roof deck, repairing any substrate, and installing a new roof covering.

(2) "Positive roof drainage" is amended to read: The drainage condition in which consideration has been made for all loading deflections of the roof deck, and the additional slope has been provided to ensure drainage of the roof within 48 hours of precipitation. Drainage has occurred when no more than ½ inch of standing water remains after 48 hours of precipitation in normal drying conditions.

C. Section 1503 weather protection. See this section of the IBC and add the following new section: **1503.3.1 plastered parapets** shall require a seamless but permeable waterproof cover or weather barrier, capping the entire parapet and wrapping over each side. The cover shall extend past any break from the vertical a minimum of four inches on the wall side. On the roof side, the cover shall properly lap any rising roof felts or membranes and be properly sealed. A layer of expanded metal lath shall be installed over the cover before plaster or stucco is applied. The lath shall extend past any break from the vertical on the wall side a minimum of five inches and on the roof side, the same distance as the cover below, allowing for plaster stops or seals. No penetrating fasteners are allowed on the horizontal surface of parapets.

D. Sections 1503 through 1505. See these sections of the IBC.

E. Section 1506 - materials. See this section of the IBC and

add the following new sections.

(1) Section 1506.5 loose granular fill. Pumice and other granular fill type materials are not permitted in roofing assemblies.

(2) Section 1506.6 Roof deck transitions. Where roof sheathing is overlapped to create "crickets" or valleys to canals, taperboard or equivalent shall be used to transition between the two deck levels to create a uniform substrate.

(3) Section 1506.7 - canales/scuppers. All canales and scuppers must have a metal pan lining extending not less than six inches (152 mm) past the inside of the parapet and not less than six inches (152 mm) from each side of the canale or scupper opening. All canales and scuppers must have positive drainage.

F. Sections 1507 through 1509. See these sections of the IBC.

G. Section 1510 - reroofing.

(1) 1510.1 and 1510.2. See these sections of the IBC.

(2) 1510.3 Recovering versus replacing. Delete the first three lines of the text of this section and substitute the following: "New roof coverings shall not be installed without first removing existing roof coverings down to the structural roof deck where any of the following conditions occur:" and add a new subsection 4 as follows: where pumice or other granular fill are present, existing roofing and granular fill must be removed prior to re-roofing.

(3) 1510.4 through 1510.6. See these sections of the IBC.

[14.7.2.23 NMAC - Rp, 14.7.2.23 NMAC, 1-28-11]

14.7.2.24 CHAPTER 16 STRUCTURAL DESIGN: See this chapter of the IBC.

[14.7.2.24 NMAC - Rp, 14.7.2.24 NMAC, 1-28-11]

14.7.2.25 CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS: See this chapter of the IBC except as provided below.

A. Section 1704.4 Concrete construction. See this section of the IBC except:

(1) delete subsection 2 and substitute: continuous concrete footings supporting walls of buildings three stories or less in height that are fully supported on earth or rock;

(2) delete subsection 3 and substitute: nonstructural concrete slabs supported directly on the ground, except pre-stressed slabs-on-grade;

(3) delete subsection 4.

B. Section 1704.5 masonry construction. See this section of the IBC except delete exception 2.

[14.7.2.25 NMAC - Rp, 14.7.2.25 NMAC, 1-28-11]

14.7.2.26 **CHAPTER 18 SOILS AND FOUNDATIONS:** See this chapter of the IBC except in Section 1809.7 delete the text and footnotes in table 1809.7 and replace with the following:

TABLE 1809.7		
PRESCRIPTIVE FOOTINGS SUPPORTING WALLS OF LIGHT-FRAME CONSTRUCTION ^{a, b, c, d, e}		
NUMBER OF FLOORS SUPPORTED BY THE FOOTING ^f	WIDTH OF FOOTING (inches)	THICKNESS OF FOOTING (inches)
1	16	8
For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm. a. Depth of footings shall be in accordance with Section 1809.4. b. The ground under the floor shall be permitted to be excavated to the elevation of the top of the footing. c. Interior stud-bearing walls shall be permitted to be supported by isolated footings. The footing width and length shall be twice the width shown in this table, and footings shall be spaced not more than 6 feet on center. d. See Section 1908 for additional requirements for concrete footings of structures assigned to Seismic Design Category C, D, E or F. e. For thickness of foundation walls, see Section 1807.1.6. f. Footings supporting roof only shall be as required for supporting one floor.		

[14.7.2.26 NMAC - Rp, 14.7.2.26 NMAC, 1-28-11]

14.7.2.27 **CHAPTER 19 CONCRETE:** See this chapter of the IBC **section 1915.6 approvals.** Delete this section of the IBC.
 [14.7.2.27 NMAC - Rp, 14.7.2.27 NMAC, 1-28-11]

14.7.2.28 **CHAPTER 20 ALUMINUM:** See this chapter of the IBC.
 [14.7.2.28 NMAC -Rp, 14.7.2.28 NMAC, 1-28-11]

14.7.2.29 **CHAPTER 21 MASONRY:** See this chapter of the IBC except as provided below. **Section 2111.4.1 and 2113.4.1 anchorage.** Delete these sections of the IBC and substitute: two 3/16-inch by 1-inch (4.8 mm by 25.4mm) straps shall be embedded a minimum of 12 inches (305 mm) into the chimney with a 180 degree bend with a six-inch (152 mm) extension around the vertical reinforcing bars in the outer face of the chimney. Each strap shall be fastened to the structural framework of the building with two 1/2-inch (12.7 mm) diameter bolts per strap. Where the joists do not head into the chimney, the anchor strap shall be connected to two-inch by four-inch (51 mm by 102 mm) ties crossing a minimum of four joists. The ties shall be connected to each joist with two 16d nails. As an alternative to the two-inch by four-inch (51 mm by 102 mm) ties, each anchor strap shall be connected to the structural framework by two 1/2-inch (12.7 mm) diameter bolts in an approved manner.
 [14.7.2.29 NMAC - Rp, 14.7.2.29 NMAC, 1-28-11]

14.7.2.30 **CHAPTER 22 STEEL:** See this chapter of the IBC.
 [14.7.2.30 NMAC - Rp, 14.7.2.30 NMAC, 1-28-11]

14.7.2.31 **CHAPTER 23 WOOD:** See this chapter of the IBC except as provided below.
A. Section 2301 through 2307. See these sections of the IBC.
B. Section 2308.8.3 framing around openings. See this section of the IBC except delete the first sentence and substitute: Trimmer and header joists shall be of sufficient size to support the load.
C. Section 2308.8.4 supporting bearing partitions. See this section of the IBC except delete the first sentence and substitute: bearing partitions parallel to joists shall be supported on beams, girders, built-up joists of sufficient size to carry the load, walls or other bearing partitions.
 [14.7.2.31 NMAC - Rp, 14.7.2.31 NMAC, 1-28-11]

14.7.2.32 **CHAPTER 24 GLASS AND GLAZING:** See this chapter of the IBC except that section 2403 is amended as set forth below.
A. Section 2403.1 - Identification. Delete the first paragraph of this section of the IBC and substitute: each pane shall bear the manufacturer’s label designating the type and thickness of the glass or glazing material. The identification shall not be omitted unless approved by the building official. The building official is authorized to require an affidavit from the glazing contractor certifying that each light is glazed in accordance with approved construction documents that comply with the provisions of this chapter. Safety glazing shall be identified in accordance with section 2406.2.
B. Section 2403.2 - Glass supports. Delete this section of the IBC and substitute: where one or more sides of any pane of glass is not firmly supported, or is subject to unusual load conditions, detailed construction documents, detailed shop drawings and analysis or test data assuring safe performance for the specific installation shall be submitted when required by the building official.
 [14.7.2.32 NMAC - Rp, 14.7.2.32 NMAC, 1-28-11]

14.7.2.33 **CHAPTER 25 GYPSUM BOARD AND PLASTER:** See this chapter of the IBC except as provided below.
A. Section 2510.6 Weather - resistant barrier. See also sections 1403.2, 1405.3 and 1503.2.
B. Section 2512.1.1 - On grade floor slab. Delete the text of this section and substitute with the following: on wood

framed or steel stud construction with an on-grade concrete floor slab system, approved acrylic based exterior plaster systems and acrylic based color coats shall be applied in such a manner as to cover but not to extend below, the lath, paper and screed. When a cement plaster stucco and cement plaster color coat is installed, and no perimeter insulation is on the exterior of a concrete or masonry foundation, the color coat shall terminate not further than 6 inches (153 mm) below finished grade. All excess plaster shall be removed from the site and no drip screeds shall comply with ASTM C 1063.

C. Section 2512.1.2 - Weep screeds. See this section of the IBC.

D. Add new section to the IBC. Section 2512.1.3 - Plaster to roof separation. A reglet and weep screed or equivalent metal flashing shall be applied where all stucco wall surfaces terminate at a roof.

[14.7.2.33 NMAC - Rp, 14.7.2.33 NMAC, 1-28-11]

14.7.2.34 CHAPTER 26

PLASTIC: See this chapter of the IBC. [14.7.2.34 NMAC - Rp, 14.7.2.34 NMAC, 1-28-11]

14.7.2.35 CHAPTER 27

ELECTRICAL: Delete this chapter of the IBC and see the NMEC except as provided below.

A. Section 2701 - General.

(1) **2701.1 Scope.** Delete the text of this section of the IBC and substitute: electrical systems, including emergency and standby power systems, and electrical equipment, appliances, fixtures, fittings and appurtenances thereto, shall be installed, altered, repaired, replaced, maintained, tested and designed pursuant to the provisions of the NMEC.

(2) All references in the IBC to the international electrical code are deemed references to the NMEC.

B. Section 2702 - Emergency and standby power systems.

(1) **2702.1 Installation** (delete this section of the IBC).

(2) **2702.1.1 Stationary generators** (delete this section of the IBC).

(3) **2702.2 Where required.** Emergency and standby power systems shall be required as follows.

(a) **2702.2.1 Group A occupancies.** See section 907.2. 1. of the IBC.

(b) **2702.2.2 Smoke control systems.** See section 909.11 of the IBC.

(c) **2702.2.3 Exit signs.** See section 1011.5.3 of the IBC.

(d) **2702.2.4 Means of egress illumination.** See section 1006.3 of the IBC.

(e) **2702.2.5 Accessible means of**

egress elevators. See section 1007.4 of the IBC.

(f) **2702.2.6 Accessible means of egress platform lifts.** See section 1007.5 of the IBC.

(g) **2702.2.7 Horizontal sliding doors.** See section 1008.1.4.3 of the IBC.

(h) **2702.2.8 Semiconductor fabrication facilities.** See section 415.8.10 of the IBC.

(i) **2702.2.9 Membrane structures.** See section 3102.8.2 of the IBC for standby power provision, and the international fire code for emergency power for exit signs in tents and membrane structures.

(j) **2702.2.10 Hazardous materials.** See section 14.5.4 of the IBC.

(k) **2702.2.11 Highly toxic and toxic materials.** See the international fire code.

(l) **2702.2.12 Organic peroxides.** See the international fire code.

(m) **2702.2.13 Pyrophoric materials.** See the international fire code.

(n) **2702.2.14 Covered mall buildings.** See section 402.14 of the IBC.

(o) **2702.2.15 High-rise buildings.** See sections 403.4.7 and 403.4.8 of the IBC.

(p) **2702.2.16 Underground buildings.** See sections 405.8 and 405.9 of the IBC.

(q) **2702.2.17 Group I-3 occupancies.** See section 408.4.2 of the IBC.

(r) **2702.2.18 Airport traffic control towers.** See section 412.3.5 of the IBC.

(s) **2702.2.19 Elevators.** See section 3003.1, 3307.7, and 3308.15 of the IBC.

(t) **2702.2.20 Smoke proof enclosures.** See section 909.20.6.2 of the IBC.

(u) **2702.3 Maintenance.** Delete this section of the IBC.

[14.7.2.35 NMAC - Rp, 14.7.2.35 NMAC, 1-28-11]

14.7.2.36 CHAPTER 28

MECHANICAL SYSTEMS: Delete this chapter of the IBC and see the NMMC.

[14.7.2.36 NMAC - Rp, 14.7.2.36 NMAC, 1-28-11]

14.7.2.37 CHAPTER 29

PLUMBING SYSTEMS:

A. Section 2901 - General.

(1) **2901.1 Scope.** Delete the text of this section of the IBC and substitute the following provision: Plumbing systems, including equipment, appliances, fixtures, fittings and appurtenances, and where connected to a water or sewage system and all aspects of a medical gas system, shall be installed, altered, repaired, replaced,

maintained, tested and designed pursuant to the provisions of the NMPC.

(2) **2901.2** All references in chapter 29 of the IBC to the international plumbing code are deemed references to the NMPC.

B. Section 2902 - Minimum plumbing facilities.

(1) **2902.1 Minimum number of fixtures.** See this section of the IBC and add the following language to the end of the first paragraph: Urinals may be substituted for up to 50 percent of the maximum number of water closets in other than A or E occupancies. In A and E occupancies, urinals may be substituted for up to 67 percent of the maximum number of water closets.

(a) **Table 2902.1 Minimum number of required plumbing facilities.** See this table in the IBC.

(b) **2902.1.1 Fixture calculations.** See this section of the IBC.

(2) **2902.2 to 2903.3** See these sections of the IBC.

[14.7.2.37 NMAC - Rp, 14.7.2.37 NMAC, 1-28-11]

14.7.2.38 CHAPTER 30

ELEVATORS AND CONVEYING SYSTEMS: See this chapter of the IBC.

[14.7.2.38 NMAC - Rp, 14.7.2.38 NMAC, 1-28-11]

14.7.2.39 CHAPTER 31

SPECIAL CONSTRUCTION: See this chapter of the IBC.

[14.7.2.39 NMAC - Rp, 14.7.2.39 NMAC, 1-28-11]

14.7.2.40 CHAPTER 32

ENCROACHMENTS INTO THE PUBLIC RIGHT-OF-WAY: See this chapter of the IBC.

[14.7.2.40 NMAC - Rp, 14.7.2.40 NMAC, 1-28-11]

14.7.2.41 CHAPTER 33

SAFEGUARDS DURING CONSTRUCTION: See this chapter of the IBC.

[14.7.2.41 NMAC - Rp, 14.7.2.41 NMAC, 1-28-11]

14.7.2.42 CHAPTER 34

EXISTING STRUCTURES: Delete this chapter of the IBC and see the NMEBC.

[14.7.2.42 NMAC - Rp, 14.7.2.42 NMAC, 1-28-11]

14.7.2.43 CHAPTER 35

REFERENCED STANDARDS: See this chapter of the IBC.

[14.7.2.43 NMAC - Rp, 14.7.2.43 NMAC, 1-28-11]

14.7.2.44 APPENDIX E

SUPPLEMENTARY ACCESSIBILITY

REQUIREMENTS:

- A. **E101 - General.** See this section of the IBC.
- B. **E102 - Definitions.** See this section of the IBC and add the following definition: **children’s use** means spaces and elements specifically designed for use primarily by people 12 years old and younger.
- C. **E103 - Accessible route.** See this section of the IBC.
- D. **E104 - Special occupancies.** See this section of the IBC.
- E. **E105 - Other features and facilities.** See this section of the IBC except delete subsection E105.1.
- F. **E106 - Telephones.** See this section of the IBC.
- G. **E107 - Signage.** See this section of the IBC except delete subsection E107.1.
- H. **E108 through E110.** See these sections of the IBC.
- I. **E111 Children’s accessible elements.** Add children’s accessibility table as shown below.

TABLE E111 CHILDREN’S ACCESSIBLE ELEMENTS TABLE				
This is provided as a comprehensive reference guide to children’s standards within NMBC-2009 and ANSI A117.1-2003				
Element	Children’s Requirements			
Children’s use definition	ANSI-2003 section 106 Children’s use: Spaces and elements specifically designed for use primarily by people 12 years old and younger.			
Scoping	E112 Children’s Standards. The technical requirements in the main body of the International Building Code 2009 are based on adult dimensions and anthropometrics. This section contains technical requirements based on children’s dimensions and anthropometrics in addition to those in ICC ANSI - A117.1 - 2003.			
Scoping	E112.1 The predominant use of an element (rather than a building or facility) shall guide the determination of whether to use specifications for adults or children for that element. If children are the primary users of the element, children’s specifications shall be applied			
Scoping	E112.2 Children’s Accessible Elements. When children are the primary users of a building or facility (such as day care centers, schools, children’s areas of libraries, etc.), the accessibility standards shall correspond to the children’s provisions of this section.			
Element	Details	Ages 3 and 4 Pre-K	Ages 5 through 8 K through 2nd grade	Ages 9 through 12 3rd through 6th grade
Ramps <i>See ANSI 405</i>	Slope	1 :16	1 :16	1 :16
	Clear Width between handrails for single wheelchair	44” min (118 mm)	44” min (118 mm)	44” min (118 mm)
	Clear Width between handrails for two wheelchairs	88” min. (2236 mm)	88” min. (2236 mm)	88” min. (2236 mm)
Element	Details	Ages 3 and 4 Pre-K	Ages 5 through 8 K through 2nd grade	Ages 9 through 12 3rd through 6th grade
Drinking fountains and water coolers <i>See ANSI 602</i> <i>See ANSI 602</i>	Spout height to outlet <i>See ANSI 602.2</i> <i>Exception 2</i>	30” max. (760 mm)	30” max. (760 mm)	30” max. (760 mm)
Water closets for Toilet Rooms, Wheelchair Stalls, and Ambulatory Stalls <i>See ANSI 604.10 and 604.1</i>	Centerline <i>See ANSI 604.10.2</i>	12” max. (305 mm)	12”-15” (305-380 mm)	15”-18” (380-455 mm)
	Clearance <i>See ANSI 604.10.3 and 604.3</i>	60” (1525 mm) wide by 56” (1420 mm) min. deep	60” (1525 mm) wide by 56” (1420 mm) min. deep	60” (1525 mm) wide by 56” (1420 mm) min. deep

Water closets for Toilet Rooms, Wheelchair Stalls, and Ambulatory Stalls <i>See ANSI 604.10 and 604.</i>	Toilet seat height <i>See ANSI 604.10.4</i>	11"-12" (280-305 mm)	12"-15" (305-380 mm)	15"-17" (380-430 mm)	
	Horizontal grab bar height to centerline <i>See ANSI 604.10.5, 604.5 and 609.4</i>	18"-20" (455-510 mm)	20"-25" (510-635 mm)	25"-27" (635-685 mm)	
	Rear grab bar may be split or shifted <i>ANSI 604.5.2</i> <i>Exception 3</i>	18"-20" (455-510 mm)	20"-25" (510-635 mm)	25"-27" (635-685 mm)	
	Vertical grab bar 18" (455mm) long <i>See ANSI 604.10.5 and 604.5.1</i>	Vertical grab bar bottom is 21" (533 mm) min. - 30" (760 mm) max. above the floor Centerline is 34 inches (865 mm) max. - 36" (915 mm) max. from the rear wall	Vertical grab bar bottom is 21" (533 mm) min. - 30" (760 mm) max. above the floor Centerline is 34 inches (865 mm) max. - 36" (915 mm) max. from the rear wall	Vertical grab bar bottom is 21" (533 mm) min. - 30" (760 mm) max. above the floor Centerline is 34 inches (865 mm) max. - 36" (915 mm) max. from the rear wall	Vertical grab bar bottom is 21" (533 mm) min. - 30" (760 mm) max. above the floor Centerline is 34 inches (865 mm) max. - 36" (915 mm) max. from the rear wall
	Flush control <i>See ANSI 604.10.6</i>	36" Max. high (915mm)	36" max. high (915 mm)	36" max. high (915 mm)	
Wheelchair water closet compartments <i>See ANSI 604.10.</i>	Size <i>See ANSI 604.8.2</i>	60" (1525 mm) min. wide by 59" (1500 mm) deep min.	60" (1525 mm) min. wide by 59" (1500 mm) deep min.	60" (1525 mm) min. wide by 59" (1500 mm) deep min.	
	Toe clearance beneath front partition and one side partition <i>See ANSI 604.8.</i>	12" (305 mm) min.	12" (305 mm) min.	12" (305 mm) min.	
Element	Details	Ages 3 and 4 Pre-K	Ages 5 through 8 K through 2nd grade	Ages 9 through 12 3rd through 6th grade	
Ambulatory water closet compartments <i>See ANSI 604.10.8</i>	Size <i>See ANSI 604.9.2</i>	36" (915 mm) wide by 60" (1525 mm) long	36" (915 mm) wide by 60" (1525 mm) long	36" (915 mm) wide by 60" (1525 mm) long	
	Horizontal parallel grab bars on both sidewalls 42" (1065 mm) long	18"-20" (455-510 mm)	20"-25" (510-635 mm)	25"-27" (635-685 mm)	
Urinals <i>See ANSI 605</i>	Top of rim	14" max. (355 mm)	14" max. (355 mm)	14" max. (355 mm)	
Lavatories and sinks <i>See ANSI 606.2</i>	Sink rim <i>See ANSI 606.2</i> <i>Exception 2 and 3.</i>	22" max. (559 mm)	31" max. (797 mm)	31" max. (797 mm)	
	Knee clearance height <i>See ANSI 606.2</i> <i>Exception 2 and 3</i>	none required with parallel approach	24" min. (610 mm)	24" min. (610 mm)	
Mirrors	Full length mirror 60" (1525 mm) min. tall	Bottom of reflecting surface 12" (455 mm) max. above floor	Bottom of reflecting surface 12" (455 mm) max. above floor	Bottom of reflecting surface 12" (455 mm) max. above floor	
	Mirrors over sinks	Bottom of reflecting surface 28" (710 mm) max. above floor	Bottom of reflecting surface 37" (940 mm) max. above floor	Bottom of reflecting surface 37" (940 mm) max. above floor	
Dining surfaces and work surfaces <i>See ANSI 902.4</i>	Tops of tables and counters	26" (660 mm) min. 30" (760 mm) max.	26" (660 mm) min. 30" (760 mm) max.	26" (660 mm) min. 30" (760 mm) max.	
Benches <i>See ANSI 903</i>	Top of seat	11" (280 mm) min. 12" (305 mm) max.	11" (280 mm) min. 17" (430 mm) max.	11" (280 mm) min. 17" (430 mm) max.	

Tray slides	Top of tray slide	28" (710 mm) min. 30" (762 mm) max	28" (710 mm) min. 30" (762 mm) max	28" (710 mm) min. 30" (762 mm) max
Storage <i>See ANSI 905</i>	Frontal approach height range	20"-36" (510-915 mm)	20"-40" (510-1015 mm)	20"-44" (510-1120 mm)
	Side approach height range	20"-36" (510-915 mm)	40" max. (1015 mm)	44" max. (1120 mm)

¹ In a compartment greater than 65" (1650 mm) in depth, toe clearance at the front partition is not required.

[14.7.2.44 NMAC - Rp, 14.7.2.44 NMAC, 1-28-11]

HISTORY OF 14.7.2 NMAC:

Pre-NMAC History: Material in this part was derived from that previously filed with the commission of public records - state records center and archives as:

- GCB-NMBC-83-1, 1982 New Mexico Building Code, filing date, 2-15-83
- CID-GCB-NMBC-85-1, 1985 New Mexico Building Code, filing date, 11-19-85
- CID-GCB-NMBC-88-1, 1988 New Mexico Building Code, filing date, 01-20-89
- CID-GCB-NMBC-91-1, 1991 New Mexico Building Code, filing date, 05-04-93

History of Repealed Material:

- 14 NMAC 7.2, New Mexico Building Code, filed 10-30-98 (with the exception of material incorporated by reference which was also filed 10-30-98), repealed 12-1-00.
- 14.7.2 NMAC, 1997 New Mexico Building Code (filed 10-16-00), repealed 7-1-04.
- 14.7.2 NMAC, 2003 New Mexico Commercial Building Code (filed 5-27-04) repealed 1-1-08.
- 14.7.2 NMAC, 2006 New Mexico Commercial Building Code (filed 08-16-07) repealed 1-28-2011.

Other History:

- CID-GCB-NMBC 91-1, 1991 New Mexico Building Code (filed 5-4-93) was replaced by 14 NMAC 7.2, Housing and Construction, Building Codes General, 1997 New Mexico Building Code, effective 12-31-98.
- 14 NMAC 7.2, Housing and Construction, Building Codes General, 1997 New Mexico Building Code (filed 10-30-98) replaced by 14.7.2 NMAC, 1997 New Mexico Building Code, effective 12-1-00.
- Those applicable portions of 14.7.2 NMAC, 1997 New Mexico Building Code (filed 10-16-00) and those applicable portions of 14 NMAC 7.3, 1997 Uniform Building Code (filed 10-30-98) replaced by 14.7.2 NMAC, 2003 New Mexico Commercial Building Code, effective 7-1-04.
- 14.7.2 NMAC, 2003 New Mexico Commercial Building Code (filed 5-27-04) replaced by 14.7.2 NMAC, 2006 New Mexico Commercial Building Code, effective 1-1-08.
- 14.7.2 NMAC, 2006 New Mexico Commercial Building Code (filed 08-16-07) replaced by 14.7.2 NMAC, 2009 New Mexico Commercial Building Code, effective 1-28-2011.

**NEW MEXICO
REGULATION AND
LICENSING DEPARTMENT
CONSTRUCTION INDUSTRIES
DIVISION**

**TITLE 14 HOUSING AND
CONSTRUCTION
CHAPTER 7 BUILDING CODES
GENERAL
PART 3 2009 NEW MEXICO
RESIDENTIAL BUILDING CODE**

14.7.3.1 ISSUING AGENCY: Construction Industries Division (CID) of the Regulation and Licensing Department. [14.7.3.1 NMAC - Rp, 14.7.3.1 NMAC, 1-28-11]

14.7.3.2 SCOPE: This rule applies to all construction, alteration, relocation, enlargement, replacement, repair, equipment, use and occupancy, location, removal and demolition of all detached one- and two-family dwellings and multiple single-family dwellings (townhouses)

not more than three (3) stories high with separate means of egress, and their accessory structures that is performed in New Mexico on or after January 28, 2011, and that is subject to the jurisdiction of CID, unless performed pursuant to a permit for which an application was received by CID before that date. Any repair, alteration or addition to such building that is associated with a change of occupancy, and any construction not addressed in the NMRBC, shall be subject to and shall comply with the NMCBC. [14.7.3.2 NMAC - Rp, 14.7.3.2 NMAC, 1-28-11]

14.7.3.3 STATUTORY AUTHORITY: NMSA 1978 Section 60-13-9 and 60-13-44. [14.7.3.3 NMAC - Rp, 14.7.3.3 NMAC, 1-28-11]

14.7.3.4 DURATION: Permanent. [14.7.3.4 NMAC - Rp, 14.7.3.4 NMAC, 1-28-11]

14.7.3.5 EFFECTIVE DATE:

January 28, 2011, unless a later date is cited at the end of a section. [14.7.3.5 NMAC - Rp, 14.7.3.5 NMAC, 1-28-11]

14.7.3.6 OBJECTIVE: The purpose of this rule is to establish minimum standards for the general construction of residential buildings in New Mexico. [14.7.3.6 NMAC - Rp, 14.7.3.6 NMAC, 1-28-11]

14.7.3.7 DEFINITIONS: See 14.5.1 NMAC, General Provisions and chapter 2 of the 2009 international residential code (IRC) as amended in 14.7.3.10 NMAC. [14.7.3.7 NMAC - Rp, 14.7.3.7 NMAC, 1-28-11]

14.7.3.8 ADOPTION OF THE 2009 INTERNATIONAL RESIDENTIAL CODE:
A. This rule adopts by reference the 2009 international residential code, as amended by this rule.
B. In this rule, each provision is numbered to correspond with

the numbering of the 2009 international residential code.

[14.7.3.8 NMAC - Rp, 14.7.3.8 NMAC, 1-28-11]

**14.7.3.9 CHAPTER 1
ADMINISTRATION:**

A. Section R101 - Title, scope and purpose.

(1) **R101.1 Title.** Delete this section of the IRC and substitute: This code shall be known as the 2009 New Mexico residential building code (NMRBC).

(2) **R101.2 Scope.** Delete this section of the IRC and see 14.7.3.2 NMAC, Scope and add the following: **Exception.** Live/work units complying with the requirements of Section 419 of the *International Building Code* shall be permitted to be built as one- and two-family dwellings or townhouses. Fire suppression required by Section 419.5 of the *International Building Code* when constructed under the *International Residential Code for One- and Two-family Dwellings* shall conform to Section 903.3.1.3 of the *International Building Code*. A home office or business not utilizing hazardous materials with a work area less than 300 sq. ft. is not a live/work unit subject to the requirements of the *International Building Code*. A home office in dwelling units exceeding 3000 sq. ft. may occupy up to 10% of the floor area.

(3) **R101.3 Purpose.** See 14.7.3.6 NMAC, Objective.

B. Section R102 - Applicability.

(1) **R102.1 General.** Delete this section of the IRC and see 14.5.1 NMAC, General Provisions.

(2) **R102.2 Other laws.** Delete this section of the IRC and see 14.5.1 NMAC, General Provisions.

(3) **R102.3 Application of references.** Delete this section of the IRC and see 14.5.1 NMAC, General Provisions.

(4) **R102.4 Referenced codes and standards.** Delete this section of the IRC and substitute the following: The codes referenced in the NMRBC are set forth below. See also 14.5.1 NMAC, General Provisions.

(a) **Electrical.** The NMEC applies to all electrical wiring as defined in NMSA 1978 Section 60-13-32. All references in the IRC to the ICC electrical code are deemed references to the NMEC.

(b) **Gas.** The NMMC applies to "gas fittings" as that term is defined in NMSA 1978 Section 60-13-32. All references in the IRC to the international mechanical code are deemed references to the NMMC.

Gas piping, systems and appliances for use with liquefied propane gas (LPG), or compressed natural gas (CNG), shall be governed by the LPG standards (NMSA 1978, Section 70-5-1 et seq., LPG and CNG

Act, and the rules promulgated pursuant thereto, 19.15.4.1 through 19.15.4.24 NMAC.)

(c) **Mechanical.** The NMMC applies to the installation, repair, and replacement of mechanical systems including equipment, appliances, fixtures, fittings and/or appurtenances including ventilating, heating, cooling, air conditioning, and refrigeration systems, incinerators, and other energy related systems. All references in the IRC to the international mechanical code are deemed references to the NMMC.

(d) **Plumbing.** The NMPC applies to the installation, alterations, repairs, and replacement of plumbing systems, including equipment, appliances, fixtures, fittings, and appurtenances, and where connected to a water or sewage system and all aspects of a medical gas system. All references in the IRC to the international plumbing code are deemed references to the NMPC.

(e) **Energy.** The NMECC applies to all energy-efficiency-related requirements for the design and construction of buildings that are subject to the New Mexico construction codes. All references in the IRC to the international energy code are deemed references to the NMECC.

(5) **R102.5 Appendices.** This rule adopts the following appendices as amended herein.

(a) **Appendix G - Swimming pools and spas.**

(b) **Appendix H - Patio covers.**

(c) **Appendix J - Existing buildings.**

(d) **Appendix K - Sound transmission.**

(6) **R102.6 Partial Invalidity.** Delete this section of the IRC and see 14.5.1 NMAC, General Provisions.

(7) **R102.7 Existing structures.** See this section, and sub-section R102.7.1, additions, alterations or repairs, of the IRC, except that the references to the international property maintenance code and the international fire code are deleted.

C. Section R103 - Department of building safety. Delete this section of the IRC.

D. Section R104 - Duties and powers of building official. Delete this section of the IRC and see 14.5.1 NMAC, General Provisions.

E. Section R105 - Permits. Delete this section of the IRC and see 14.5.2 NMAC, Permits.

F. Section R106 - Construction documents. Delete this provision of the IRC and see 14.5.2 NMAC, Permits.

G. Section R107 - Temporary structures and uses. Delete this section of the IRC and see 14.5.2 NMAC, Permits.

H. Section R108 - Fees.

Delete this section of the IRC and see 14.5.5 NMAC, Fees.

I. Section R109 - Inspections. Delete this section of the IRC and see 14.5.3 NMAC, Inspections.

J. Section R110 - Certificate of occupancy. Delete this section of the IRC and see 14.5.3 NMAC, Inspections.

K. Section R111 - Service utilities. Delete this section of the IRC and see 14.5.3 NMAC, Inspections.

L. Section R112 - Board of appeals. Delete this section of the IRC and see 14.5.1 NMAC, General Provisions.

M. Section R113 - Violations. Delete this section of the IRC and see CILA 60-13-1 et seq., and 14.5.3 NMAC, Inspections.

N. Section R114 - Stop work order. Delete this section of the IRC and see 14.5.3 NMAC, Inspections.

[14.7.3.9 NMAC - Rp, 14.7.3.9 NMAC, 1-28-11]

**14.7.3.10 CHAPTER 2
DEFINITIONS:**

A. Section R101 General.

(1) **R201.1, R201.2 and R201.4.** See these sections of the IRC.

(2) **R201.3 Terms defined in other codes.** Delete this section of the IRC and substitute the following provision: Defined terms not listed in this rule have the meanings given in 14.5.1.7 NMAC, General Provisions, and in the other New Mexico codes.

B. Section R202 Definitions.

(1) **Board of appeals.** Delete this definition and see 14.5.1 NMAC, General Provisions.

(2) **Building official.** Delete this definition and see 14.5.1 NMAC, General Provisions.

(3) **Design professional and registered design professional.** Delete these definitions and see 14.5.1 NMAC, General Provisions.

(4) **Earthen building materials** has the meaning given in 14.7.4 NMAC, 2006 New Mexico earthen building materials code.

(5) **Exterior finish coating** means a single coat of plaster, cementitious or other approved material applied to a concrete or masonry surface for cosmetic purposes only.

(6) **ICC** means the international code council.

(7) **Manufactured home.** Delete this definition from the IRC.

(8) **Sleeping room** means a room designated as a sleeping room or bedroom on the plans.

(9) **Unbalance backfill height** is the difference in height between the exterior finish ground level and the lower of the top

of the concrete footing that supports the foundation wall, retaining wall or the interior finished ground level. Where an interior concrete slab on grade is provided and is in contact with the interior surface of the foundation wall, the unbalanced backfill height is permitted to be measured from the exterior finished ground level to the top of the interior concrete slab.

(10) Decorative coating. A single coat of plaster, cementitious or other approved material applied to a concrete or masonry surface for cosmetic purposes only.

(11) All other terms defined in this section of the IRC have the meanings given in that section.

[14.7.3.10 NMAC - Rp, 14.7.3.10 NMAC, 1-28-11]

14.7.3.11 CHAPTER 3 BUILDING PLANNING:

A. Section R301 - Design criteria. See this section of the IRC except as provided below:

(1) Section R301.2.1 Climatic and geographic design criteria. Amend footnote “F” as follows: The jurisdiction shall fill in this part of the table with the seismic design category determined from Section R301.2.2.1 or information from the U.S.G.S. software “Design Values for Buildings” found online at <http://earthquake.usgs.gov/hazards/design/buildings.php>.

(2) Section 301.2.2 Seismic provisions. Add the following sentence to end the **exception**: Buildings in which earthen building materials form the bearing wall system, that are located in seismic design categories A, B, C and D₁ are exempt from the seismic requirements of this code.

(3) Section R301.2.2.1. Determination of seismic design category. Add the following text at the end of the section: or information from the U.S.G.S. software “Design Values for Buildings” found online at <http://earthquake.usgs.gov/hazards/design/buildings.php>.

B. Section R302. See this section of the IRC except as provided below.

(1) Section R302.1. See this section of the IRC except as provided below and add a new sub-section as follows: **Section R302.1.1 Zero lot line separation.** Where perpetual, platted, and recorded easements create a non-buildable minimum fire separation distance of at least six (6) feet between structures on adjacent properties, the one-hour fire-resistive rating shall not apply.

(2) R302.2 Townhouses. Add the following sentence to the beginning of the exception: The following exception applies if the *townhouse* has an automatic residential fire sprinkler system. Delete the text “Chapters 34 through 43” from the second to the last sentence and replace with currently-adopted electrical code.

(3) Section R302.5.1 Opening protection. Delete the text in this section and replace with the following: Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with self-closing, tight fitting solid wood doors not less than 1 3/8 inches (35 mm) in thickness, solid or honeycomb core steel doors not less than 1 3/8 inches (35 mm) thick or self-closing, tight fitting 20-minute fire-rated doors.

(4) R302.6 Dwelling/garage fire separation required. Delete the text of this section and replace with the following: The garage shall be separated from the residence and its attic area by not less than 5/8 inch (15.9 mm) type x gypsum board or equivalent applied to the garage side. Garages beneath habitable space shall be separated from all habitable rooms above by not less than 5/8 inch (15.9 mm) type x gypsum board or equivalent. Where separation is a floor-ceiling assembly, the structure supporting the separation shall also be protected by not less than 5/8 inch (15.9 mm) type x gypsum board or equivalent. Garages located less than three (3) feet (914 mm) from a dwelling unit on the same lot shall be protected with not less than 5/8 inch (15.9 mm) type x gypsum board or equivalent applied to the interior side of exterior walls that are within this area. Openings in these walls shall be regulated by section R309.1. This provision does not apply to garage walls that are perpendicular to the adjacent dwelling unit wall. **Table R302.6.** Delete the text of table R302.6 and replace with the following:

Table R302.6 DWELLING/GARAGE SEPARATION	
SEPARATION	MATERIAL
From the residence and attics	Not less than 5/8-inch Type X gypsum board or equivalent applied to the garage side
From all habitable rooms above the garage	Not less than 5/8-inch Type X gypsum board or equivalent applied to the interior side of exterior walls that are within this area
Structure(s) supporting floor/ceiling assemblies used for separation required by this section	Not less than 5/8-inch gypsum board or equivalent
Garages located less than 3 feet from a dwelling unit on the same lot	Not less than 5/8-inch gypsum board or equivalent

C. Section R303 through Section R308. See these sections of the IRC.

D. Section R309. See this section of the IRC except as provided below: **R309.1 Floor surface.** Delete the text of this section of the IRC and replace with the following language. Garage floor surfaces shall be of approved noncombustible material. The area of floor used for parking of automobiles or other vehicles shall be sloped a minimum of 1 percent to facilitate the movement of liquids to a drain or toward the main vehicle entry doorway. The approach apron shall be recessed a minimum ¼ inch at the vehicle doorways to prevent entry of storm water into the garage.

F. Section R311 Means of egress. See these section of the IRC except as provided below. **R311.7.7.3 Grip-size.** Delete the text of the first sentence of this section of the IRC and replace with the following: All required handrails shall be of one of the following types or the shape shall provide equivalent graspability. In item #1 Type I delete the word “of” after the “words maximum cross section” and before “dimension”.

G. Section R313 Automatic fire sprinkler systems. Delete the text of sections R313.1 and R313.2 and replace with the following: **R313.1 A determination on the requirement for an automatic residential fire sprinkler system in townhouses and one- and two-family dwellings is deferred until July 1, 2013.**

H. Section R312 through Section R323. See these sections of the IRC.

[14.7.3.11 NMAC - Rp, 14.7.3.11 NMAC, 1-28-11]

14.7.3.12 CHAPTER 4 FOUNDATIONS:

A. Section R401. See this section of the IRC except as provided below: **Section R401.4 Soil tests.** Delete the text of this section and replace with the following. Where quantifiable data created by accepted soil science methodologies indicate expansive, compressible, shifting, or other questionable soil characteristics are likely to be present at a particular location, a soil test to determine the soil's characteristics at a particular location shall be performed.

B. Section R403 Footings. See this section of the IRC except as provided below.

(1) R403.1.3.2 See this section of the IECC and add the following sentence to the end of the section. Where the slabs-on-ground are cast monolithically and rigid insulation is used as a forming material, a minimum of 1½ inch rigid insulation shall be used. Where sandy, silty sand or sandy gravel soils are present, rigid insulation shall not be used as a forming material. Forms must be constructed to prevent the possibility of failure or collapse. Forms shall be constructed and maintained so that the finished concrete complies with section R401.2.

(2) R403.1.4 Delete the text of this section and replace with the following language. All exterior footings shall be placed at least 12 inches (305 mm) below the grade. Where applicable, the depth of footings shall also conform to sections R403.1.4.1 and R403.1.4.2.

[14.7.3.12 NMAC - Rp, 14.7.3.12 NMAC, 1-28-11]

14.7.3.13 CHAPTER 5 FLOORS:

See this chapter of the IRC. [14.7.3.13 NMAC - Rp, 14.7.3.13 NMAC, 1-28-11]

14.7.3.14 CHAPTER 6 WALL CONSTRUCTION:

A. Section R601. General. See this section of the IRC.

B. Section R602. Wood wall framing. See this section of the IRC except as provided below.

(1) Section R602.1.3 Structural log members. Delete the text of this section and replace with the following; **Native timber.** Rough-sawn lumber, timbers, and vigas, used for any load bearing application shall be identified by a grade mark of an *approved* lumber grading or inspection agency. In lieu of a grade mark, on the material, a certificate of inspection as to species and grade, issued by a lumber-grading or inspection agency meeting the requirements of this section. A grading report issued by an engineer or architect will be accepted.

(2) R602.3 Design and

construction. Delete the text of this section and replace with the following: exterior walls of wood-frame construction shall be designed and constructed in accordance with the provisions of this chapter and Figures R602.3(1) and R602.3(2) or in accordance with the American forest and paper associations (AF&PA's) national design specifications (NDS). Components of exterior walls shall be fastened in accordance with Tables R602.3(1) through R602.3(4). Structural wall sheathing shall be fastened directly to structural framing members and plywood or OSB shall have a 1/8 inch space at panel edge and end joints. Exterior wall coverings shall be capable of resisting the wind pressures listed in Table R301.2(2) adjusted for height and exposure using Table R301.2(3). Wood structural panel sheathing used for exterior walls shall conform to the requirements of Table R602.3(3).

(3) R602.3.4 Bottom (sole) plate. Studs shall have full bearing on a nominal 2-by (51 mm) or larger plate or sill having a width at least equal to the width of the studs. 2 inch (51 mm) by 6 inch (152 mm) or wider exterior wall bottom or sill plates may be cantilevered a maximum of 1-1/2 (38 mm) inches from concrete slab-on-grade to accommodate slab-on-grade perimeter insulation if the remaining bearing is sufficient to carry the structural load. Anchor bolts shall be placed a minimum of 2 inches from the exterior edge of the concrete. 2 inch by 4 inch or wider exterior wall bottom or sill plates may be cantilevered a maximum of 1/2 inches from concrete slab-on-grade to accommodate slab-on-grade perimeter insulation if the remaining bearing is sufficient to carry the structural load. Anchor bolts shall be placed a minimum of 2 inches from the exterior edge of the concrete.

(4) Section R602.10.5 Continuous wood structural panel sheathing. Delete this section of the IRC and substitute as follows: When continuous wood structural panel sheathing is provided in accordance with method 3 of R602.10.3, including areas above and below openings, braced wall panel lengths shall be in accordance with table R602.10.5. Wood structural panel sheathing shall be installed at corners in accordance with figures R602.10.5. The bracing amounts in table R602.10.1 for method 3 shall be permitted to be multiplied by a factor of 0.9 for walls with a maximum opening height that does not exceed 85 percent of the wall height or a factor of 0.8 for walls for the maximum opening height that does not exceed 67 percent of the wall height.

(5) Table R602.10.5 Length requirements for braced wall panels in a continuously sheathed wall. See this table of the IRC and revise note 'c' as follows: c. Walls on either or both sides of openings in garages shall be permitted to be built in

accordance with Section R602.10.6.2 and Figure R602.10.6.2 except that a single bottom plate shall be permitted and two anchor bolts shall be placed at 1/3 points. In addition, tie-down devices shall not be required and the vertical wall segment shall have a maximum 6:1 height-to-width ratio (with height being measured from top of header to the bottom of the sill plate). This option shall be permitted for the first story of two-story applications in Seismic Design Categories A through C.

(6) R602.10.6 Braced wall panel connections. Delete the text of this section and substitute: Alternate braced wall lines constructed in accordance with (a) or (b), below, shall be permitted to replace each 4 feet (1219 mm) of braced wall panel as required by section R602.10.4. In one-story buildings, each panel shall have a length of not less than 16 inches (406 mm) and a height of not more than 10 feet (3048 mm). Each panel shall be sheathed on one face with 3/8 inch (9.5 mm) minimum thickness wood structural panel sheathing nailed with 8d common or galvanized box nails in accordance with table R602.3.(1) and blocked at all wood structural panel sheathing edges. Anchor bolts shall be placed at panel quarter points. For walls between 12 inches (305 mm) and 16 inches (406 mm) in length and a height of not more than 10 feet (3048 mm), panels shall be nailed as above and have one anchor bolt placed at the center of the panel. The panels shall be supported directly on a foundation or on floor framing supported directly on a foundation, which is continuous across the entire length of the braced wall line. This foundation shall be reinforced with not less than one No. 4 bar top and bottom. When the continuous foundation is required to have a depth greater than 12 inches (305 mm), a minimum 12-inch-by-12-inch (305 mm by 305 mm) continuous footing or turned down slab edge shall be reinforced with not less than one No. 4 bar top and bottom. This reinforcement shall be lapped 15 inches (381 mm) with the reinforcement required in the continuous foundation located directly under the braced wall line. In the first story of two-story buildings, each braced wall panel shall be in accordance with (a), above, except that the wood structural panel sheathing shall be provided on both faces, sheathing edge nailing spacing shall not exceed 4 inches (101.6 mm) on center, at least three anchor bolts shall be placed at one-fifth points.

C. Section R603 through Section R612. See these sections of the IRC.

[14.7.3.14 NMAC - Rp, 14.7.3.14 NMAC, 1-28-11]

14.7.3.15 CHAPTER 7 WALL COVERING:

A. Section R701 and

Section R702. See these sections of the IRC.

B. Section R703 Exterior covering. See this section of the IRC except as follows. **Section R703.6.2 Plaster.** Insert the following at the end of the first paragraph: exterior finish coatings which have a current ICC evaluation report, and applied to a concrete or masonry surface shall be installed in accordance with the manufacturer's installation instructions and are not required to comply with table 702.1(1). **Exception:** Exterior plaster may be continued below the weep screed to below grade provided there is a complete break in the drainage plane of the building at the location of the horizontal weep screed. Weep holes in the screed shall not be plugged during the application of plaster materials used to cover foundation insulation. **Section R703.6.2.1 Weep screeds.** Delete the text of this section of the IRC and substitute with the following: When an approved acrylic based exterior finish stucco system or acrylic based color coat is applied, a minimum 0.019 inch (0.48 mm) (No. 26 galvanized sheet gage), corrosion-resistant weep screed or plastic weep screed, with a minimum vertical attachment flange of 3 ½ inches (89 mm) shall be provided at or below the foundation plate line on exterior stud wall in accordance with ASTM C 926. The weep screed shall be placed a minimum of 4 inches (51mm) above the earth or ½ inch 13 mm above paved areas and shall be of a type that will allow trapped water to drain to the exterior of the building. The weather-resistant barrier shall lap the attachment flange. The exterior lath shall lap the attachment flange of the weep screed. Weep screeds are not required under covered porches or covered patios. [14.7.3.15 NMAC - Rp, 14.7.3.15 NMAC, 1-28-11]

14.7.3.16 CHAPTER 8 ROOF-CEILING CONSTRUCTION: See this chapter of the IRC. [14.7.3.16 NMAC - Rp, 14.7.3.16 NMAC, 1-28-11]

14.7.3.17 CHAPTER 9 ROOF ASSEMBLIES:

A. Section R901 through Section R902: See these sections of the IRC.

B. Section R903: See this section of the IRC except as provided below. **(1) Section R903.2 Plaster to roof separation.** A reglet and, weep screed or an approved metal flashing shall be applied where all stucco wall surfaces terminate at a roof.

(2) Section R903.3. Delete the text of this section and replace with the following: Plastered parapets shall require a seamless but permeable waterproof cover or weather barrier, capping the entire parapet

and wrapping over each side. The cover shall extend past any break from the vertical a minimum of four (4) inches on the wall side. On the roof side, the cover shall properly lap any rising roof felts or membranes and be properly sealed. A layer of expanded metal lath shall be installed over the cover before plaster or stucco is applied. The lath shall extend past any break from the vertical on the wall side a minimum of five (5) inches and on the roof side, the same distance as the cover below, allowing for plaster stops or seals. No penetrating fasteners are allowed on the horizontal surface of parapets.

C. Section R904: See this section of the IRC except add the following new section: **Section R904.5 Loose granular fill.** Pumice and other granular fill type materials are not permitted in roof assemblies.

D. Section R905: See this section of the IRC except add the following new sections.

(1) Section R905.9.4 Roof deck transitions. Add new section to the IRC as follows: Where roof sheathing is overlapped to create drainage "crickets" or valleys to canales, taperboard or equivalent shall be used to transition between the two deck levels to create a uniform substrate.

(2) Section R905.9.5 Canales and scuppers. All canales and/or scuppers must have a metal pan lining extending 6 inches minimum past the inside of the parapet and 6 inches minimum to each side of the canale or scupper opening. All canales or scuppers must have positive drainage.

(3) Section R905.11.4 Modified bitumen roofing. Add new section to the IRC as follows: Where roof sheathing is overlapped to create drainage "cricket" or valleys to canales, taperboard or equivalent shall be used to transition between the two deck levels to create a uniform substrate.

(4) Section R905.12.4 Thermoset single-ply roofing. Add new section to the IRC as follows: Where roof sheathing is overlapped to create drainage "crickets" or valleys to canales, taperboard or equivalent shall be used to transition between the two deck levels to create a uniform substrate.

(5) Section R905.13.4 Thermoplastic single-ply roofing. Add new section to the IRC as follows: Where roof sheathing is overlapped to create drainage "crickets" or valleys to canales, taperboard or equivalent shall be used to transition between the two deck levels to create a uniform substrate.

E. Section R907.3 Re-covering versus replacement. Delete the text of section R907.3 and substitute with the following: New roof covering shall not be installed without first removing existing roof coverings where any of the following conditions occur.

(1) Where the existing roof or roof

covering is water soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional roofing.

(2) Where the existing roof covering is wood shake, slate, clay, cement or asbestos-cement tile.

(3) Where the existing roof has two or more applications of any type of roof covering

(4) Where pumice or other granular fill are present. Existing roofing and granular fill must be removed prior to re-roofing.

[14.7.3.17 NMAC - Rp, 14.7.3.17 NMAC, 1-28-11]

14.7.3.18 CHAPTER 10 CHIMNEYS AND FIREPLACES: See this chapter of the IRC.

[14.7.3.18 NMAC - Rp, 14.7.3.18 NMAC, 1-28-11]

14.7.3.19 CHAPTER 11 ENERGY EFFICIENCY: Delete this chapter of the IRC and see 14.7.6 NMAC, the NMECC.

[14.7.3.19 NMAC - Rp, 14.7.3.19 NMAC, 1-28-11]

14.7.3.20 CHAPTERS 12 THROUGH 23 MECHANICAL: Delete these chapters of the IRC and see 14.9.2, NMMC.

[14.7.3.20 NMAC - Rp, 14.7.3.20 NMAC, 1-28-11]

14.7.3.21 CHAPTER 24 FUEL GAS: Delete this chapter of the IRC and see the NMMC.

[14.7.3.21 NMAC - Rp, 14.7.3.21 NMAC, 1-28-11]

14.7.3.22 CHAPTERS 25 THROUGH 33 PLUMBING: Delete these chapters of the IRC and see the NMPC.

[14.7.3.22 NMAC - Rp, 14.7.3.22 NMAC, 1-28-11]

14.7.3.23 CHAPTERS 34 THROUGH 43 ELECTRICAL: Delete these chapters of the IRC and see the NMEC.

[14.7.3.23 NMAC - Rp, 14.7.3.23 NMAC, 1-28-11]

14.7.3.24 CHAPTER 44 REFERENCED STANDARDS: See this section of the IRC.

[14.7.3.24 NMAC - Rp, 14.7.3.24 NMAC, 1-28-11]

14.7.3.25 A P P E N D I X J EXISTING BUILDINGS AND STRUCTURES. See this section Of the IRC except as provided below:

A. Section AJ101 Purpose and intent. See this section of the IRC.

B. Section AJ102 Compliance. See this section of the IRC except add the following new section:
Section AJ102.4.1 Compliance. When alterations and repairs are made to exterior stud framed walls of existing bedrooms and exterior wall framing adjoining the window is exposed, then the window shall be made to comply with section R310.
 [14.7.3.25 NMAC - Rp, 14.7.3.25 NMAC, 1-28-11]

HISTORY OF 14.7.3 NMAC:

Pre-NMAC History: Material in this part was derived from that previously filed with the commission of public records - state records center and archives as:
 GCB-NMBC-83-1, 1982 New Mexico Building Code, filing date, 2-15-83
 CID-GCB-NMBC-85-1, 1985 New Mexico Building Code, filing date, 11-19-85
 CID-GCB-NMBC-88-1, 1988 New Mexico Building Code, filing date, 01-20-89
 CID-GCB-NMBC-91-1, 1991 New Mexico Building Code, filing date, 05-04-93

History of Repealed Material:

14 NMAC 7.2, 1997 New Mexico Building Code (filed 10-30-98) (with the exception of material incorporated by reference which was also filed 10-30-98), repealed 12-1-00.
 14.7.2 NMAC, 1997 New Mexico Building Code (filed 10-16-00), repealed 7-1-04.
 14.7.3 NMAC, 2003 New Mexico Residential Building Code (filed 5-27-04), repealed 1-1-08.
 14.7.3 NMAC, 2006 New Mexico Residential Building Code (filed 08-16-07), repealed 1-28-2011.

Other History:

CID-GCB-NMBC 91-1, 1991 New Mexico Building Code (filed 5-4-93) was replaced by 14 NMAC 7.2, Housing and Construction, Building Codes General, 1997 New Mexico Building Code, effective 12-31-98.
 14 NMAC 7.2, Housing and Construction, Building Codes General, 1997 New Mexico Building Code (filed 10-30-98) replaced by 14.7.2 NMAC, 1997 New Mexico Building Code, effective 12-1-00.
 Those applicable portions of 14.7.2 NMAC, 1997 New Mexico Building Code (filed 10-16-00) and 14 NMAC 7.3, 1997 Uniform Building Code (filed 10-30-98) replaced by 14.7.2 NMAC, 2003 New Mexico Commercial Building Code, effective 07-01-04 and 14.7.3 NMAC, 2003 New Mexico Residential Building Code, effective 7-1-04.
 14.7.3 NMAC, 2003 New Mexico Residential Building Code (filed 5-27-04) was replaced by 14.7.3 NMAC, 2006 New Mexico Residential Building Code, effective 1-1-08.
 14.7.3 NMAC, 2006 New Mexico Residential Building Code (filed 08-16-07) was replaced by 14.7.3 NMAC, 2009 New

Mexico Residential Building Code, effective 1-28-2011.

**NEW MEXICO
 REGULATION AND
 LICENSING DEPARTMENT
 CONSTRUCTION INDUSTRIES
 DIVISION**

**TITLE 14 HOUSING AND CONSTRUCTION
 CHAPTER 7 BUILDING CODES GENERAL
 PART 4 2009 NEW MEXICO EARTHEN BUILDING MATERIALS CODE**

14.7.4.1 ISSUING AGENCY: Construction Industries Division of the Regulation and Licensing Department.
 [14.7.4.1 NMAC - Rp, 14.7.4.1 NMAC, 1-28-11]

14.7.4.2 SCOPE: This rule applies to all earthen building materials contracting work performed in New Mexico on or after January 28, 2011, that is subject to the jurisdiction of CID, unless performed pursuant to a permit for which an application was received by CID before that date.
 [14.7.4.2 NMAC - Rp, 14.7.4.2 NMAC, 1-28-11]

14.7.4.3 STATUTORY AUTHORITY: NMSA 1978 Section 60-13-9 and 60-13-44.
 [14.7.4.3 NMAC - Rp, 14.7.4.3 NMAC, 1-28-11]

14.7.4.4 DURATION: Permanent.
 [14.7.4.4 NMAC - Rp, 14.7.4.4 NMAC, 1-28-11]

14.7.4.5 EFFECTIVE DATE: January 28, 2011, unless a later date is cited at the end of a section.
 [14.7.4.5 NMAC - Rp, 14.7.4.1 NMAC, 1-28-11]

14.7.4.6 OBJECTIVE: The purpose of this rule is to establish minimum standards for earthen building materials construction in New Mexico.
 [14.7.4.6 NMAC - Rp, 14.7.4.1 NMAC, 1-28-11]

14.7.4.7 DEFINITIONS:

A. Amended soil means improving an unqualified soil to a qualified state with the addition of other soils or amendments.

B. Amendments means additive elements to soil, such as lime, portland cement, fly ash, etc. which are

“dry-mixed” into the main soil body as a percentage of total weight to achieve stabilization.

C. Buttress means a projecting structure providing lateral support to a wall. The buttress shall be incorporated into the foundation and wall system. (Refer to figure 1 of the earthen building figures supplement).

D. CEB means compressed earth block.

E. Keyway means a groove on the vertical rammed earth wall surface for interlocking purposes. Refer to figure 3 of the earthen building figures supplement).

F. Lift means a course of rammed earth, placed within the forms, and then compacted.

G. Nailer means any material rammed into the wall that serves as an attachment device. Refer to figure 4 of the earthen building figures supplement).

H. Optimum moisture means sufficient water (generally no more than ten (10) percent) mixed into the soil to attain sufficient compaction.

I. psi means pounds per square inch.

J. Qualified soil means any soil, or mixture of soils, that attains 300 psi compression strength and attains 50 psi. modulus of rupture.

K. Rammed earth means qualified soil that is mechanically or manually consolidated to full compaction.

L. Round-cap nails means fasteners that include nails or screws in combination with caps of at least three-fourths (3/4) inches diameter or three-fourths (3/4) inch square.

M. Stabilization, stabilized means qualified soils that pass the wet strength test under ASTM D1633-00 or contain a minimum of six (6) percent portland cement by weight. Stabilization is achieved through the use of amendments.

N. Wet strength compression test means an approved testing laboratory process in which a fully cured rammed earth cylinder is completely submerged in water a minimum of four hours according to ASTM D1633-00, then subjected to a compression test.

[14.7.4.7 NMAC - Rp, 14.7.4.7 NMAC, 1-28-11]

14.7.4.8 EARTHEN BUILDING MATERIALS:

A. General. The provisions of this rule, 14.7.4 NMAC, shall control the design and construction of one- and two-family dwellings in which earthen building materials form the bearing wall system.

B. Allowable wall heights for earthen structures. All earthen structures whether adobe, burned adobe,

compressed earth block, rammed earth or terrón, shall conform to table 1. For purposes of using table 1, height is defined as the distance from the top of the slab or top of stem wall to the underside of the bond beam.

Table 1 ALLOWABLE WALL HEIGHTS FOR EARTHEN STRUCTURES					
Maximum Sds	Wall Thickness	Maximum Height	Maximum Sds	Wall Thickness	Maximum Height
.25	10	120"	.3	10	120"
	12	128		12	128
	14	144		14	144
	16	144		16	144
	18	144		18	144
	24	144		24	144
.35	10	120"	.4	10	120"
	12	128		12	128
	14	144		14	144
	16	144		16	144
	18	144		18	144
	24	144		24	144
.45	10	104"	.5	10	96"
	12	128		12	112
	14	144		14	136
	16	144		16	144
	18	144		18	144
	24	144		24	144

This table is based on two story maximum, one and two family residential with seismic soil site class D1.
 [14.7.4.8 NMAC - Rp, 14.7.4.8 NMAC, 1-28-11]

14.7.4.9 ADOBE CONSTRUCTION:

A. General. Adobe shall not be used in any building more than two (2) stories in height. The maximum height of every wall of adobe block without lateral support is specified in 14.7.4.8 NMAC, table 1. The height of the wall is defined as the distance from the top of the slab or top of stem wall to the underside of the bond beam. The maximum height of exterior walls, which are laterally supported with those supports located no more than twenty-four (24) feet apart, are as defined in 14.7.4.8 NMAC, table 1. The bottom story of a two-story is allowed a minimum thickness of fourteen (14) inches with the upper story allowed a thickness of ten (10) inches providing the structure meets the provisions of 14.7.4.8 NMAC, table 1.

B. Fireplaces. Adobe or masonry fireplaces and chimneys in adobe structures shall comply with 14.7.3.18 NMAC. They shall be integrated into adjacent adobe walls during construction or secured to them by suitable steel ladder reinforcement or reinforcing rods.

C. Count Rumford fireplaces. Count Rumford fireplaces are allowed as provided in 14.7.3.18 NMAC.

D. Soil. Soil for use in adobe blocks should have a mixture of coarse sand, sand, silt and clay, naturally occurring, or amended with sand or straw, that will make a sun-dried brick without serious warping or cracking. The best way to determine the fitness of a soil is to make sample blocks and allow them to cure in the open, protected from moisture. Then test as specified by Subsections C and D of 14.7.4.11 NMAC. The soil shall not contain more than two (2) percent soluble salts.

E. Passive solar structures. Passive solar structures incorporating the use of solar mass walls (trombes), direct gain arrays or sunspaces (greenhouses) as defined by the passive solar heating worksheet, dated June, 2004 and prepared by the state of New Mexico energy, minerals and natural resources department, are allowed.

[14.7.4.9 NMAC - Rp, 14.7.4.9 NMAC, 1-28-11]

14.7.4.10 CLASSES OF ADOBE:

A. Stabilized adobe. The term "stabilized" is defined to mean water-resistant adobe made of soil to which certain admixtures are added in the manufacturing process in order to limit water absorption into the adobe. Exterior walls constructed of stabilized mortar and adobe requires no additional protection. Cement stucco or other waterproof coating is not required. The test required is that a dried four (4) inch cube cut from a sample unit shall not gain more than 2.5% in weight when placed upon a constantly water-saturated porous surface for seven (7) days. An adobe unit that meets this specification shall be considered "stabilized."

B. Unstabilized adobe. Unstabilized or "natural" adobes are adobes that do not meet the water absorption specifications indicated in Subsection A of 14.7.4.10 NMAC above. Use of unstabilized adobes is prohibited within four (4) inches of the finished floor grade. Stabilized adobe or waterproof masonry units and mortar may be used for the first four (4) inches above floor grade.

C. Terrón. The term "Terrón" shall refer to a cut sod brick. Their use is permitted if units are dry and the wall design is in conformance with this code.

D. Burned adobe. The term "burned adobe" shall refer to mud adobe bricks that have been cured by low-temperature kiln firing. This type of adobe is not generally dense enough to be "frostproof" and may deteriorate with seasonal freeze-thaw cycles. Its use for exterior locations is discouraged in climate zones with daily freeze-thaw cycles.

[14.7.4.10 NMAC - Rp, 14.7.4.10 NMAC, 1-28-11]

14.7.4.11 PROPERTIES, SAMPLING AND TESTING:

A. General. Each of the tests prescribed in this section shall be applied to sample units selected at random at a ratio of five (5) units per twenty-five thousand (25,000) bricks to be used or at the discretion of the building official.

B. Shrinkage cracks. Shrinkage cracks are allowed, providing that these cracks do not jeopardize the structural integrity of the blocks.

C. Compressive strength.

(1) Cured units shall have an average minimum compressive strength of three hundred (300) pounds per square inch when tested. One (1) sample out of five (5) may have a compressive strength of not less than two hundred fifty (250) psi.

(2) The adobe block shall be tested in the flat position. The length of the test unit must be a minimum of twice the width. The surfaces must be smooth. The test unit shall be subjected to a uniform compressive load that is gradually increased at a rate of five hundred (500) psi./minute until failure occurs. A true platen should be used in the testing machine, along with swivel head to accommodate nonparallel bearing surfaces. The compressive strength is defined as P/A, where P= load and A = area of compression surface.

D. Modulus of rupture. Cured units shall average fifty (50) psi in modulus of rupture when tested according to the following procedures. A cured unit shall be laid over two-inch (2") diameter cylindrical supports two (2) inches from each end and extending across the full width of the unit. A cylinder two (2) inches in diameter shall be laid midway between and parallel to the supports. Load shall be applied to the cylinder at a rate of five hundred (500) psi/minute until rupture occurs. The modulus of rupture is equal to: $3PL/2bt^2$ (P=rupture load in pounds, L=span between supports, b=width of block, t=thickness of block).

E. Mortar. The use of earth mortar is allowed if the earth mortar material is of the same type as the adobe blocks. Conventional lime/sand/cement mortars of types M, S, and N are also allowed. Mortar "bedding" joints shall be fully grouted, with partially open "head" joints allowable if the surface is to be plastered. All joints shall be lapped at least twenty-five (25) percent of the visible block length.

F. Use. No adobe shall be laid in the wall until fully cured. Adobes shall be laid in level courses so that the top of any course shall be at the same height above the stem around the structure.

G. Foundations. Adobes may not be used for foundations or basement walls. All adobe walls, except as noted, shall have a continuous footing at least eight (8) inches thick and not less than two (2) inches wider on each side that supports the foundation stem walls above. All foundation stem walls that support adobe units shall extend to an elevation not less than six (6) inches above the finish grade. Foundation stem walls shall be at least as thick as the adobe walls they support. Where perimeter insulation is used, a variance is allowed for the stem wall width to be two (2) inches narrower than the width of the adobe wall it supports. Alternative foundation systems must be approved by the building official.

H. Bond beams. All bearing walls shall be topped with a continuous bond beam (except patio walls less than six (6) feet high above stem). All bond beam construction shall be in accordance with accepted engineering practices.

I. Concrete bond beam. Concrete bond beams shall be a minimum of six (6) inches high by ten (10) inches wide for walls up to fourteen (14) inches thick. Where adobe walls are wider than one course, two-thirds (2/3) of each visible course top shall be covered by the concrete bond beam. All concrete bond beams shall be reinforced with a minimum of two (2) no. 4 reinforcing rods at each floor and ceiling plate line.

J. Wood bond beam. Wood bond beams shall be a minimum of six (6) inches deep by ten (10) inches wide for walls up to fourteen (14) inches thick. Where adobe walls are wider than one course, two-thirds (2/3) of each visible course top shall be covered by a wood bond beam and the roof load shall be distributed over both bond beams. Wood bond beams may be solid in the six-inch (6") dimension, or may be built up by applying layers of lumber. Ends of wood bond beams are to be lapped a minimum of the width of the wall and fully nailed. No wood layer shall be less than one (1) inch nominal thickness. The building official shall approve all wooden bond beams for walls wider than fourteen (14) inches.

K. Lintels. Lintels of wood or concrete are allowed. When an engineer's drawing and seal is not provided, all lintels shall conform to table 2 or 3 below. The required bearing of any lintel shall not be reduced by a splayed or angled window or door opening.

L. Wood lintels. When an engineer's drawing and seal is not provided for lintels, all wood lintels shall conform to table 2 and have a fiber stress rating of at least 850 psi.

Table 2 ADOBE WALL WOOD LINTEL SCHEDULE				
MINIMUM FIBER STRESS 850 psi				
Wall Width	Max. Span	Size	Bearing length on earth wall	Load Capacity
10"	4'-0"	10" x 6"	12"	860 PLF
	6'-0"	10" x 8"	12"	1020 PLF
	8'-0"	10" x 10"	18"	1150 PLF
	10'-0"	10" x 12"	24"	1000 PLF
	12'-0"	10" x 14"	24"	1000 PLF
12"	4'-0"	10" x 6"	12"	860 PLF
	6'-0"	10" x 8"	12"	1020 PLF
	8'-0"	10" x 10"	18"	1150 PLF
	10'-0"	10" x 12"	24"	1000 PLF
	12'-0"	10" x 14"	24"	1000 PLF

14"	4'-0"	12" x 6"	12"	950 PLF
	6'-0"	12" x 8"	12"	1150 PLF
	8'-0"	12" x 10"	18"	1300 PLF
	10'-0"	12" x 12"	24"	1300 PLF
	12'-0"	12" x 14"	24"	1200 PLF

M. Concrete lintels. When an engineer’s drawing and seal is not provided for lintels, all concrete lintels shall conform to table 3 and have a minimum strength of 3000 psi.

Maximum Span	Minimum depth*	Reinforcing	Maximum Capacity per linear foot	Bearing length on earth wall
Less than 6' - 0"	8"	2 - # 4	1500 lbs.	12"
6' - 0" to 10' - 0"	12"	3 - # 5	1500 lbs.	18"
11' - 0" to 16' - 0"	16"	3 - # 6	1500 lbs.	24"

* SIZE Wall width X depth of lintel

N. Anchorage. Roof and floor structures will be suitably anchored to bond beams. Wood joists, vigas or beams shall be attached to the wood or concrete bond beams with adequate metal fasteners. Door and window bucks shall be secured to the adobe wall with adequate metal fasteners. “Gringo blocks” or wood nailers, placed in the adobe walls as they are laid up, are allowed. Wood and metal partitions may be secured to nailing blocks laid up in the adobe wall or by other approved methods.

O. Plastering. Add the following new provisions.

(1) Portland-based plasters or lime-based stuccos used over insulation board or foam shall follow 14.7.4.11 P NMAC.

(2) Unstabilized, uninsulated exterior adobe walls can be protected with plasters or stuccos with a minimum thickness of seven-eighths (7/8) inch, if adequate roof, parapet, canal, and window flashing is provided.

(3) Portland-based plaster covering unstabilized, adobe walls must be reinforced with self-furring metal wire mesh, minimum seventeen (17) gauge by one-and-a-half (1 1/2) inch openings, securely attached to the exterior adobe wall surface by nails or staples with a minimum penetration of one-and-a-half (1 1/2) inches. Such mesh fasteners shall have a maximum spacing sixteen (16) inches from each other. Wood surfaces or areas of dissimilar materials to be covered with Portland-based plaster must be protected from moisture with asphalt felt, covered with expanded metal lath, securely attached to the adobe wall.

(4) Type S hydrated lime stuccos covering unstabilized adobe walls are allowed providing that adobe head joints are left partially open as provided by 14.7.4.11 E NMAC. Lime-based stuccos do not require a wire mesh cover except when used over wood or dissimilar materials in which case the surface must be protected from moisture with asphalt felt, covered with expanded metal lath.

(5) Other plasters or coatings are allowed providing they do not constitute a vapor barrier. Interior gypsum or mud plasters may be applied directly to the wall, provided that adobe head joints have been left partially open. Expanded metal lath shall be used around window and door openings. If desired, exterior adobe walls may be protected with mud plaster. Alternative plastering or coating systems shall be submitted for approval by the building official.

P. Wall insulation. Add the following new provisions.

(1) Insulating boards or foams not exceeding two (2) inches in thickness may be adhered to the exterior of the adobe wall. When insulation board is used, round-cap nails shall attach it to the adobe wall, with nails placed to avoid bed joints between courses. Cap nails shall have a maximum spacing of sixteen (16) inches from each other. Additionally, cap nails shall secure the rigid insulation boards around their perimeter edges, with nails spaced no less than twelve (12) inches apart. All cap nails shall penetrate a minimum of two (2) inches into the adobe wall. Insulating boards or foams shall not be used to form architectural shapes exceeding two (2) inches in thickness.

(2) Insulations exceeding two (2) inches in thickness may be used providing they do not form a vapor barrier. Their weight shall be supported by the stem wall below and contained within vertical furring strips, securely attached to the adobe wall. A sectional, scaled drawing for the proposed insulation scheme must be submitted for review by the building official.

Q. Parapets. Add the following new provisions.

(1) **Plastered parapets**, whether of adobe or frame construction, shall require a seamless but permeable waterproof cover or weather barrier, capping the entire parapet and wrapping over each side. The cover shall extend past the bond beam a minimum of four (4) inches on the wall side. On the roof side, the cover shall properly lap any rising roof felts or membranes and be properly sealed. A layer of expanded metal lath shall be installed over the cover before plaster or stucco is applied. The lath shall extend past the bond beam on the wall side a minimum of five (5) inches and on the roof side, the same distance as the cover below, allowing for plaster stops or seals. No penetrating fasteners are allowed on the horizontal surface of parapets.

(2) **Exposed parapets** of adobe shall be laid in level courses of fully stabilized block and mortar. Bed and head joints shall be fully grouted and tightly tooled. Bedding joints at bond beams and around vents and canales shall be fully grouted and tightly tooled. The horizontal top of exposed adobe parapets shall be covered with a minimum three-fourths (3/4) inch layer of fully stabilized mortar, troweled to conform with the parapet. Waterproof sealers are allowed, providing they are permeable. Other parapet covers, such as flagstone, Spanish mission tile or cement mortar are allowed providing they are securely attached to the parapet. A scaled, sectional drawing shall be provided to the building official showing the attachment scheme.

[14.7.4.11 NMAC - Rp, 14.7.4.11 NMAC, 1-28-11]

14.7.4.12 RAMMED EARTH CONSTRUCTION:

A. General. The following provisions shall apply.

(1) Rammed earth shall not be used in any building more than (2) stories in height. The height of every wall of rammed earth

without lateral support is specified in 14.7.4.8 NMAC table 1. The height of the wall is defined as the distance from the top of the slab or top of stem wall to the underside of the bond beam.

(2) Exterior rammed earth walls shall be a minimum of eighteen (18) inches in thickness. Exception: Exterior walls that are also designed as solar mass walls (trombe) as defined by the passive solar heating worksheet, dated June 2004 and prepared by the state of New Mexico energy, minerals and natural resources department, are allowed and shall be minimum thickness of ten (10) inches, not to exceed twelve (12) inches. They shall be fully attached to or integrated with any adjacent structural wall and topped with a bond beam that fully attaches them to the bond beam of any adjacent structural wall as described in 14.7.4.17 NMAC.

(3) Interior rammed earth walls shall be a minimum of twelve (12) inches in thickness.

(4) Unstabilized rammed earth walls must be covered to prevent infiltration of moisture from the top of the wall at the end of each workday and prior to wet weather conditions, whether the walls are contained within forms or not.

(5) Fully stabilized rammed earth walls may be left unprotected from the elements.

(6) In no case shall a rammed earth wall be reduced in thickness with back to back channels or nailers. Channels or nailers rammed on both sides of a running wall shall not be opposite each other to avoid an hourglass configuration in the wall section. Channels or nailers on both sides of a running wall shall be separated from each other vertically at a distance no less than the rammed earth wall thickness. (Refer to figure 4 of the earthen building figures supplement).

(7) An architect or engineer registered in the state of New Mexico shall design and seal structural portions of two-story residential rammed earth construction documents.

(8) The general construction of the building shall comply with all provisions of the 2009 New Mexico Residential Building Code (NMRBC), unless otherwise provided for in this rule.

(9) Passive solar structures incorporating the use of solar mass walls (trombe), direct gain arrays or sunspaces (greenhouses) as defined by the passive solar heating worksheet, dated June 2004 and prepared by the state of New Mexico energy, minerals and natural resources department, are allowed.

B. Fireplaces. Adobe or masonry fireplaces and chimneys in rammed earth structures shall comply with 14.7.3.18 NMAC. They shall be integrated

into adjacent rammed earth walls during construction or secured to them by suitable steel ladder reinforcement or reinforcing rods.

C. Count Rumford fireplaces. Count Rumford fireplaces are allowed as provided in 14.7.3.18 NMAC.

D. Stop work. The building inspector shall have the authority to issue a "stop work" order if the provisions of this section are not complied with.

E. Lateral support. Lateral support shall occur at intervals not to exceed twenty-four (24) feet. Rammed earth walls eighteen (18) inches to less than twenty-four (24) inches thick shall be laterally supported with any one or combination of the following: A rammed earth wall of bond beam height that intersects the running wall with at least sixty (60) degrees of support (refer to a figure 5 of the earthen building figures supplement); an adobe wall of bond beam height and at least ten (10) inches in width that intersects with and attaches to the running wall with at least sixty (60) degrees of support (refer to figure 5 of the earthen building figures supplement); a minimum twenty 20 gauge steel frame or wood frame wall of full height that intersects with and attaches to the running wall with ninety (90) degrees of support, that is properly cross-braced or sheathed (refer to figure 6 of the earthen building figures supplement); a buttress configuration that intersects the running wall at ninety (90) degrees, of adobe or rammed earth. The buttress base must project a minimum of three (3) feet (or thirty-three (33) percent of the wall height) from the running wall and support at least seventy-five (75) percent of the total wall height (refer to figure 7 of the earthen building figures supplement). The thickness of a rammed earth buttress shall be at least eighteen (18) inches. The thickness of an adobe buttress shall be a minimum fourteen (14) inches. Rammed earth walls greater than twenty-four (24) inches in thickness are self-buttressing and do not require lateral support provided their design adheres to 14.7.4.8 NMAC table 1 and the other applicable provisions of this rule.

F. Openings. Door and window openings shall be designed such that the opening shall not be any closer to an outside corner of the structure as follows.

(1) In rammed earth walls eighteen (18) inches to less than twenty-four (24) inches thick, openings shall not be located within three (3) feet of any corner of the structure. (Refer to figure 8 of the earthen building figures supplement). Exception: Openings may be located within three (3) feet of any corner provided a buttress extending at least three (3) feet from the structure supports the corner. A continuous footing below and a continuous bond beam above, shall be provided across such openings.

(2) Rammed earth walls greater than twenty-four (24) inches thick are self-buttressing, with no special consideration for placement of openings within the area of the wall.

G. Piers. Rammed earth piers supporting openings shall measure no less than three (3) square feet in area and no dimension shall be less than eighteen (18) inches. (Refer to figures 9-A and 9-B of the earthen building figures supplement).

[14.7.4.12 NMAC - Rp, 14.7.4.12 NMAC, 1-28-11]

14.7.4.13 FOUNDATIONS:

A. General. Foundation construction shall comply with applicable provisions of the 2009 New Mexico Residential Building Code, and the following: a minimum of three (3) continuous #4 reinforcing rods are required in minimum 2500 psi. concrete footings supporting rammed earth walls. Stem walls shall be the full width of the wall supported above or wider to receive forming systems. Footings shall be a minimum of ten (10) inches in depth.

B. Perimeter insulation. For the purposes of placement of perimeter insulation, rammed earth walls may overhang the bearing surface up to the thickness of the perimeter insulation, but in no case greater than two (2) inches.

C. Keyway. A key way shall be provided where the rammed earth wall meets the foundation system. The keyway shall be established at the top of the stem a minimum of two (2) inches deep by six (6) inches wide formed at the time of the pour, and shall run continuously around the structure to include any intersecting rammed earth wall sections. The rammed earth wall shall be fully rammed into this keyway (refer to figure 2 of the earthen building figures supplement). Exception: Placement of vertical reinforcing rods extending a minimum twelve (12) inches into the rammed earth wall. The vertical rods shall be minimum #4, imbedded into the concrete and spaced forty-eighty (48) inches on center, maximum.

D. Concrete grade beam. Rubble filled foundation trench designs with a reinforced concrete grade beam above are allowed to support rammed earth wall construction. An architect or engineer registered in the state of New Mexico shall certify the grade beam/rubble-filled trench design portion.

[14.7.4.13 NMAC - Rp, 14.7.4.13 NMAC, 1-28-11]

14.7.4.14 RAMMED EARTH SOIL SPECIFICATIONS:

A. General. The soil shall not contain rock more than one-and-a-half (1 1/2) inch in diameter. The soil shall not

contain clay lumps more than one-half (1/2) inch in diameter. The soil shall be free of all organic matter. The soil shall not contain more than two (2) percent soluble salts.

B. Soil compressive strength. Prior to the start of construction, fully-cured rammed earth soil samples shall be tested at an approved testing laboratory for compressive strength. The ultimate compressive strength of all rammed earth soil, stabilized or non-stabilized, shall be a minimum three-hundred (300) psi. The compressive strength report shall be submitted with the permit application. This report may be waived if the builder provides certification of compliance. The certification must be dated within one year of the date on the application for the building permit. Samples tested shall be representative of soil to be used on the project for which the permit application is submitted.

C. Stabilized rammed earth soil. The following shall apply to stabilization of rammed earth soil: Asphalt emulsion may not be used for stabilization of rammed earth soil. Thorough mixing of additives to the soil may be achieved by any method that assures a complete blending to a uniform color and texture. Stabilized soil is suitable soil that contains six (6) percent or more portland cement by weight or that passes ASTM D1633-00. Samples tested shall be representative of soil to be used on the project for which the permit application is submitted. The compressive strength report shall be submitted with the permit application. Laboratory testing shall indicate rammed earth samples attained a minimum of two-hundred (200) psi. after seven (7) days. If a different soil is provided at any time during construction, it must meet the minimum requirements outlined above, prior to use in the structure.

D. Unstabilized rammed earth soil. Unstabilized rammed earth soil is that containing less than six (6) percent portland cement by weight or that fails to pass ASTM D1633-00. The exterior of such walls shall be protected with approved stucco systems or other method approved by the building official. Refer to 14.7.4.19 NMAC for weather-resistive barrier requirements.

E. Amended soil. The following guidelines shall apply when amending soils to attain a qualified soil. Soil shall not contain rock greater than one-and-a-half (1 1/2) inch in diameter. Soil shall not contain clay lumps greater than one-half (1/2) inch diameter. Soil shall be free of organic matter. Soil shall not contain more than two (2) percent soluble salts. Soils to be mixed shall be sufficiently dry to blend completely to one uniform color and texture. The amended soil shall be tested prior to use as per Subsection B of 14.7.4.14 NMAC.

F. Forming systems. The forming system shall be adequate to contain

the material under compaction. It shall be properly plumbed and braced to withstand the soil pressures as well as construction activity on and around it.

G. Placement of material, compaction and curing.

(1) No amount of portland cement stabilized soil will be mixed that will not be placed in the wall system within sixty (60) minutes of its preparation.

(2) Lifts of prepared soil shall be placed in the forms in relatively even layers not to exceed 8 inches in depth. Each lift shall then be rammed to full compaction.

(3) Optimum moisture content as determined to meet minimum compressive strength shall be maintained for stabilized and unstabilized walls.

(4) Work will progress, lift-by-lift, until the work approaches bond beam height.

(5) Forms may be stripped immediately after ramming is completed for a section of wall, providing ramming of adjacent sections does not affect the structural integrity of completed walls.

(6) Portland cement stabilized walls not in forms shall be lightly spray-cured with water at least five (5) spaced times during daylight hours. This procedure shall continue for at least three (3) days starting from the time that the wall is exposed to the elements. Exception: Rammed earth walls left in forms three (3) or more days shall not require water-spray curing.

H. Placement of attachment materials.

(1) **Nailers:** Nailers incorporated into the rammed earth wall shall be installed as follows (Refer to figure 4 of the earthen building figures supplement); the rammed earth wall shall not be reduced in thickness with back-to-back nailers. To avoid an hourglass configuration in the wall section, nailers on either side of a running wall shall not be opposite each other. Nailers on either side of a running wall shall be separated from each other vertically a distance not less than the rammed earth wall thickness. Nailers shall be placed onto the wall such that the narrow dimension of the nailer is exposed on the race of the wall prior to ramming. Nailers shall be cured and sealed against moisture penetration prior to installation in forms. The nailers shall not extend the full depth of the wall. Box wood nailers are not allowed. (Refer to figure 11 of the earthen building figures supplement). The nailer shall be no more than two (2) inches by four (4) inches by its length.

(2) **Channels:** Channels may be incorporated into the rammed earth wall as follows (Refer to figure 2 of the earthen building figures supplement); To avoid an hourglass configuration in the wall section, channels on either side of a running wall shall not be opposite each other. (Refer to figure 4 of the earthen building figures

supplement). Channels shall be no more than two (2) inches by four (4) inches by their length in dimension. Vertical channels shall not be placed closer than twelve (12) inches to a rammed earth wall finished edge or corner.

[14.7.4.14 NMAC - Rp, 14.7.4.14 NMAC, 1-28-11]

14.7.4.15 NICHOS OR OTHER SHAPED VOIDS:

A. General. The depth of voids shall not exceed 8 inches. The width of the void shall be as defined in Subsections B and C of 14.7.4.15 NMAC below.

B. Voids in stabilized rammed earth walls. Voids shall not exceed two (2) feet in width. Voids greater than two (2) feet in width require a lintel or half-circle arched opening. Refer to 14.7.4.18 NMAC for lintel requirements.

C. Voids in unstabilized rammed earth walls. Voids shall not exceed one (1) foot in width. Voids greater than one (1) foot in width require a lintel or half-circle arched opening of stabilized rammed earth material. Refer to 14.7.4.18 NMAC for lintel requirements.

[14.7.4.15 NMAC - Rp, 14.7.4.15 NMAC, 1-28-11]

14.7.4.16 ATTACHMENTS AND CONNECTIONS:

A. General. Attachment and connection methods of alternate wall construction to rammed earth walls are described as follows. The building official may approve other attachment and connection methods. In no case shall two wall types be butted to each other without consideration for attachment or connection.

B. Attachment of a rammed earth wall to a rammed earth wall. A keyway, at least six (6) inches wide by three (3) inches deep shall be formed vertically at the center of the wall section from stem top to underside of bond beam. The connecting wall shall be rammed into the keyway. (Refer to figure 3 of the earthen building figures supplement).

C. Attachment of a load-bearing adobe wall to a rammed earth wall. Where adobe is deployed as an interior wall that will be incorporated into the rammed earth wall for lateral support, the adobe shall measure a minimum of ten (10) inches in thickness. Steel ladder reinforcement shall be rammed into the wall at the intersection with the adobe wall. The reinforcement may be bent against the forms during the ramming process. After ramming is complete and forms removed, the reinforcement shall be incorporated into the adjoining adobe coursing, every four (4) courses minimum. (Refer to figure 12 of the earthen building figures supplement). As an alternative, a keyway, not to exceed the

depth of the adobe wall, nor one-third (1/3) the depth of the rammed earth wall, shall be formed into the rammed earth wall. The adobe shall be incorporated into the keyway. (Refer to figure 13 of the earthen building figures supplement).

D. Attachment of a loadbearing wood or steel frame wall to a rammed earth wall. A half-inch (1/2) minimum diameter anchor bolt with four (4) inch hook, set in a linear vertical pattern, a maximum of twenty-four (24) inches on-center. The anchor bolt shall be embedded at least twelve (12) inches into the earth wall with the threaded end protruding sufficiently to pass through and attach the adjoining vertical wall stud. The washer and nut shall be tightened just prior to sheathing the frame wall. As an alternative, eighteen (18) gauge by two (2) inch minimum galvanized strap tie, grouted into the concrete bond beam (or secured to the wood bond beam or wood top plate), securely nailed to the top plate of the frame wall. The remainder of the vertical stud shall be attached to the rammed earth wall with thirty-D (30D) nails or screws embedded a minimum of three (3) inches into the adjacent wall at eight (8) inches on center vertically. (Refer to figure 14 of the earthen building figures supplement).

E. Attachment of a door or window unit to a rammed earth wall. The unit shall be attached to nailers within the opening or nailed or screwed directly into the rammed earth wall. The nail or screw shall penetrate at least three (3) inches into the rammed earth wall. Heavier units may utilize stronger attachments, such as anchor bolts, T-bolts, steel pins, etc., embedded into the rammed earth wall.

F. Attachment of rigid insulation to a rammed earth wall. When rigid insulation board is used, round-cap nails shall attach it to the rammed earth wall. Cap nails shall have a maximum spacing of sixteen (16) inches from each other. Additionally, cap nails shall secure the rigid insulation boards around their perimeter edges, with nails spaced no less than twelve (12) inches apart. All cap nails shall penetrate a minimum of two (2) inches into the rammed earth wall when securing rigid insulation board up to two (2) inches in thickness, and three (3) inches when securing insulation board greater than two (2) inches in thickness.

G. Attachment of cabinetry to a rammed earth wall. Deck screws shall penetrate a minimum of three (3) inches through cabinetry and into a nailer, eight (8) inches on center maximum, or; deck screws with a least three (3) inch minimum penetration through cabinetry and into the rammed earth wall. Screws shall be placed horizontally, eight (8) inches on center maximum, on the top and bottom of cabinetry. As an alternative, all-thread rods or other attachment devices, suitable for attachment of cabinetry through the rammed earth wall.

H. Attachment of concrete bond beam to a rammed earth wall. Number four (4) reinforcing bar shall be driven into the uncured wall top. The reinforcing bar shall be set at a maximum twenty degree angle along both edges of the wall, staggered no more than twenty-four (24) inches on-center and no closer than four (4) inches from the exterior faces of the wall. The reinforcing bar shall extend a minimum of twelve (12) inches into the rammed earth wall and four (4) inches into the concrete bond beam. (Refer to figure 16 of the earthen building figures supplement).

I. Attachment of wood bond beam to a rammed earth wall. One-half (1/2) inch anchor bolts with four (4) inch base hooks shall be rammed into the wall. The bolts shall be staggered a maximum of forty-eight (48) inches on-center along both edges of the wall, staggered no closer than six (6) inches from the exterior faces of the wall. The bolt shall extend a minimum of eighteen (18) inches into the rammed earth wall.

[14.7.4.16 NMAC - Rp, 14.7.4.16 NMAC, 1-28-11]

14.7.4.17 BOND BEAMS:

A. General. The bond beam shall be secured to the rammed earth wall. Refer to Subsections H and I of 14.7.4.16 NMAC above. Bond beams may be of wood or concrete construction. Bond beams shall measure six (6) inches nominal depth and extend the full width of the wall. Exception: The bond beam width may be reduced as follows: Two (2) inches maximum in an eighteen (18) to less than twenty-four (24) inch thick rammed earth wall, or three (3) inches maximum in a rammed earth wall twenty-four (24) inches or greater in thickness. Bond beams must be continuous, running the full perimeter of the structure. Interior rammed earth or adobe walls shall be incorporated into the bond beam. Varying height bond beams shall extend into the adjoining rammed earth wall one-half (1/2) the thickness of the adjoining rammed earth wall. The concrete bond beam may secure anchoring and strapping devices.

B. Wood bond beam construction. In addition to the general requirements of Subsection A of 14.7.4.17 NMAC, wood bond beams may be constructed as approved by the building official. Light wood bond beam construction may be utilized as shown in figure 10 of the earthen building figures supplement.

C. Concrete bond beam construction. In addition to the general requirements of Subsection A of 14.7.4.17 NMAC, concrete bond beams shall be constructed of minimum twenty-five hundred (2500) psi. concrete and shall contain steel reinforcement as follows: For eighteen (18) to less than twenty-four (24) inch thick rammed earth wall construction, a minimum of two (2) continuous number four (4) reinforcing rods shall be used. For walls equal to or greater than twenty-four (24) inches in thickness, a minimum of two (2) continuous number five (5) reinforcing rods shall be used. Provide two (2) inch minimum reinforcement concrete cover over all horizontal reinforcing rods. Concrete bond beams may be used to secure anchoring and strapping devices.

D. Concrete bond beam cold joints. Concrete bond beam cold joints are limited to corners of perpendicular intersections with other structural, full-height walls. Cold joints shall be tied into the adjoining bond beam with three (3) number four (4) reinforcing rods. The reinforcement shall extend a minimum of twenty-four (24) inches into both portions of the concrete bond beam.

[14.7.4.17 NMAC - Rp, 14.7.4.17 NMAC, 1-28-11]

14.7.4.18 LINTELS OVER OPENINGS:

A. General. All openings require a lintel or semi-circular arch over the opening. All lintels, whether of wood or concrete shall bear a minimum of twelve (12) inches into the length of the wall. Exception: Nichos and other shaped voids as defined in 14.7.4.15 NMAC.

B. Bearing limitations. Lintels shall bear a minimum of twelve (12) inches beyond coved, splayed or rounded bearing portions of openings that are less than the full width of the wall. (Refer to figure 15 of the earthen building figures supplement).

C. Lintels over openings in stabilized rammed earth walls. Openings less than twenty-four (24) inches in width shall not require a lintel or semi-circular arched opening. Openings greater than twenty-four (24) inches in width require lintels as defined in table 4.

Table 4 Concrete Lintels Over Openings in Rammed Earth Walls (1)					
Wall width	Lintel span	Lintel depth	Reinforcement (2)	Reinforcement Concrete Cover (3)	Uniform Load
18"	24"	6"	3- #4 @ 4"o.c.	3" minimum concrete cover on all sides	1000 PLF
	36"	6"	3- #4 @ 4"o.c.		
	48"	6"	3- #4 @ 4"o.c.		
	60"	6"	3- #4 @ 4"o.c.		
	72"	8"	3- #5 @ 4"o.c.		
	84"	8"	3- #5 @ 4"o.c.		
	96"	8"	3- #5 @ 4"o.c.		
20"	24"	6"	3- #4 @ 4"o.c.	4" minimum concrete cover on all sides	1350 PLF
	36"	6"	3- #4 @ 4"o.c.		
	48"	6"	3- #4 @ 4"o.c.		
	60"	6"	3- #4 @ 4"o.c.		
	72"	8"	3- #5 @ 4"o.c.		
	84"	8"	3- #5 @ 4"o.c.		
	96"	10"	3- #5 @ 4"o.c.		
22"	24"	6"	3- #4 @ 5"o.c.	3 1/2" minimum concrete cover on all sides	1700 PLF
	36"	6"	3- #4 @ 5"o.c.		
	48"	6"	3- #4 @ 5"o.c.		
	60"	6"	3- #4 @ 5"o.c.		
	72"	8"	3- #5 @ 5"o.c.		
	84"	10"	3- #5 @ 5"o.c.		
	96"	10"	3- #5 @ 5"o.c.		
24"	24"	6"	3- #4 @ 6"o.c.	3" minimum concrete cover on all sides	2000 PLF
	36"	6"	3- #4 @ 6"o.c.		
	48"	6"	3- #4 @ 6"o.c.		
	60"	6"	3- #4 @ 6"o.c.		
	72"	8"	3- #5 @ 6"o.c.		
	84"	10"	3- #5 @ 6"o.c.		
	96"	12"	3- #5 @ 6"o.c.		

1. 3000 psi minimum concrete at approximately 28 days.
2. Grade 40 steel reinforcement minimum.
3. Steel reinforcement at mid-depth of lintel.

[14.7.4.18 NMAC - Rp, 14.7.4.18 NMAC, 1-28-11]

14.7.4.19 WEATHER RESISTIVE BARRIERS:

A. General. Stabilized rammed earth walls do not require a weather-resistive barrier or an approved exterior finish. Unstabilized rammed earth walls require a weather-resistive barrier and approved exterior finish. When a vapor barrier is installed over the rammed earth wall, it shall not be installed on both sides of a rammed earth wall system. Exception: On the top and sides of a parapet wall.

B. Moisture barrier locations. A moisture barrier shall protect rammed earth walls adjacent to bath and shower enclosures. A moisture barrier shall protect rammed earth walls at window sills, the top of the parapet, or other exterior wall portions exposed to the elements. A moisture barrier installed over an exposed parapet top of a rammed earth wall shall lap a minimum of six (6) inches down both sides of the parapet top.

[14.7.4.19 NMAC - Rp, 14.7.4.19 NMAC, 1-28-11]

14.7.4.20 LATH AND PLASTER:

A. General. When non-cementitious plasters are applied directly to the rammed earth wall surface, the surface shall be scored or sandblasted prior to the application of the plaster. Rammed earth walls must cure to a depth of four (4) inches minimum prior to application of an approved exterior finish.

B. Lath. Where rammed earth walls have a plaster finish, metal lath shall be installed around interior and exterior wall openings and over dissimilar materials.

C. Exterior plaster. In unstabilized rammed earth walls, stucco netting shall be installed and cementitious plaster shall have a minimum seven-eighths (7/8) inch finished thickness, unless an elastomeric "color coat" is used, then it shall have a minimum base coat of five-eighths (5/8) inch. Applications shall follow the material manufacturers' specifications.

[14.7.4.20 NMAC - Rp, 14.7.4.20 NMAC, 1-28-11]

14.7.4.21 PLUMBING:

A. General. Code compliant plumbing systems may be rammed into the wall system, either vertically or horizontally, provided that such plumbing material is of sufficient strength to withstand the ramming pressures without any rupture or collapse.

B. Plumbing system installation. Installations shall not reduce the width of the rammed earth wall by more than one-third (1/3). Prior to ramming, a minimum five (5) inch earth cover is provided over any horizontal pipe.

[14.7.4.21 NMAC - Rp, 14.7.4.21 NMAC, 1-28-11]

14.7.4.22 ELECTRICAL:

A. Electrical system installation. Electrical wiring shall pass through a channel or conduit. Approved rigid or flexible electrical conduit shall withstand ramming pressures without damage or collapse. Electrical wiring within a channel shall be covered a minimum of one and one-fourth (1 1/4) inches. Prior to ramming, a minimum five (5) inch earth cover shall be provided over any horizontal pipe.

B. UF cable installation. UF cable may not be rammed within the rammed earth wall. Exception: UF cable installed within an approved conduit or channel. In a channel installation, UF cable must be covered a minimum of one-and-one-fourth (1 1/4) inches with plaster, adobe or similar finish.

C. Electrical box installation. Plastic electrical boxes shall not be rammed within the rammed earth wall. Exception: Plastic electrical boxes installed in a channel installation.

[14.7.4.22 NMAC - Rp, 14.7.4.22 NMAC, 1-28-11]

14.7.4.23 COMPRESSED EARTH BLOCK CONSTRUCTION (CEB):

A. General. Compressed earth block shall not be used in any building more than (2) stories in height. The height of every wall of compressed earth block without lateral support shall be defined in Subsection B of 14.7.4.8 NMAC, table 1. The height of the wall is defined as the distance from the top of the slab or top of stem wall to the underside of the bond beam. Heights for exterior walls, which are laterally supported with those supports located no more than twenty-four (24) feet apart, are defined in Subsection B of 14.7.4.8 NMAC, table 1. The bottom story of a two-story is allowed a minimum thickness of fourteen (14) inches with the upper story allowed a thickness of ten (10) inches, providing the structure meets the provisions of Subsection B of 14.7.4.8 NMAC, table 1. Passive solar structures incorporating the

use of solar mass walls (trombe), direct gain arrays or sunspaces (greenhouses) as defined by the passive solar heating worksheet, dated June 2004 and prepared by the state of New Mexico energy, minerals and natural resources department, are allowed.

B. Fireplaces. Adobe or masonry fireplaces and chimneys in compressed earth block structures shall comply with 14.7.3.18 NMAC. They shall be integrated into adjacent compressed earth block walls during construction or secured to them by suitable steel ladder reinforcement or reinforcing rods.

C. Count Rumford fireplaces. Count Rumford fireplaces are allowed as designated in 14.7.3.18 NMAC.

D. Stop work. The building inspector shall have the authority to issue a "stop work" order if the provisions of this section are not complied with.

E. Stabilized compressed earth blocks. The term "stabilized" is defined to mean a block with certain admixtures that retains minimum strength requirements as specified in Subsection J of 14.7.4.23 NMAC after saturation in water. Saturation is defined as a minimum four (4) hours of submersion in water as defined in ASTM D1633-00.

F. Unstabilized compressed earth blocks. Unstabilized blocks are defined as not meeting the minimum strength requirements as defined in Subsection J of 14.7.4.23 NMAC after saturation in water. Use of unstabilized compressed earth blocks is prohibited within four (4) inches of the finished floor grade. Stabilized compressed earth blocks, poured concrete, or waterproof masonry units and mortar may be used for the first four (4) inches above floor grade.

G. Materials. The material must be a mineral soil with the aggregate content not exceeding one (1) inch in diameter. The material shall not contain more than two (2) percent soluble salts.

H. Testing. Each of the tests prescribed in this section shall be applied to sample units selected at random of five (5) units per building project prior to construction. Test may be waived if block manufacturer provides certification of compliance. The certification must be dated within one year of the date on the application for the building permit.

I. Shrinkage cracks. Shrinkage cracks are allowed, providing that these cracks do not jeopardize the structural integrity of the blocks.

J. Compressive strength. Cured units shall have a minimum compressive strength of three hundred (300) pounds per square inch when tested. The compressed earth block shall be tested in the flat position. The length of the test unit must be a minimum of twice the width.

The surfaces must be smooth. The test unit shall be subjected to a uniform compressive load that is gradually increased at a rate of five hundred (500) psi/minute until failure occurs. A true platen should be used in the testing machine, along with swivel head to accommodate nonparallel bearing surfaces. The compressive strength is defined as P/A, where P = load and A - area of compression surface.

K. Modulus of rupture. Units shall have a minimum compressive strength of fifty (50) pounds per square inch in modulus of rupture when tested according to the following procedures: A cured unit shall be laid over two-inch (2") diameter cylindrical supports two (2) inches from each end and extending across the full width of the unit. A cylinder two (2) inches in diameter shall be laid midway between and parallel to the supports. Load shall be applied to the cylinder at a rate of five hundred (500) psi/minute until rupture occurs. The modulus of rupture is equal to: $3PL/2bt^2$ (P= rupture load in pounds, L= span between supports, b= width of block, t= thickness of block).

[14.7.4.23 NMAC - Rp, 14.7.4.23 NMAC, 1-28-11]

14.7.4.24 MORTAR:

A. General. The use of earth mortar is allowed if the earth mortar material is compatible with the compressed earth blocks. Conventional lime/sand/cement mortars of Types M, S, and N are also allowed. Mortar "bedding" joints shall be fully grouted. Head joint mortar is not required provided that the blocks are initially laid in contact. Partially open "head" joints are allowed if the surface is to be plastered. All joints shall be lapped at least twenty-five (25) percent of the visible block length.

B. Slip mortars. Liquid mud slip mortar is allowed, providing it is made of a compatible soil that is screened to eliminate aggregate larger than one-eighth (1/8) inch in diameter. Water may be substituted for slip or other mortars, providing adequate adhesion is demonstrated.

C. Stacking. "Dry stacking" of compressed earth blocks is allowed providing that adequate adhesion is demonstrated, the wall is to be stuccoed or plastered and the wall is not less than ten (10) inches in thickness.

D. Use. Compressed earth block may be cured prior to use or laid directly from the press into the wall in an uncured state. Compressed earth block shall be laid in level courses so that the top of any course shall be at the same height above the stem around the structure.

E. Foundations. Compressed earth blocks may not be used for foundations or basement walls.

F. Footings. All compressed earth block walls shall have a

continuous footing at least ten (10) inches thick. The footing width must be a minimum of thirty-three (33) percent greater than the wall width, but not less than two (2) inches on each side. The stem wall must be centered on the footing.

G. Stem walls. All stem walls that support CEB units shall extend to an elevation not less than eight (8) inches above the exterior finish grade. Stem walls shall be as thick as the exterior wall. Where perimeter insulation is used, a variance is allowed for the stem wall width to be two (2) inches smaller than the width of the CEB wall it supports.

H. Concrete grade beam. Rubble-filled foundation trench designs with a reinforced concrete grade beam above are allowed to support CEB construction. An architect or engineer registered in the state of New Mexico shall certify the grade beam/rubble-filled trench design portion. Other alternative foundation systems must be approved by the building official.

[14.7.4.24 NMAC - Rp, 14.7.4.24 NMAC, 1-28-11]

14.7.4.25 BOND BEAMS:

A. General. All bearing walls shall be topped with a continuous bond beam (except patio walls less than six (6) feet high above stem). All bond beam construction shall be in accordance with accepted engineering practices.

B. Concrete bond beam. Concrete bond beams shall be a minimum of six (6) inches high by ten (10) inches wide for walls up to fourteen (14) inches thick. Where CEB walls are wider than one course, two-thirds (2/3) of each visible course top shall be covered by the concrete bond beam. All concrete bond beams shall be reinforced with a minimum of two (2) no. 4 reinforcing rods at each floor and ceiling plate line.

C. Wood bond beam. Wood bond beams shall be a minimum of six (6) inches deep by ten (10) inches wide for walls up to fourteen (14) inches thick. Where CEB walls are wider than one course, two-thirds (2/3) of each visible course top shall be covered by a wood bond beam and the roof load shall be distributed over both bond beams. Wood bond beams may be solid in the six inch (6") dimension, or may be built up by applying layers of lumber. Ends of wood bond beams are to be lapped in minimum of the width of the wall and fully nailed. Galvanized metal straps or perforated metal straps, 18 gauge minimum and twelve (12) inches long, may be used to join the ends of wood bond beam members. Full nailing of straps is required. No wood layer shall be less than one (1) inch nominal thickness. The building official shall approve all wooden bond beams for walls wider than fourteen (14) inches.

[14.7.4.25 NMAC - Rp, 14.7.4.25 NMAC, 1-28-11]

14.7.4.26 LINTELS:

A. General. Lintels of wood or concrete are allowed. The bearing length of any lintel shall not be reduced by an angled or splayed window or door opening. Other lintel designs are accepted providing that engineering is submitted for review by the building official.

B. Wood lintels. When an engineer's drawing and seal is not provided for lintels, all wood lintels shall conform to table 5 and have a fiber stress rating of at least 850 psi.

Table 5 CEB WALL WOOD LINTEL SCHEDULE				
MINIMUM FIBER STRESS 850 PSI				
Wall Width	Max. Span	Size	Bearing length on earth wall	Load Capacity
10"	4'-0"	10" x 6"	12"	860 PLF
	6'-0"	10" x 8"	12"	1020 PLF
	8'-0"	10" x 10"	18"	1150 PLF
	10'-0"	10" x 12"	24"	1000 PLF
	12'-0"	10" x 14"	24"	1000 PLF
12"	4'-0"	10" x 6"	12"	860 PLF
	6'-0"	10" x 8"	12"	1020 PLF
	8'-0"	10" x 10"	18"	1150 PLF
	10'-0"	10" x 12"	24"	1000 PLF
	12'-0"	10" x 14"	24"	1000 PLF
14"	4'-0"	12" x 6"	12"	950 PLF
	6'-0"	12" x 8"	12"	1150 PLF
14"	8'-0"	12" x 10"	18"	1300 PLF
	10'-0"	12" x 12"	24"	1300 PLF
	12'-0"	12" x 14"	24"	1200 PLF

C. Concrete lintels. When an engineer's drawing and seal is not provided for lintels, all concrete lintels shall conform to table 6 and have a minimum strength of 3000 psi.

Table 6 CEB WALL CONCRETE LINTEL SCHEDULE				
MIN. 3000 psi				
Maximum Span	Minimum depth*	Reinforcing	Maximum Capacity per linear foot	Bearing length on earth wall
Less than 6' - 0"	8"	2 - # 4	1500 lbs.	12"
6' - 0" to 10' - 0"	12"	3 - # 5	1500 lbs.	18"
11' - 0" to 16' - 0"	16"	3 - # 6	1500 lbs.	24"

* SIZE Wall width X depth of lintel

[14.7.4.26 NMAC - Rp, 14.7.4.26 NMAC, 1-28-11]

14.7.4.27 ATTACHMENTS AND CONNECTIONS: Amend the following provision as follows.

A. Insulating boards or foams. Insulating boards or foams not exceeding two (2) inches in thickness may be adhered to the exterior of the CEB wall. When insulation board is used, round-cap nails shall attach it to the CEB wall with nails placed to avoid bed joints between courses. Cap nails shall have a maximum spacing of sixteen (16) inches from each other. Additionally, cap nails shall secure the rigid insulation boards around their perimeter edges, with nails spaced no less than twelve (12) inches apart. All cap nails shall penetrate a minimum of two (2) inches into the CEB wall. Insulating boards or foams shall not be used to form architectural shapes exceeding two (2) inches in thickness.

B. Insulations exceeding two (2) inches in thickness. Insulations exceeding two (2) inches in thickness may be used providing they do not form a vapor barrier. Their weight shall be supported by the stem wall below and contained within vertical furring strips, securely attached to the CEB wall. A sectional, scaled drawing for the proposed insulation scheme must be submitted for review by the building official.

[14.7.4.27 NMAC - Rp, 14.7.4.27 NMAC, 1-28-11]

14.7.4.28 PLASTERING:

A. Plasters and stuccos applied to uninsulated, unstabilized walls. Unstabilized, uninsulated exterior CEB walls can be protected with plasters or stuccos with a minimum thickness of seven-eighths (7/8) inch, if adequate roof, parapet, canal, and window flashing is provided.

(1) Portland-based plaster must be reinforced with self-furring metal wire mesh, minimum seventeen (17) gauge by one-and-a-half (1 1/2) inch openings, securely attached to the exterior CEB wall surface by nails or staples with a minimum penetration of one-and-a-half (1 1/2) inches. Such mesh fasteners shall have a maximum spacing sixteen (16) inches from each other. Wood surfaces or areas of dissimilar materials to be covered with Portland-based plaster must be protected from moisture with asphalt felt, covered with expanded metal lath, securely attached to the CEB wall.

(2) Type S hydrated lime stuccos are allowed providing that CEB head joints are left partially open as provided by Subsection A of 14.7.4.24 NMAC. Lime-based stuccos do not require a wire mesh cover except when used over wood or dissimilar materials in which case the surface must be protected from moisture with asphalt felt, covered with expanded metal lath.

B. Plasters and stuccos applied over foam or board insulations. Portland-based plasters or lime-based stuccos used over insulation board or foam shall follow Subsection A of 14.7.4.27 NMAC.

C. Other Protective coatings or plasters. Coatings other than Portland-based plaster or lime-based stucco are allowed providing they do not constitute a vapor barrier. Interior gypsum or mud plasters may be applied directly to the wall, provided that CEB head joints have been left partially open. Expanded metal lath shall be used around window and door openings. If desired, exterior adobe walls may be protected with mud plaster. Alternative plastering or coating systems shall be submitted for approval by the building official.

[14.7.4.28 NMAC - N, 1-28-11]

14.7.4.29 PARAPETS:

A. Plastered parapets, whether of CEB or frame construction, shall require a seamless but permeable waterproof cover or weather barrier, capping the entire parapet and wrapping over each side. The cover shall extend past the bond beam a minimum of four (4) inches on the wall side. On the roof side, the cover shall properly lap any rising roof felts or membranes and be properly sealed. A layer of expanded metal lath shall be installed over the cover before plaster or stucco is applied. The lath shall extend past the bond beam on the wall side a minimum of five (5) inches and on the roof side the same distance as the cover below, allowing for plaster stops or seals. No penetrating fasteners are allowed on the horizontal surface of parapets.

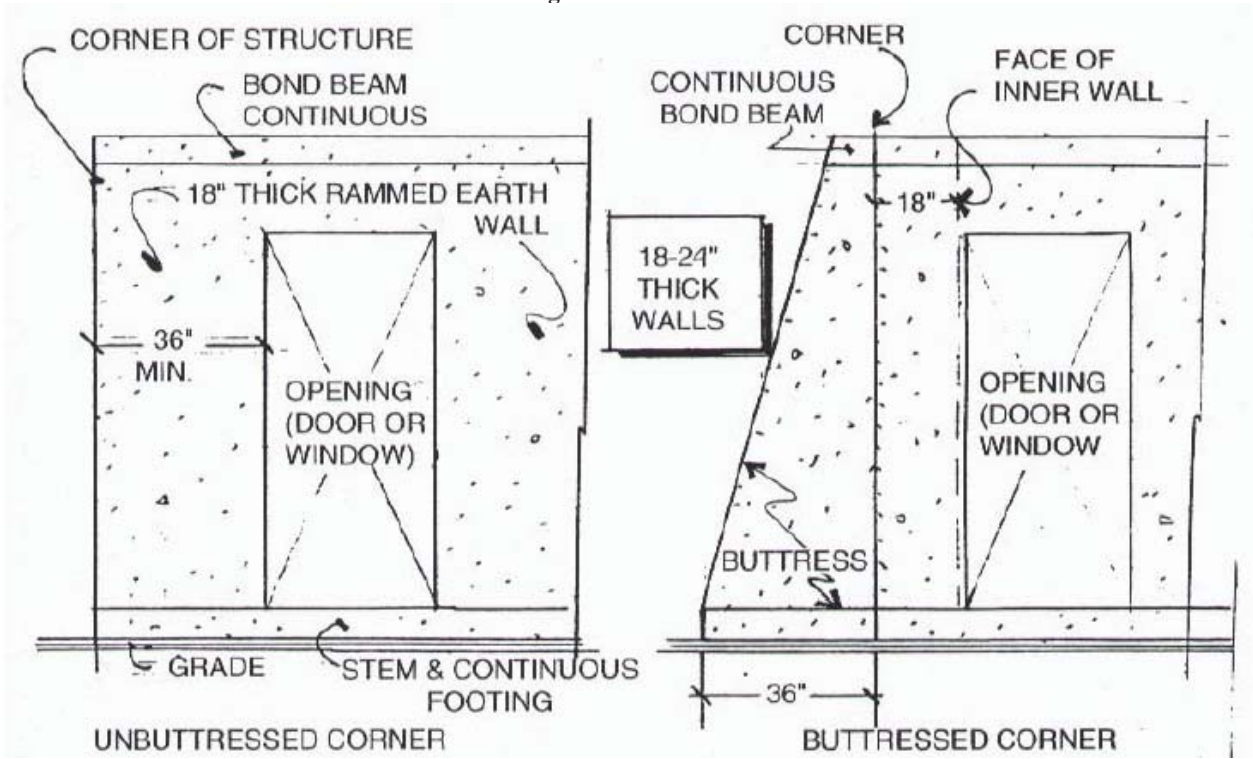
B. Exposed parapets of CEB shall be laid in level courses of fully stabilized block and mortar. Bed and head joints shall be fully grouted and tightly tooled. Bedding joints at bond beams and around vents and canals shall be fully grouted and tightly tooled. The horizontal top of exposed CEB parapets shall be covered with a minimum three-fourths (3/4) inch layer of fully stabilized mortar, troweled to conform to the parapet. Water proof sealers are allowed, providing they are permeable. Other parapet covers, such as flagstone, Spanish mission tile or cement mortar are allowed providing they are securely attached to the parapet. A scaled, sectional drawing shall be provided to the building official showing the attachment scheme.

[14.7.4.29 NMAC - N, 1-28-11]

14.7.4.30

FIGURE 1 - BUTTRESS

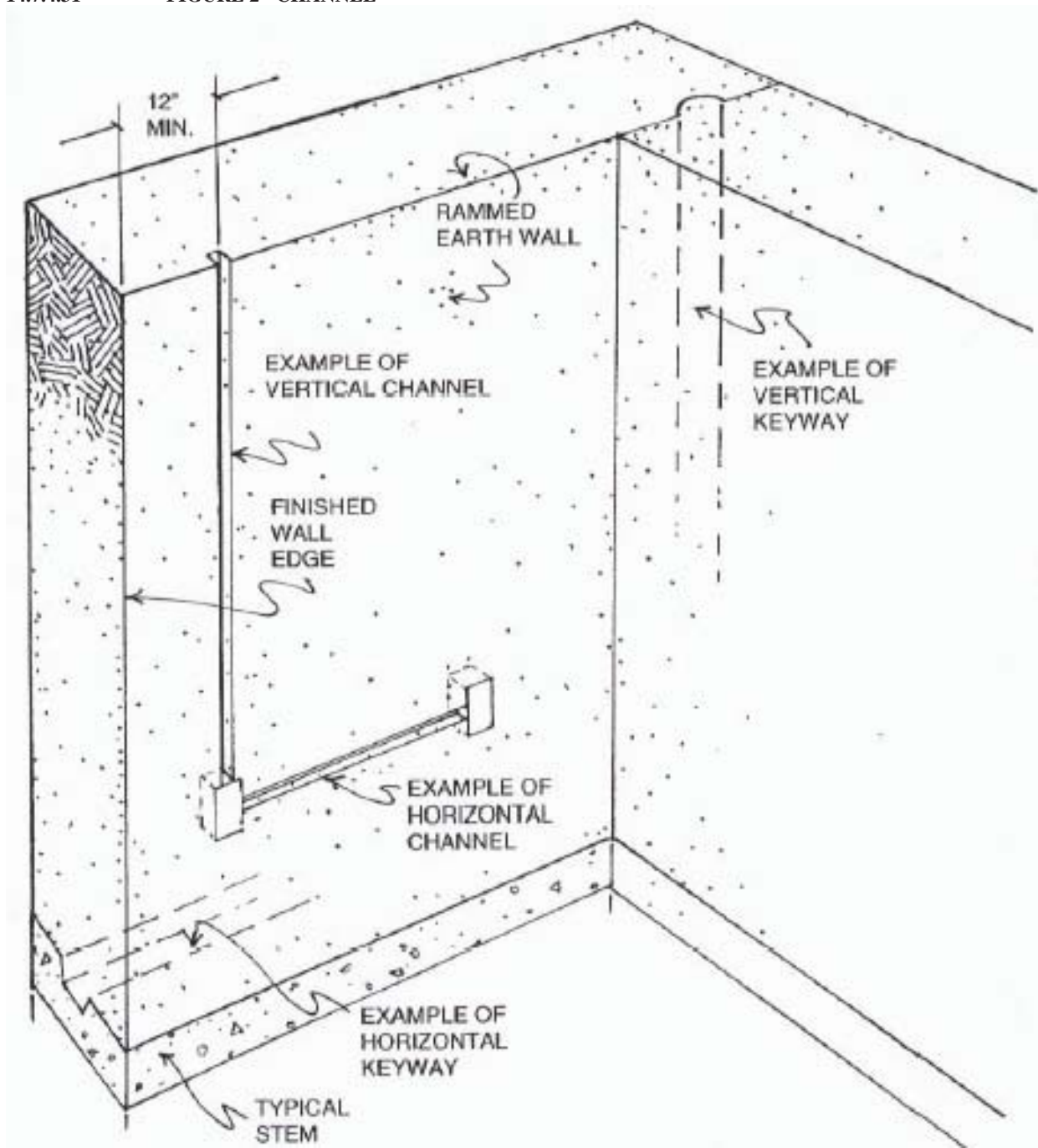
Figure 1 – Buttress:



[14.7.4.30 NMAC - Rp, 14.7.4.28 NMAC, 1-28-11]

14.7.4.31

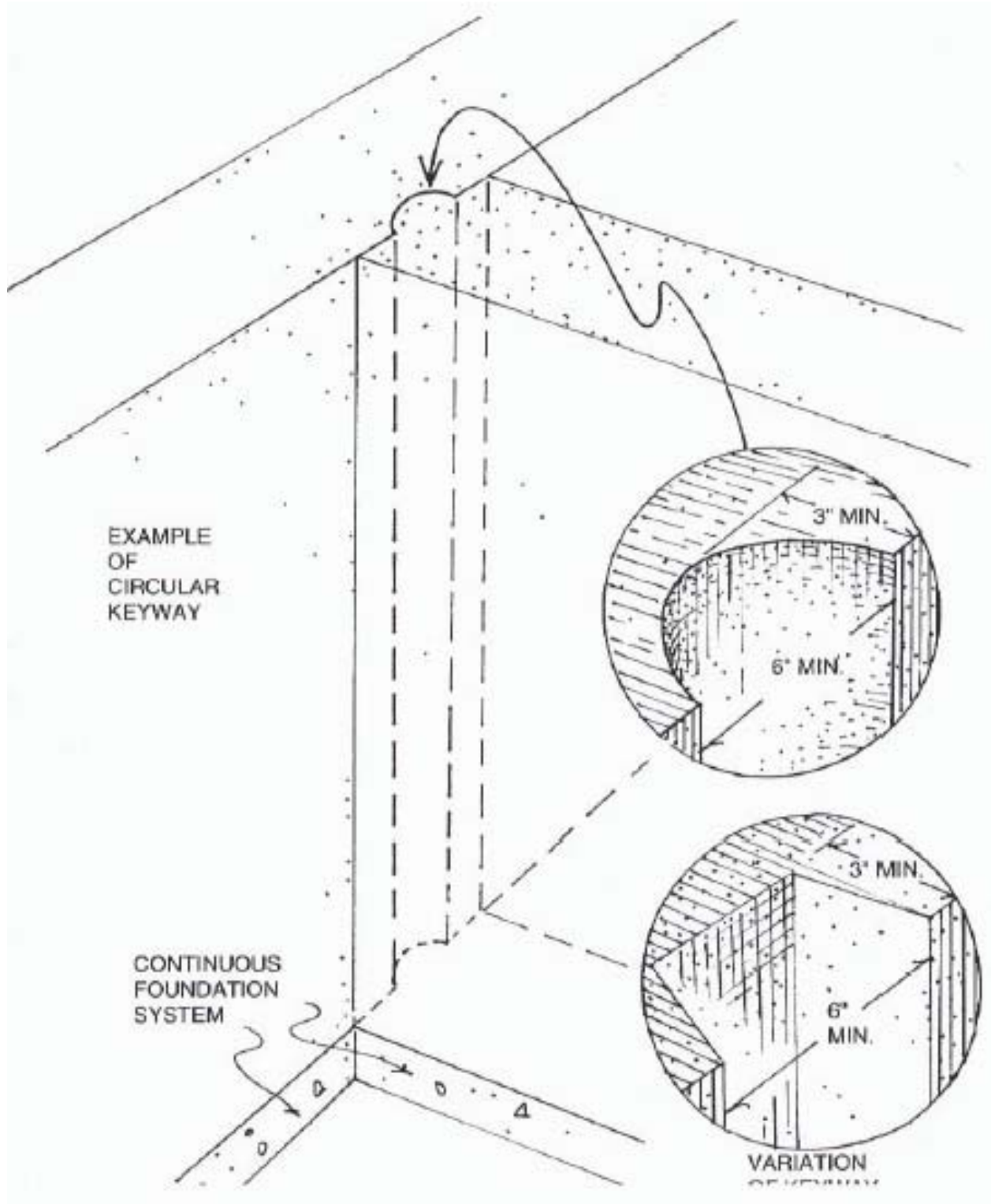
FIGURE 2 - CHANNEL



[14.7.4.31 NMAC - Rp, 14.7.4.29 NMAC, 1-28-11]

14.7.4.32

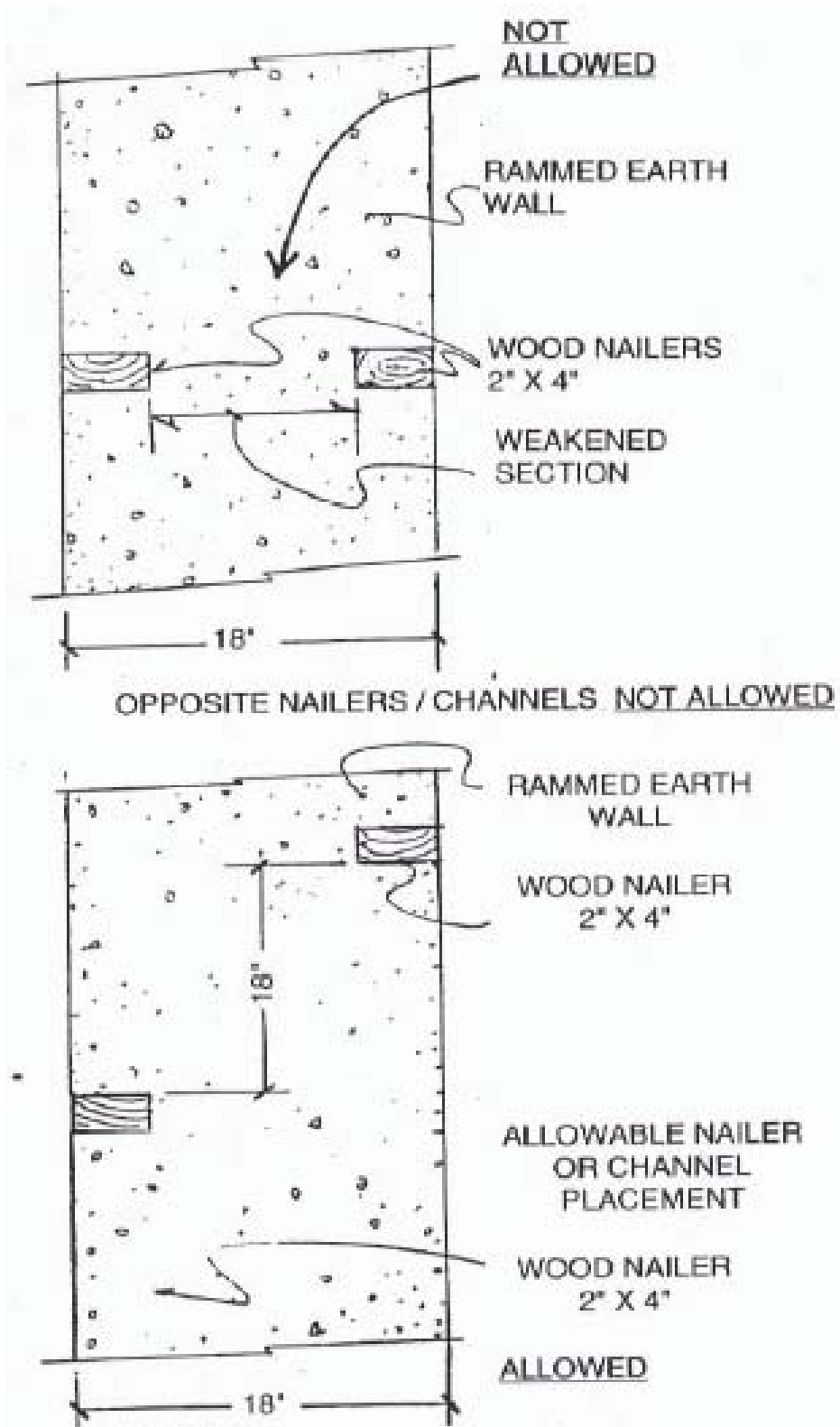
FIGURE 3 - KEYWAY



[14.7.4.32 NMAC - Rp, 14.7.4.30 NMAC, 1-28-11]

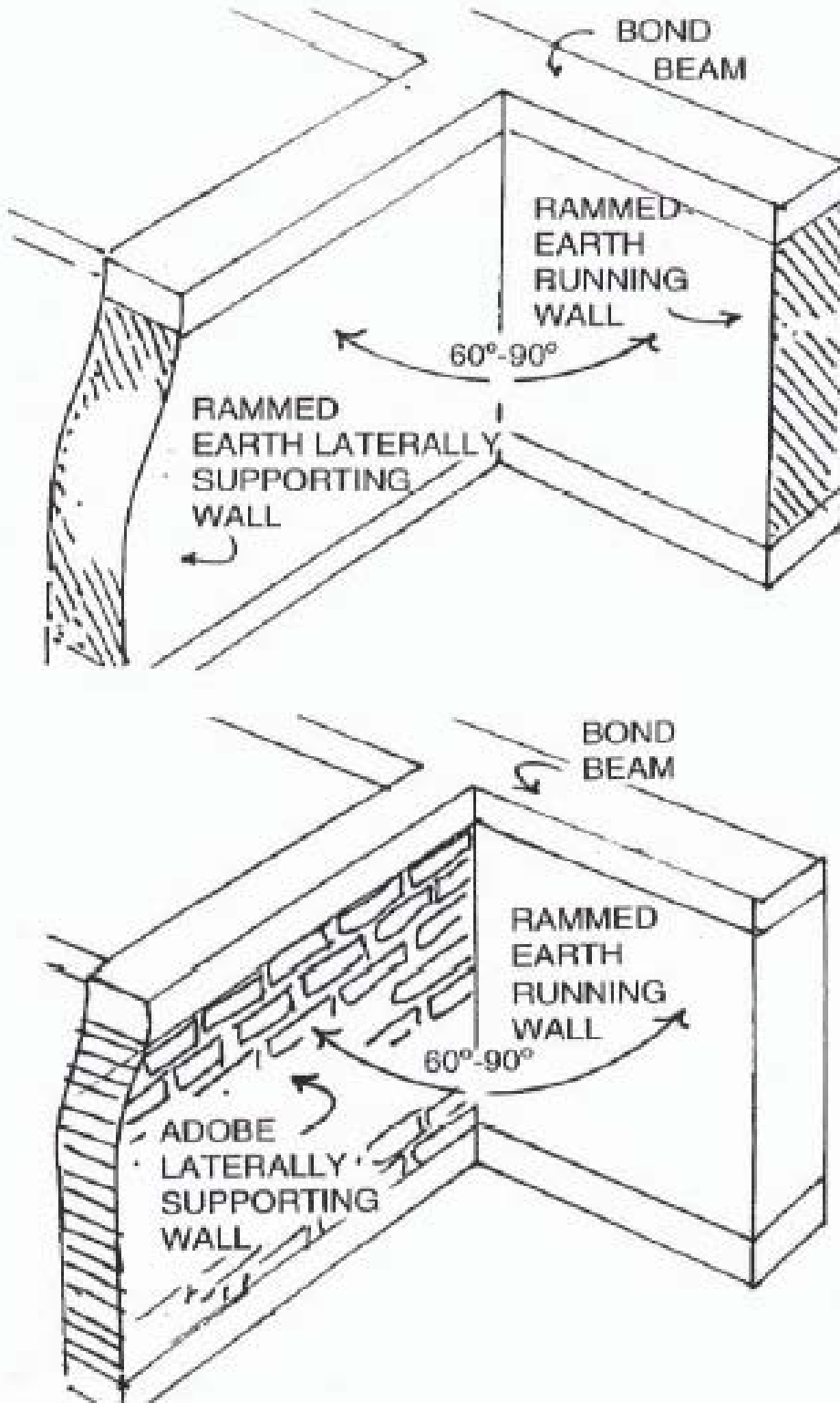
14.7.4.33

FIGURE 4 - NAILER:



[14.7.4.33 NMAC - Rp, 14.7.4.31 NMAC, 1-28-11]

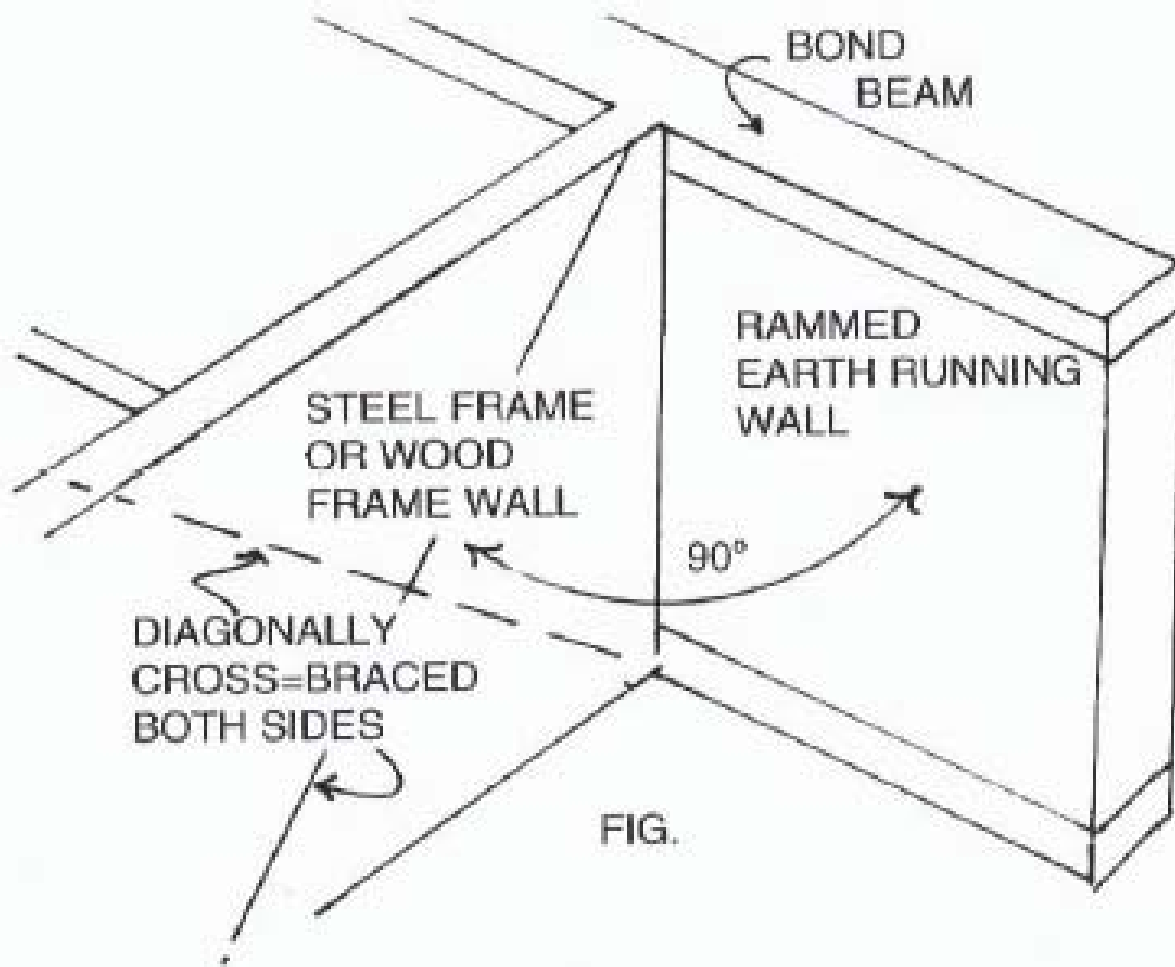
14.7.4.34 FIGURE 5 - LATERAL SUPPORT



[14.7.4.34 NMAC - Rp, 14.7.4.32 NMAC, 1-28-11]

14.7.4.35

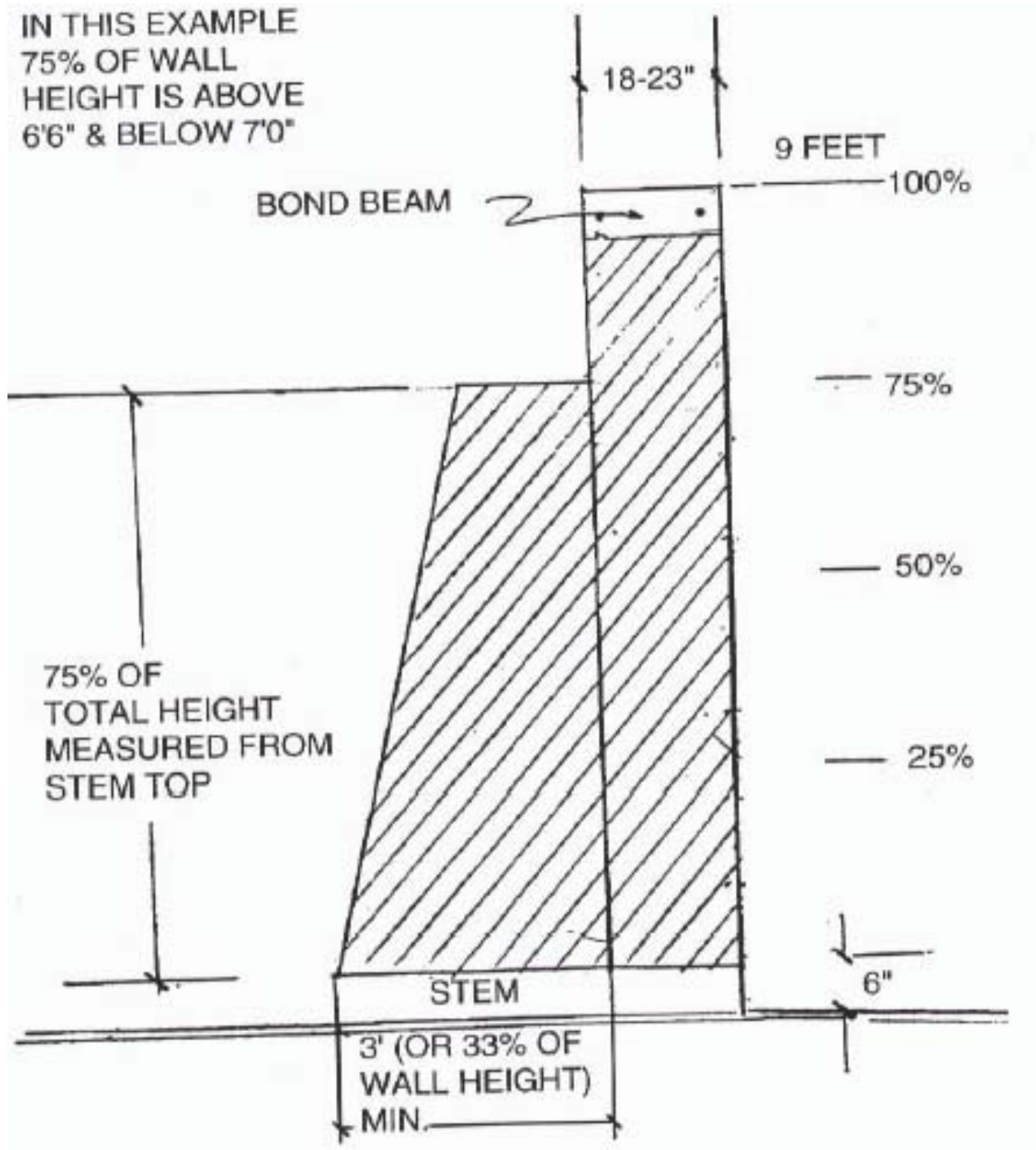
FIGURE 6 - LATERAL SUPPORT



[14.7.4.35 NMAC - Rp, 14.7.4.33 NMAC, 1-28-11]

14.7.4.36

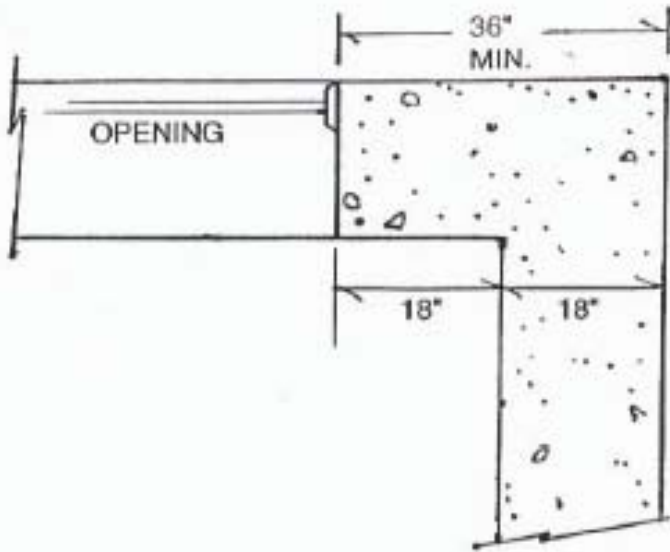
FIGURE 7 - LATERAL SUPPORT:



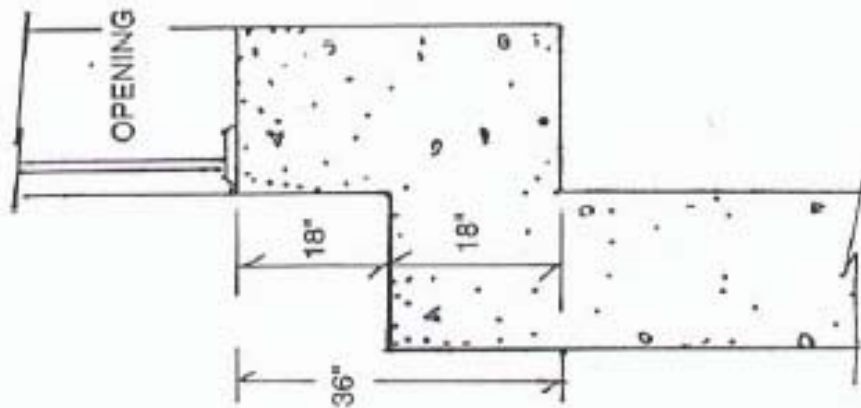
[14.7.4.36 NMAC - Rp, 14.7.4.34 NMAC, 1-28-11]

14.7.4.37

FIGURE 8 - OPENINGS:

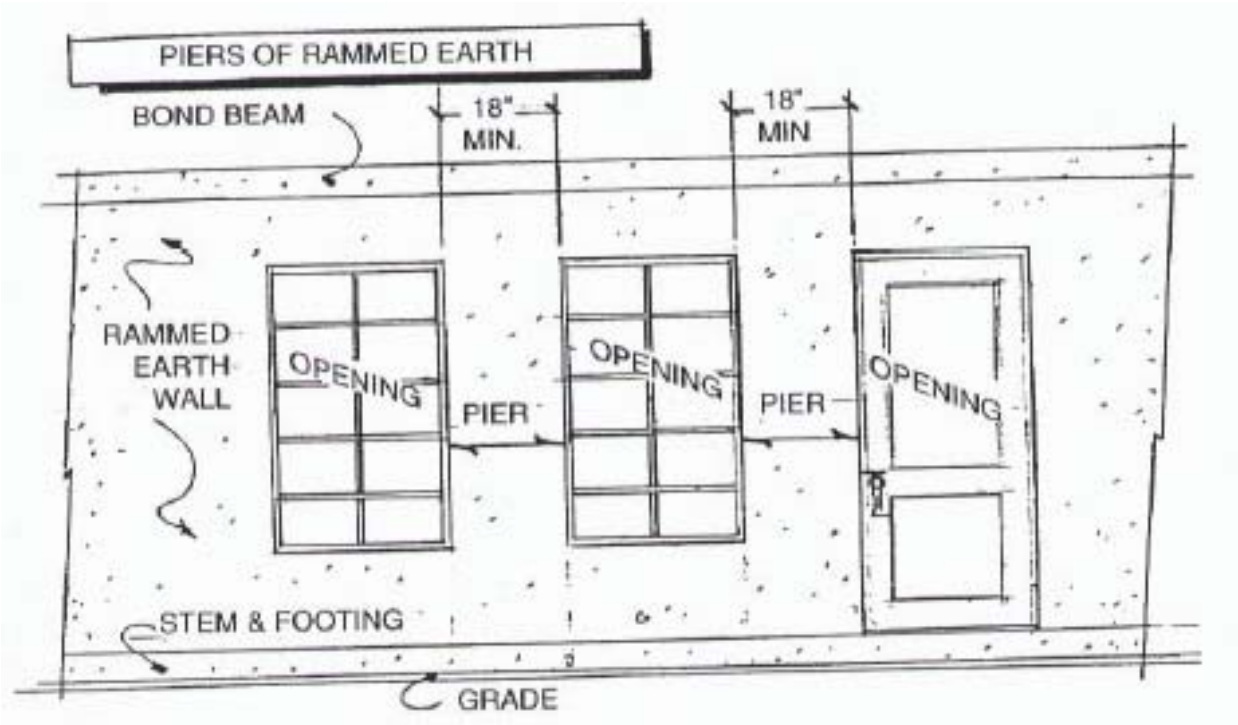


THE MINIMUM DISTANCE MEASURED FROM THE EDGE OF ANY OPENING TO THE NEAREST CORNER, PLUS THE ADJOINING WALL THICKNESS SHALL NOT BE LESS THAN 36 INCHES



14.7.4.38

FIGURE 9 - A PIERS:

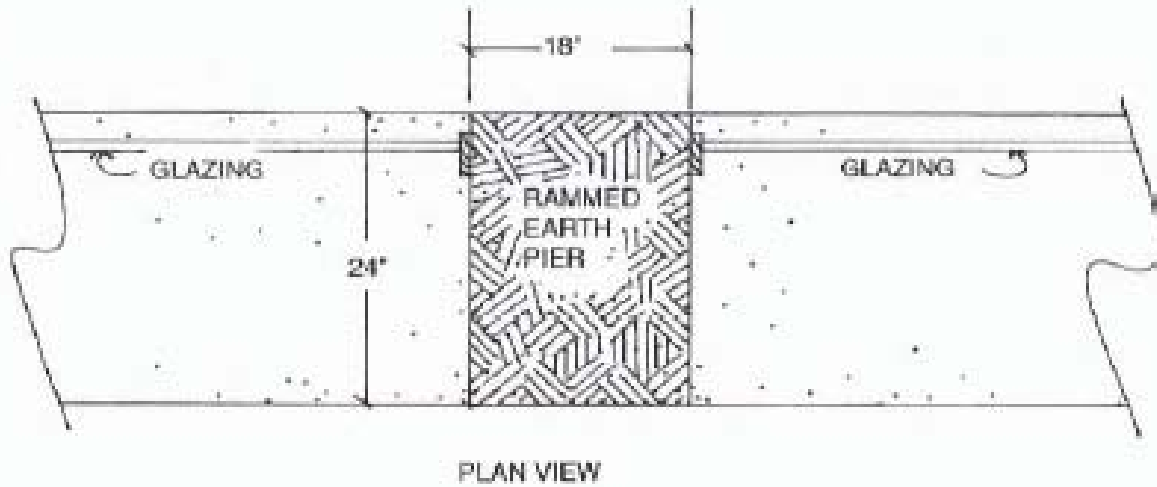


[14.7.4.38 NMAC - Rp, 14.7.4.36 NMAC, 1-28-11]

14.7.4.39

FIGURE 9 - B PIERS:

EXAMPLE OF
RECTANGULAR TYPE PIER



EXAMPLE
SHOWN:

18" = 1.5'
24" = 2.0'

THUS, 1.5 X 2.0 = 3.0 SQUARE FEET MIN.

EXAMPLE OF
ROUND TYPE PIER

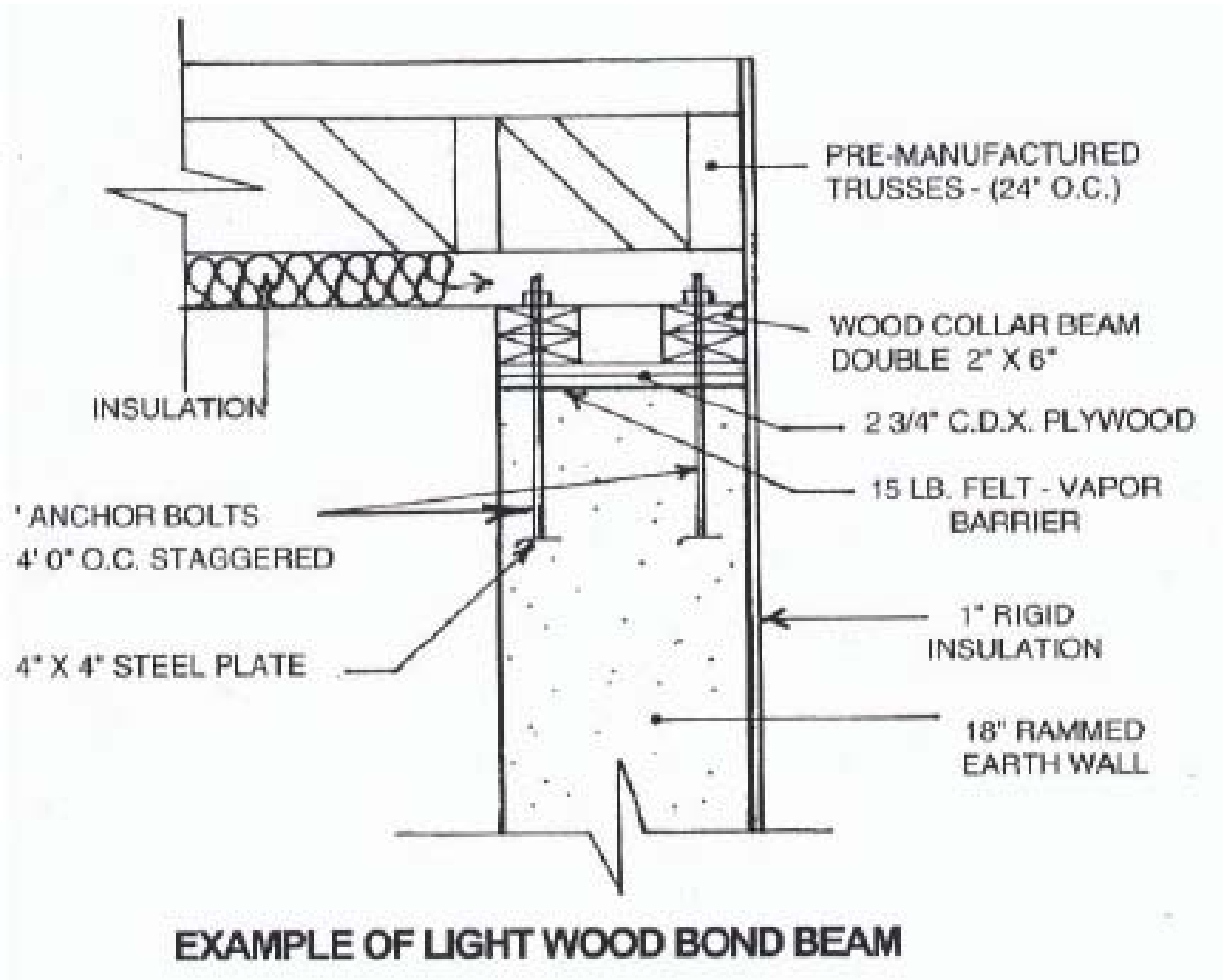


EXAMPLE
SHOWN: AREA = πR^2 OR,
3.14 X 12 OR 3.14 X 144
452 SQ. INCHES = OK
(432 SQ. IN. = 3.0 SQ. FEET)

[14.7.4.39 NMAC - Rp, 14.7.4.37 NMAC, 1-28-11]

14.7.4.40

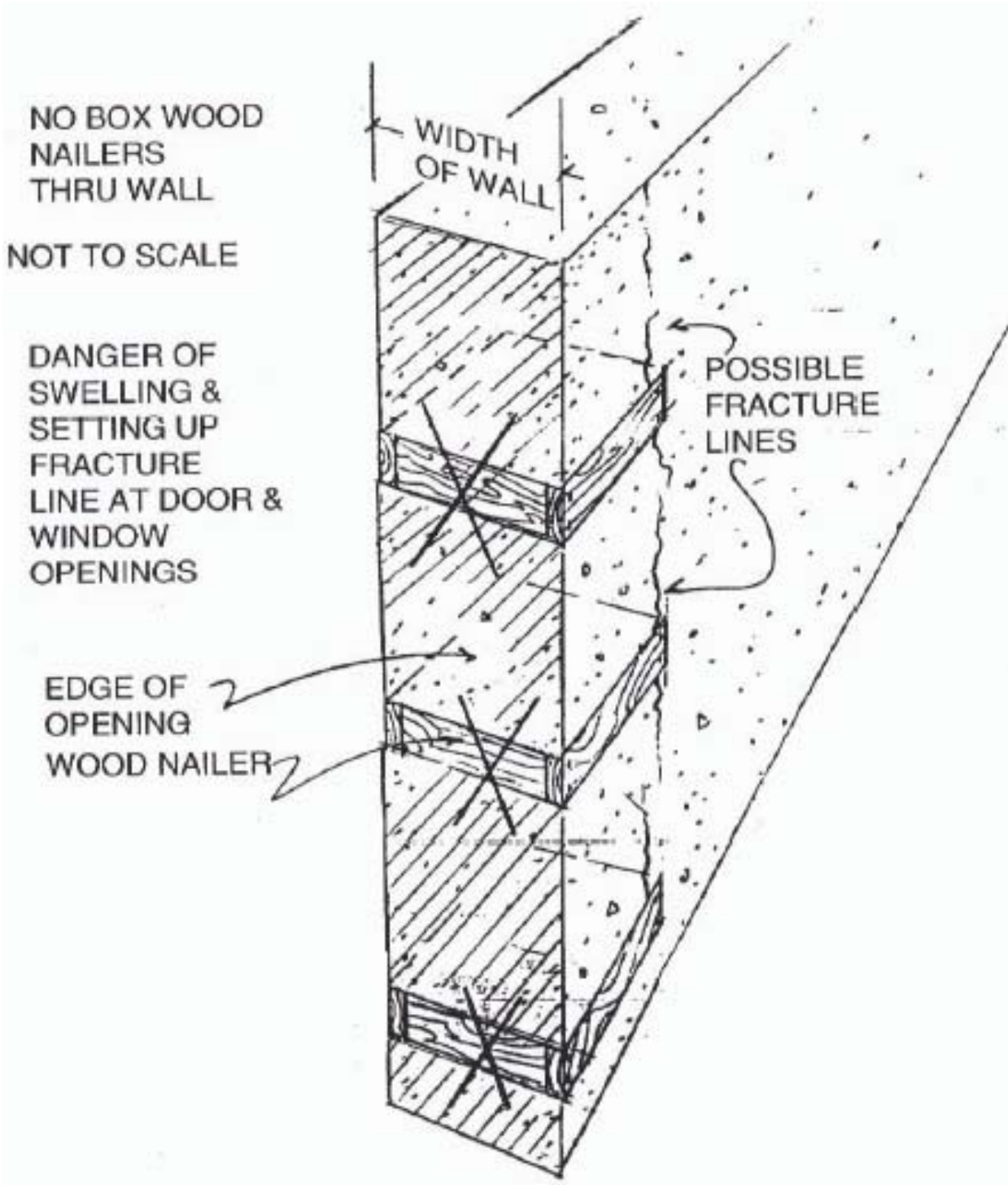
FIGURE 10 - WOOD BOND BEAM CONSTRUCTION:



[14.7.4.40 NMAC - Rp, 14.7.4.38 NMAC, 1-28-11]

14.7.4.41

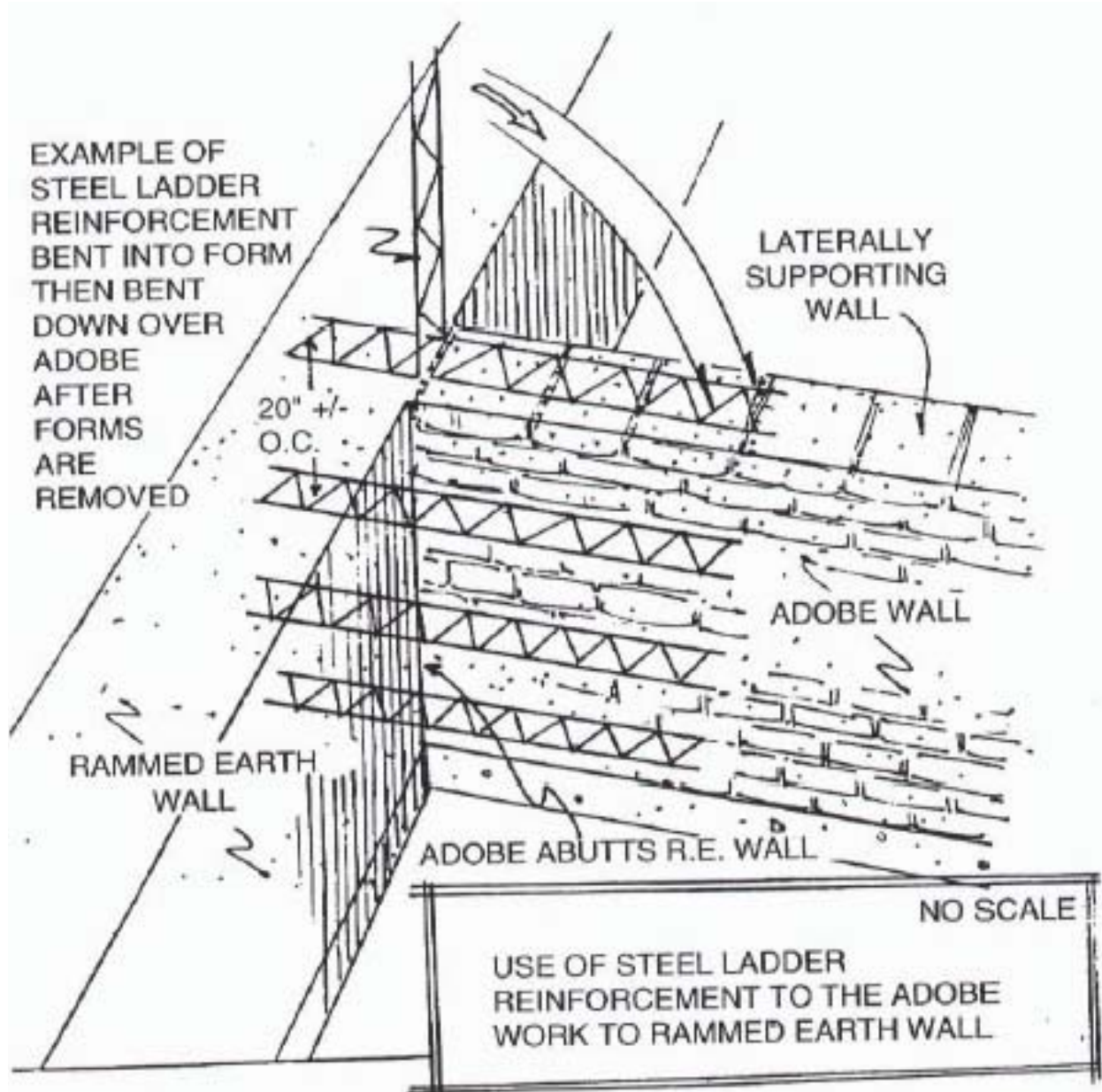
FIGURE 11 - PLACEMENT OF ATTACHED MATERIALS:



[14.7.4.41 NMAC - Rp, 14.7.4.39 NMAC, 1-28-11]

14.7.4.42

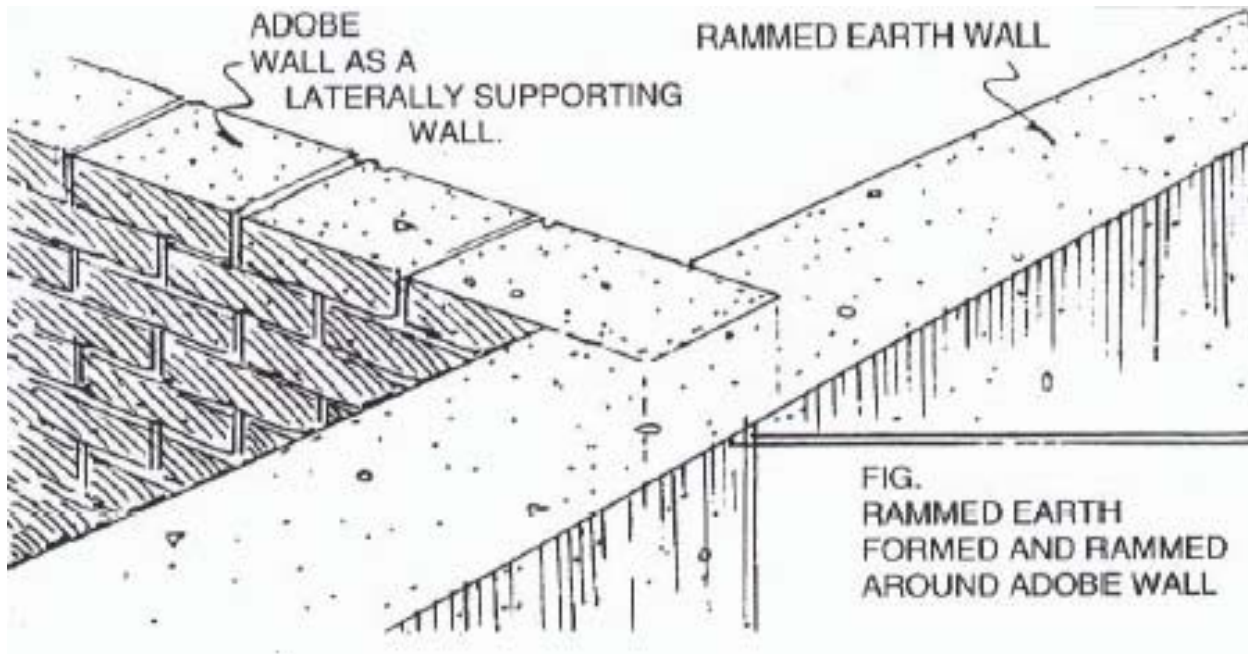
FIGURE 12 - ATTACHMENT OF AN ADOBE WALL TO A RAMMED EARTH WALL:



[14.7.4.42 NMAC - Rp, 14.7.4.40 NMAC, 1-28-11]

14.7.4.43

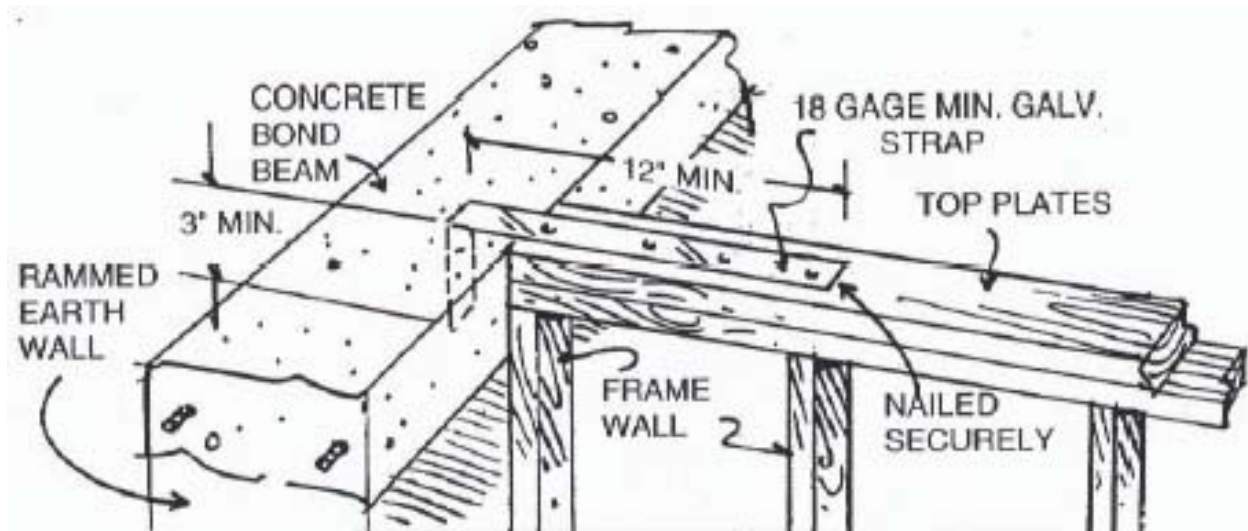
FIGURE 13 - ATTACHMENT OF AN ADOBE WALL TO A RAMMED EARTH WALL:



[14.7.4.43 NMAC - Rp, 14.7.4.41 NMAC, 1-28-11]

14.7.4.44
EARTH WALL:

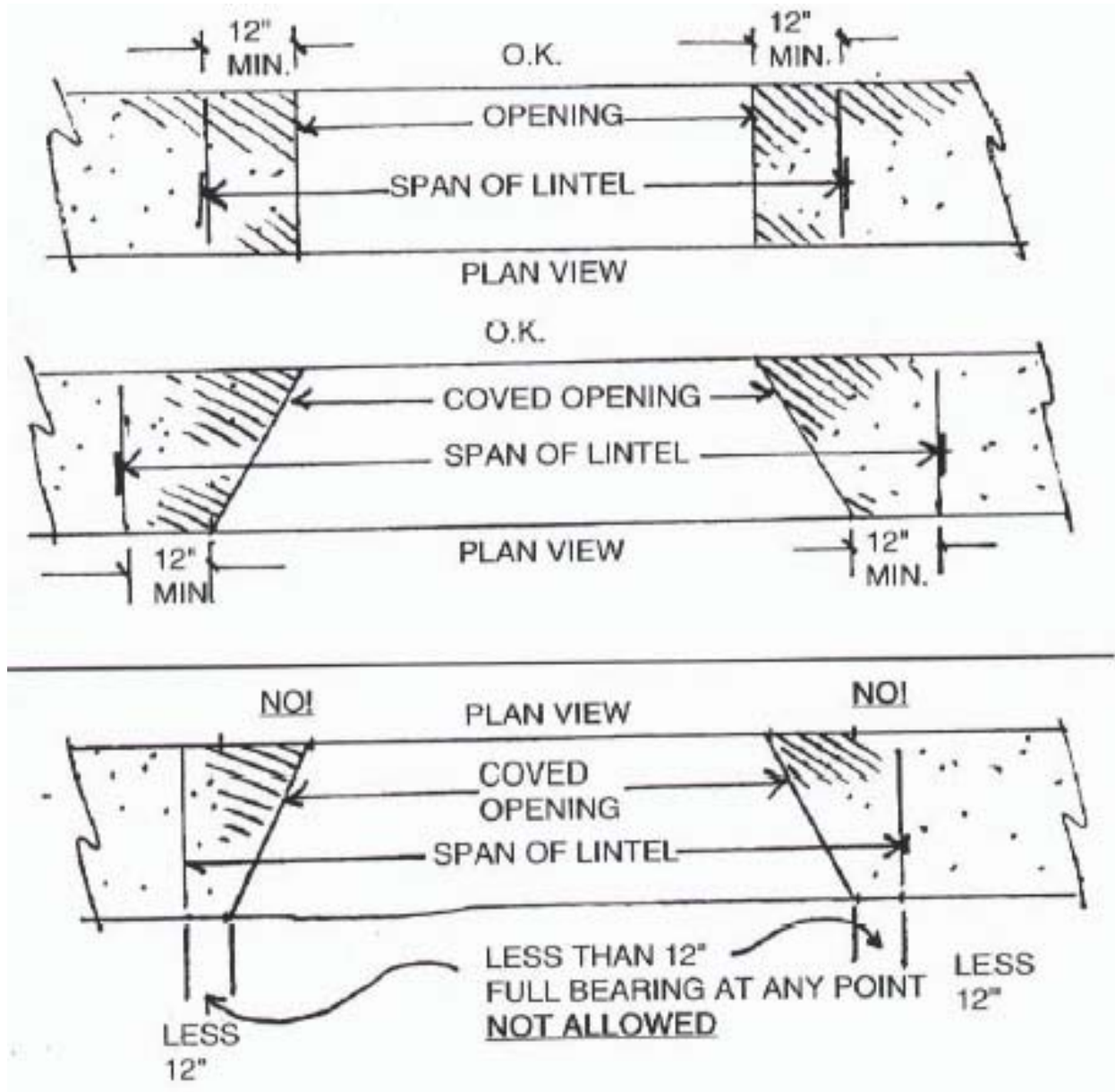
FIGURE 14 - ATTACHMENT OF A LOAD BEARING WOOD OR STEEL FRAME WALL TO A RAMMED



[14.7.4.44 NMAC - Rp, 14.7.4.42 NMAC, 1-28-11]

14.7.4.45

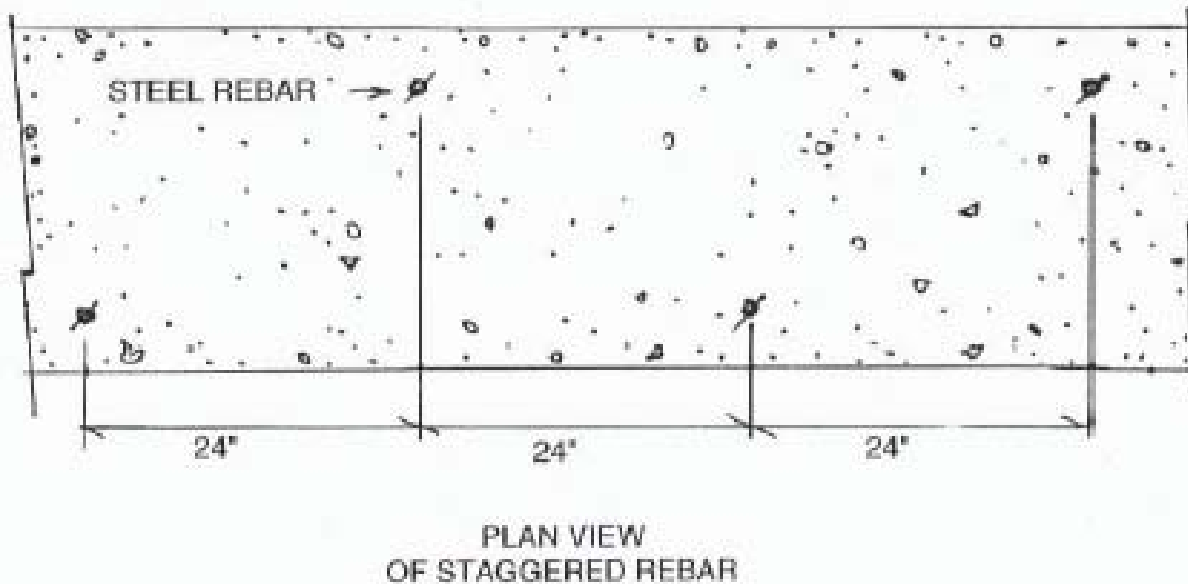
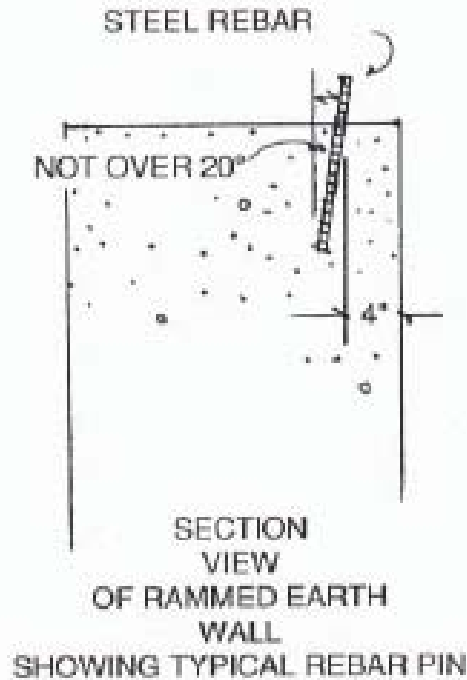
FIGURE 15 - BEARING LIMITATIONS:



[14.7.4.45 NMAC - Rp, 14.7.4.43 NMAC, 1-28-11]

14.7.4.46

FIGURE 16 - ATTACHMENT OF A CONCRETE BOND BEAM TO A RAMMED EARTH WALL:



[14.7.4.46 NMAC - Rp, 14.7.4.44 NMAC, 1-28-11]

HISTORY OF 14.7.4 NMAC:

Pre-NMAC History: None.

History of Repealed Material:

14.11.11 NMAC, Standard for Rammed Earth Construction (filed 10-31-01) repealed 11-19-04.

14.7.4 NMAC, 2003 New Mexico Earthen Building Materials Code (filed 10-18-04) repealed 1-1-08.

14.7.4 NMAC, 2006 New Mexico Earthen Building Materials Code (filed 8-16-2007) repealed 1-28-11.

Other History:

14.11.11 NMAC, Standard for Rammed Earth Construction (filed 10-31-01) renumbered and replaced by 14.7.4 NMAC, 2003 New Mexico

Earthen Building Materials Code (which did not include figures previously filed in 14.11.11 NMAC), effective 11-19-04.

14.7.4 NMAC, 2003 New Mexico Earthen Building Materials Code (filed 10-18-04) was replaced by 14.7.4 NMAC, 2006 New Mexico Earthen Building Materials Code (which includes figures previously filed in 14.11.11 NMAC), effective 1-1-08.

14.7.4 NMAC, 2006 New Mexico Earthen Building Materials Code (filed 8-16-07) was replaced by 14.7.4 NMAC, 2009 New Mexico Earthen Building Materials Code, effective 1-28-11.

**NEW MEXICO
REGULATION AND
LICENSING DEPARTMENT
CONSTRUCTION INDUSTRIES
DIVISION**

**TITLE 14 HOUSING AND
CONSTRUCTION
CHAPTER 7 BUILDING CODES
GENERAL
PART 6 2009 NEW MEXICO
ENERGY CONSERVATION CODE**

14.7.6.1 ISSUING AGENCY: Construction Industries Division (CID) of the Regulation and Licensing Department.
[14.7.6.1 NMAC - Rp, 14.7.6.1 NMAC, 1-28-11]

14.7.6.2 SCOPE: This rule applies to all contracting work performed in New Mexico on or after January 28, 2011, that is subject to the jurisdiction of CID, unless performed pursuant to a permit for which an application was received by CID before that date.
[14.7.6.2 NMAC - Rp, 14.7.6.2 NMAC, 1-28-11]

14.7.6.3 STATUTORY AUTHORITY: NMSA 1978 sections 60-13-9 and 60-13-44.
[14.7.6.3 NMAC - Rp, 14.7.6.3 NMAC, 1-28-11]

14.7.6.4 DURATION: Permanent.
[14.7.6.4 NMAC - Rp, 14.7.6.4 NMAC, 1-28-11]

14.7.6.5 EFFECTIVE DATE: January 28, 2011 unless a later date is cited at the end of a section.
[14.7.6.5 NMAC - Rp, 14.7.6.5 NMAC, 1-28-11]

14.7.6.6 OBJECTIVE: The purpose of this rule is to establish minimum standards for energy conservation in construction in New Mexico.

[14.7.6.6 NMAC - Rp, 14.7.6.6 NMAC, 1-28-11]

14.7.6.7 DEFINITIONS: See 14.5.1 NMAC, General Provisions and chapter 2 of the IECC as amended in 14.7.6.10 NMAC.

[14.7.6.7 NMAC - Rp, 14.7.6.7 NMAC 1-28-11]

14.7.6.8 ADOPTION OF THE 2009 NEW MEXICO ENERGY CONSERVATION CODE:

A. This rule adopts by reference the 2009 international energy conservation code (IECC), as amended by this rule.

B. In this rule, each provision is numbered to correspond with the numbering of the 2009 international energy conservation code.

C. This rule is to be applied in conjunction with each of the other 2009 New Mexico building codes, including the NMCBC, NMRBC, NMPC, NMMC and the NMEC.

[14.7.6.8 NMAC - Rp, 14.7.6.8 NMAC, 1-28-11]

14.7.6.9 CHAPTER 1 - ADMINISTRATION:

A. Section 101 - General.
(1) 101.1 Title. Delete this section of the IECC and substitute: this rule shall be known as the 2009 New Mexico energy conservation code (NMECC).

(2) 101.2 Scope. Delete this section of the IECC and see 14.7.6.2 NMAC, Scope.

(3) 101.3 Intent. Delete this section of the IECC and see 14.7.6.6 NMAC, Objective.

(4) 101.4 Applicability. See this section of the IECC.

(5) 101.5.1 Compliance materials. Delete this section of the IECC and substitute the following: the code official shall be permitted to approve specific computer software, worksheets, compliance manuals and other similar materials that meet the intent of this code, such as ComCheck, ResCheck, and worksheet or trade-off sheets from the *New Mexico energy conservation code residential applications manual*.

B. Section 102 Alternate Materials-Method of Construction, Design for Insulating Systems. See this section of the IECC except: **102.1.1 Above Code Programs** Delete this section with no substitution.

C. Section 103 - Construction Documents. Delete this section of the IECC and see 14.5.2 NMAC, Permits.

D. Section 104 Inspections. Delete this section of the IECC and see 14.5.3 NMAC, Inspections.

E. Section 105 Validity. Delete this section of the IECC and see 14.5.1 NMAC, General Provisions.

F. Section 106 Reference Standards. All references in the IECC to the international building code shall be deemed references to 14.7.2 NMAC, the 2009 New Mexico commercial building code (NMCBC). All references to the international residential code shall be deemed references to 14.7.3 NMAC, the 2009 New Mexico residential building code (NMRBC). All references to the international plumbing code shall be deemed references to 14.8.2 NMAC, the 2009 New Mexico plumbing code (NMPC). All references to the international mechanical code shall be deemed references to 14.9.2, the 2009 New Mexico mechanical code (NMMC). All references to the ICC or international electrical code shall be deemed references to 14.10.4 NMAC, the 2008 New Mexico electrical code (NMEC). All references to the international energy conservation code shall be deemed references to 14.7.6 NMAC, the 2009 New Mexico energy conservation code (NMECC). All references to the international fuel gas code are deemed references to the NMMC or the LP gas standards found at 19.15.40 NMAC, and NMSA 1978 70-5-1 et seq.

G. Section 107 Fees.
(1) 107.1 Fees. Delete this section of the IECC and see 14.5.5 NMAC Fees.

(2) 107.2 Schedule of Permit Fees. Delete this section of the IECC and see 14.5.5.10 NMAC Permit Fees.

(3) 107.3 Work Commencing Before a Permit Issuance. Delete this section of the IECC and see 14.5.2.16 NMAC Failure to Obtain Permit.

(4) 107.4 Related Fees. Delete this section of the IECC and see 14.5.5 NMAC Fees.

(5) 107.5 Refunds. Delete this section of the IECC and See 14.5.5 NMAC Fees.

H. 108 Stop Work Order. Delete this section of the IECC and see 14.5.3 Inspections.

I. 109 Board of Appeals. Delete this section of the IECC and See 14.5.1 General Provisions.

[14.7.6.9 NMAC - Rp, 14.7.6.9 NMAC, 1-28-11]

14.7.6.10 CHAPTER 2 - DEFINITIONS: See this chapter of the IECC except as provided below.

A. Section 201.1 Scope. See this section of the IECC and add the following: If the same term is defined in the New Mexico construction codes and in the IECC, the term shall have the meaning given it in the New Mexico construction codes.

B. Section 201.2 Interchangeability. See this chapter of the

IECC.

C. Section 201.3 Terms defined in other codes. Delete this section of the IECC and substitute: if a term is not defined in this code but is defined in a New Mexico construction code, the term shall have the meaning given it in the New Mexico construction code.

D. Section 201.4 Terms not defined. See this chapter of the IECC.

E. Section 202 General Definitions. See this section of the IECC except as provided below.

(1) Conditioned space. Delete the text of this definition and replace with the following: An area, room or space within a building that is provided with heating, cooling, or combined heating and cooling by equipment or systems capable of maintaining, through design or heat loss/gain, **50 degrees fahrenheit** (10 degrees celsius) during the heating season and **85 degrees fahrenheit** (29 degrees celsius) during the cooling season, or an area, room or space that communicates directly with a conditioned space.

(2) Duct installation. Ducts shall be installed in accordance with Chapter 6 and Chapter 17 of the New Mexico Mechanical Code and current applicable standards.

(3) Indirectly conditioned space. Add the following definition. Enclosed space within a building thermal envelope that is not mechanically heated or cooled space.

(4) Multi scene controls. Systems for controlling power to multiple groups of lights requiring only a few controls.

(5) Residential building. Delete the text of this definition and replace with the following: For this code, includes detached one- and two-family dwellings and townhouses not more than three stories above grade plane in height with a separate means of egress and their accessory structures and R-3 buildings, as well as R-2 and R-4 buildings three stories or less in height above grade.

(6) Unconditioned space. Add the following definition: Space within a building that is not mechanically heated or cooled and is outside the building thermal envelope.

(7) Vapor retarder class. Add the following definition: a measure of a material or assembly's ability to limit the amount of moisture that passes through that material or assembly. Vapor retarder class shall be defined using the desiccant method of ASTM E96 as follows:

(a) class I: 0.1 perm or less;

(b) class II: > 0.1 perm ≤ 1.0 perm;

(c) class III: > 1.0 perm < 10 perm.

[14.7.6.10 NMAC - Rp, 14.7.6.10 NMAC, 1-28-11]

14.7.6.11 CHAPTER 3 - CLIMATE ZONES: See this section of the IECC except as provided below:

A. Section 301.1 General. Table 301.2 based on the information in table 301.3(2) shall be used to determine the climate zones for the listed locations and the corresponding requirements for Chapters 4 & 5. Locations with unknown heating degree days (HDD) and cooling degree days (CDD) shall use table 301.1 to determine the climate zone.

**Table 301.2
New Mexico Climate Zones Based on Heating and Cooling Degree Days**

City	County	Elev. (feet)	Heating Degree Days (HDD) 65°F	Cooling Degree Days (CDD) 50°F day	Climate Zone
Abiquiu Dam	Rio Arriba	6380	5872		5B
Alamogordo	Otero	4350	3053	5309	3B
Albuquerque	Bernalillo	5312	4332	4462	4B
Artesia	Eddy	3380	3366	5374	3B
Aztec Ruins	San Juan	5644	5757		5B
Belen	Valencia	4800	4432	5012	3B
Bernalillo	Sandoval	5052	4782	4138	4B
Bloomfield	San Juan	5456	5490		5B
Bosque del Apache	Socorro	4520	3916	5012	3B
Carlsbad	Eddy	3295	2813	5997	3B
Carrizozo	Lincoln	5438	4234	3631	4B
Cedar Crest	Bernalillo	6581	5703		5B
Chaco Canyon	San Juan	6200	6137		5B
Chama	Rio Arriba	7871	8254		6B
Clayton	Union	5056	5150	3170	4B
Clouderoft	Otero	8801	7205		6B
Clovis	Curry	4268	4033	4252	4B
Corona	Valencia	6690	5389	3631	4B
Cuba	Sandoval	7035	7122		5B
Deming	Luna	4305	3347	5292	3B
Dulce	Rio Arriba	6793	7979		6B
Eagle Nest	Colfax	8262	9254		7B

Edgewood	Santa Fe	6649	6146		5B
Espanola	Rio Arriba	5643	5641		5B
Farmington	San Juan	5395	5747		5B
Fence Lake	Cibola	7055	6396		5B
Fort Sumner	De Baca	4032	3799	4616	3B
Gallup	McKinley	6465	6207		5B
Glenwood	Catron	4725	3632	4427	4B
Grants	Cibola	6460	6143		5B
Hatch	Dona Ana	4052	3270	5904	3B
Hobbs	Lea	3622	2954	5181	3B
Jemez Springs	Sandoval	6198	5260	2059	4B
Las Cruces	Dona Ana	4000	3223	5904	3B
Las Vegas	San Miguel	6424	5738		5B
Lordsburg	Hidalgo	4250	3213	5210	3B
Los Alamos	Los Alamos	7320	6381		5B
Los Lunas	Valencia	4856	4725	4462	4B
Magdalena	Socorro	6572	5074	2093	4B
Mescalero	Otero	6611	5540		5B
Moriarty	Torrance	6220	4735	3786	4B
Mosquero	Harding	5485	5209	3631	4B
Mountainair	Torrance	6520	5558		5B
Organ	Dona Ana	5245	3215	4919	3B
Placitas	Sandoval	5955	4917	3701	4B
Portales	Roosevelt	4006	3845	4347	4B
Raton	Colfax	6680	6001		5B
Reserve	Catron	5847	5483		5B
Rio Rancho	Sandoval	5282	4880	3949	4B
Roswell	Chaves	3573	3565	5505	3B
Ruidoso	Lincoln	6920	6309		5B
Sandia Crest	Bernalillo	10680	10034		7B
Sandia Park	Bernalillo	7077	7510		6B
Santa Fe	Santa Fe	7260	6001		5B
Santa Rosa	Guadalupe	4620	3749	4714	3B
Shiprock	San Juan	4892	5475		5B
Silver City	Grant	5895	4438	3975	4B
Socorro	Socorro	4603	3984	5147	3B
Springer	Colfax	5797	5653		5B
Taos	Taos	6967	6827		5B
Taos Ski Valley	Taos	9321	9769		7B
Tatum	Lea	3999	3680	4721	3B
Thoreau	McKinley	7200	5789		5B
Tierra Amarilla	Rio Arriba	7425	7901		6B
Tijeras	Bernalillo	6322	6338		5B
Tohatchi	McKinley	6447	5418		5B
Truth or Consequences	Sierra	4245	3394	5103	3B
Tucumcari	Quay	4096	3767	4429	4B
Tularosa	Otero	4508	3056	5130	3B
Zuni	McKinley	6293	5742		5B

B. Section 301.2. through 303.3. See these sections of the IECC.
[14.7.6.11 NMAC - Rp, 14.7.6.11 NMAC, 1-28-11]

as provided below.

A. 401.1 Scope. See this section of the IECC.

B. 401.2 Compliance. Delete the text in this section and replace with the following; the project is deemed to be in compliance where the *building official* or other authority having *jurisdiction* shall be required to demonstrate to the state that a national, state or local energy efficiency program meets or exceeds the energy efficiency required by this code. Projects shall comply with one of the following: **1)** Sections 401, 402.1 through 402.5, and 403.1, 403.2.1, 403.2.2, 403.2.3, and 403.3 through 403.9 (mandatory provisions), and 404.1 (prescriptive provisions); **2)** Specific computer software, worksheets, compliance manuals and other similar materials that meet the intent of this code, such as REScheck, REM/Rate, and trade-off worksheets from the New Mexico energy conservation code residential applications manual; or **3)** (Performance path to compliance.) A REScheck Compliance Certificate, a New Mexico 2009 IECC Annual Energy Use Report provided by a CID-approved HERS rater, or comparable process that shows a project performs 20% better than the 2006 IECC. Only the following mandatory provisions are required: 403.8, 403.9, and 404.1. Compliance may be demonstrated by use of the RESNET accreditation standard for sampling providers.

C. 401.3 Certificate. Delete the text in this section and replace with the following; a permanent certificate shall be posted on, in, or near the electrical distribution panel, or near the mechanical equipment. The certificate shall not cover or obstruct the visibility of the circuit directory label, service disconnect label or other required labels. The certificate shall be completed by the builder or registered design professional. The certificate shall list the predominant R-values of insulation installed in or on ceiling/roof, walls, foundation (slab, basement wall, crawlspace all and/or floor) and ducts outside conditioned spaces; U-factors for fenestration and the solar heat gain coefficient (SHGC) of fenestration. Where there is more than one value for each component, the certificate shall list the value covering the largest area. The certificate shall list the types and efficiencies of heating, cooling and service water heating equipment. Where a gas-fired unvented room heater, electric furnace, or baseboard electric heater is installed in the residence, the certificate shall list "gas-fired unvented room heater", "electric furnace" or "baseboard electric heater" as appropriate. An efficiency shall not be listed for gas-fired unvented room heaters, electric furnaces or electric baseboard heaters.

[14.7.6.12 NMAC - Rp, 14.7.6.12 NMAC, 1-28-11]

14.7.6.13 CHAPTER - 4 RESIDENTIAL ENERGY EFFICIENCY. Section 402 Building thermal envelope. See this section of the IECC except as provided below.

A. 402.1 General (prescriptive). See this section of the IECC except.

(1) Delete the text of table 402.1.1 and replace with the following:

Climate Zone	Fenestration U-Factor ^{b,1}	Skylight U-Factor ^b	Glazed Fenestration SHGC ^{b, e, k}	Ceiling R-Value ^{m, n, o}	Wood Frame Wall R-Value
1	1.2	0.75	0.30	30	13
2	0.65 ^j	0.65	0.30	38	13
3	0.35 ^j	0.55	0.35	38	20 or 13+5 ^h
4 except Marine	0.35	0.55	0.35	38	20 or 13+5 ^h
5 and Marine 4	0.35	0.55	0.40	49 ^o	20 or 13+5 ^h
6	0.32	0.55	NR	60	20 or 13+5 ^h
7 and 8	0.32	0.55	NR	60	21

Climate Zone	Mass Wall R-Value ⁱ	Floor R-Value	Basement Wall R-Value ^c	Slab R-Value & Depth ^d	Crawl Space Wall R-Value ^c
1	3/4	13	0	0	0
2	4/6	13	0	0	0
3	5/8	19	5/13 ^f	0	5/13
4 except Marine	8/13	19	10/13	10, 2 ft	10/13
5 and Marine 4	13/17	30 ^g	10/13	10, 2 ft	10/13
6	15/20	30 ^g	15/19	10, 4 ft	10/13
7 and 8	19/21	38 ^g	15/19	10, 4 ft	10/13

For SI: 1 foot = 304.8 mm.

- a. *R*-values are minimums. *U*-factors and SHGC are maximums. R-19 batts compressed into a nominal 2 x 6 framing cavity such that the *R*-value is reduced by R-1 or more shall be marked with the compressed batt *R*-value in addition to the full thickness *R*-value.
- b. The fenestration *U*-factor column excludes skylights. The SHGC column applies to all glazed fenestration.
- c. “15/19” means R-15 continuous insulation on the interior or exterior of the home or R-19 cavity insulation at the interior of the basement wall. “15/19” shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the home. “10/13” means R-10 continuous insulation on the interior or exterior of the home or R-13 cavity insulation at the interior of the basement wall.
- d. R-5 shall be added to the required slab edge *R*-values for heated slabs. Insulation depth shall be the depth of the footing or 2 ft, whichever is less, in zones 1 through 3 for heated slabs.
- e. There are no SHGC requirements in the Marine zone.
- f. Basement wall insulation is not required in warm-humid locations as defined by Figure 301.1 and table 301.1.
- g. Or insulation sufficient to fill the framing cavity, R-19 minimum.
- h. First value is cavity insulation, second is continuous insulation, so “13+5” means R-13 cavity insulation plus R-5 insulated sheathing. If structural sheathing covers 25 percent or less of the exterior, insulating sheathing is not required in the locations where structural sheathing is used. If structural sheathing covers more than 25 percent of exterior, structural sheathing shall be supplemented with insulated sheathing of at least R-2.
- i. The second *R*-value applies when more than half the insulation is on the interior of the mass wall.
- j. For impact rated fenestration in wind-borne debris regions, the maximum *U*-factor shall be 0.75 in zone 2 and 0.65 in zone 3.
- k. The SHGC may be waived when the glazing orientation is part of a passive solar glazing application.
- l. A fenestration *U*-factor of 0.37 shall be equivalent to the 0.35 requirement for glazing in all climate zones above 5,000 ft. elevation
- m. When air impermeable insulation is used to create an un-vented attic assembly in accordance with Sec. R806.4, at least R-23 cavity insulation and R-10 continuous insulation surrounding all framing members shall be deemed to satisfy the requirement for R-38 ceilings.
- n. In all locations with heating degree days (HDD) exceeding 6000: When air impermeable insulation is used to create an un-vented attic assembly in accordance with Sec. R806.4, at least R-30 cavity insulation and R-17 continuous insulation surrounding all framing members shall be deemed to satisfy the requirement for R-49 ceilings.
- o. In locations with HDD less than 6000, R-38 shall be deemed to satisfy this requirement.

(2) **402.1.3** See this section of the IECC except delete the text of table 402.1.3 and replace with the following: **Add Table 402.1.3 with corresponding U factor changes.**

Climate Zone	Fenestration U-Factor	Skylight U-Factor	Ceiling U-Factor	Frame Wall U-Factor	Mass Wall U-Factor	Mass ^b Wall U-Factor	Floor U-Factor	Basement Wall U-Factor	Crawl Space Wall U-Factor
1	1.20	0.75	0.035	0.082	0.197	0.17	0.064	0.360	0.477
2	0.65	0.65	0.030	0.082	0.165	0.14	0.064	0.360	0.477
3	0.35	0.55	0.030	0.057	0.141	0.12	0.047	0.091	0.136
4 ^c	0.35	0.55	0.030	0.057	0.112	0.10	0.047	0.059	0.065
5 ^d	0.35	0.55	0.026	0.057	0.082	0.057	0.033	0.059	0.065
6	0.32	0.55	0.024	0.057	0.057	0.057	0.033	0.050	0.065
7, 8	0.32	0.55	0.024	0.057	0.057	0.057	0.028	0.050	0.065

Equivalent U-Factors^a

- a. Non-fenestration U-Factors shall be obtained from measurement, calculation or an approved source.
- b. When more than half the insulation is on the interior.
- c. Except Marine
- d. And Marine 4

B. 402.2. Specific insulation requirements (prescriptive). See this section of the IECC except as provided below.

(1) **402.2.3 Access hatches and doors.** See this section of the IECC and add the following **exception:** access need not be provided where only ductwork is present in the attic, unless otherwise required.

(2) **402.2.6 Floors.** Delete the text of this section and substitute the following: The following requirements apply to new floors and to existing un-insulated floors, including above-garage and cantilevered floors.

(a) **402.2.6.1** Floor insulation shall be installed to maintain permanent contact with the underside of the subfloor decking.

(b) **402.2.6.2** Batt and blown insulation shall be held in place by mechanical attachments.

(c) **402.2.6.3** The manufacturer’s published installation instructions for in-floor heating shall be followed.

(3) **402.2.8 Slab-on-grade floors.** See this section of the IECC except as provided below. Add the following sentence to the end of the first paragraph; monolithic foundations shall be formed in place or insulation used as a forming material shall be adequately supported to resist movement. Add the following subsections:

(a) **402.2.8.1 Exception.** For slab-on-grade installations, the placement of vertical perimeter insulation shall not be required to penetrate the top four inches of the slab at door thresholds or between unheated garages, storage or mechanical areas, and heated living spaces. The required depth and placement of perimeter insulation shall not be required to a depth that exceeds that of the top of the spread

footing or the bottom of the monolithically-poured footing as determined for frost protection.

(b) 402.2.8.2 Slab-on-grade sill plate sealer. The space between the foundation and the bottom plate shall be sealed to limit infiltration by one of the following methods: application of a sill sealer that will expand and contract, or other equivalent material, between the foundation and the bottom plate; or application of caulk, or other equivalent material, to seal the bottom plate of exterior walls.

(4) 402.2.12 Band joist/rim joists and corners. Add this new section to the IECC. Band /rim joists and corners shall be insulated to the same level as exterior walls as required for wood frame wall R-values in table 402.1.1 and must include an air barrier.

(5) 402.2.13 Skylight shafts and knee walls. Add this new section to the IECC. Skylight shafts and knee walls shall be insulated to the same level as the exterior walls as required for wood frame wall R-values in table 402.1.1.

(6) 402.2.14 Architectural features. Add this new section to the IECC. Code required building envelope insulation and air sealing for exterior architectural features such as stairs and decks shall be continuous.

(7) 402.2.15 Insulation installation requirements. Add this new section to the IECC. Insulation shall be installed as follows: **a)** insulation shall be installed according to manufacturer’s published installation instructions; **b)** wall insulation shall be enclosed on all six sides, and shall be in substantial contact with the sheathing material on at least one side (interior or exterior) of the cavity; **c)** insulation shall uniformly fill each cavity side-to-side and top-to-bottom, without substantial gaps or voids around obstructions (such as blocking or bridging); **d)** exterior rigid insulation shall be in firm contact with the structural sheathing materials, and shall be tightly fitted at joints; **e)** cavity insulation shall be split, installed, and fitted tightly around wiring and other services; **f)** exterior sheathing shall not be visible from the interior through gaps in the cavity insulation.

C. 402.3 Fenestration. (Prescriptive.) See this section of the IECC except add the following new section: **Section 402.3.7. Glazing-to-opaque wall area ratio.** The ratio of glazing to opaque wall area shall not exceed 18 percent. Exception: when the ratio of glazing to opaque wall area exceeds 18 percent, compliance shall be demonstrated by using the calculation methods in the residential applications manual trade-off worksheet, dated January 2011, as prepared by the state of New Mexico energy, minerals and natural resources department.

D. 402.4 Air leakage (Mandatory). See this section of the IECC except as provided below.

(1) 402.4.1 Delete the text and title of this section of the IECC and substitute with the following; **Infiltration.** The building thermal envelope on all new construction shall be durably sealed to limit infiltration. The sealing methods between dissimilar materials shall allow for differential expansion and contraction. The following shall be caulked, gasketed, weather stripped or otherwise sealed with an air barrier material, suitable film or solid material: all joints, seams and penetrations; site-built windows, doors and skylights; openings between windows and door assemblies and curb mounted skylights and their respective jambs and framing; utility penetrations; dropped ceilings separating a garage from conditioned spaces; behind tubs and showers on exterior walls; and other sources of infiltration.

(a) 402.4.1.1 Existing building openings in level III alterations. Add the following new subsection to the IECC: The existing building openings between conditioned and un-conditioned space must be fully sealed and insulated, and any remaining gaps must be sealed with caulk or foam. Where required, fire rated material shall be used.

(b) 402.4.1.2 Existing building doors and windows. Add the following new subsection to the IECC: Existing building openings between door and window assemblies and their respective jambs and framing shall be caulked, gasketed, weather stripped or otherwise sealed with an approved material.

(c) 402.4.1.3 Existing building skylight shaft insulation. Add the following new subsection to the IECC: Where access is available, all skylights shall be caulked, gasketed or weather stripped. Knee walls shall be insulated in compliance with table 402.1.1.

(2) 402.4.2 Air sealing and insulation. See this section of the IECC except as provided below.

(a) Table 402.4.2 air barrier and insulation inspection component criteria. See this table of the IECC except under Criteria of the Air barrier and thermal barrier component delete the last Criteria and replace with the following: air-permeable insulation is inside of an air barrier and must fill the wall cavity.

(b) 402.4.2.2 Visual inspection option. See this section of the IECC and add the following sentence at the end of the paragraph: compliance with the **state of New Mexico thermal bypass inspection checklist** shall be required.

State of New Mexico Thermal Bypass Inspection Checklist					
Home Address: _____ City: _____ State: NM					
Thermal Bypass	Inspection Guidelines	Corrections Needed	Builder Verified	Rater Verified	N/A

1. Overall Air Barrier and Thermal Barrier Alignment	Requirements: Insulation shall be installed in full contact with sealed interior and exterior air barrier except for alternate to interior air barrier under item no. 2 (<i>Walls Adjoining Exterior Walls or Unconditioned Spaces</i>)				
	All Climate Zones:				
	1.1 Overall Alignment Throughout Home	Y / N	Y / N	Y / N	Y / N
	1.2 Garage Band Joist Air Barrier (at bays adjoining conditioned space)	Y / N	Y / N	Y / N	Y / N
	1.3 Attic Eave Baffles Where Vents/Leakage Exist	Y / N	Y / N	Y / N	Y / N
	Only at Climate Zones 4 and Higher:				
	1.4 Slab-edge Insulation (A maximum of 25% of the slab edge may be uninsulated in Climate Zones 4 and 5.)	Y / N	Y / N	Y / N	Y / N
	Best Practices Encouraged, Not Required.:				
	1.5 Air Barrier At All Band Joists (Climate Zones 4 and higher)	Y / N	Y / N	Y / N	Y / N
1.6 Minimize Thermal Bridging (e.g., OVE framing, SIPs, ICFs)	Y / N	Y / N	Y / N	Y / N	
2. Walls Adjoining Exterior Walls or Unconditioned Spaces	Requirements: Fully insulated wall aligned with air barrier at both interior and exterior, OR Alternate for Climate Zones 1 thru 3, sealed exterior air barrier aligned with RESNET Grade 1 insulation fully supported Continuous top and bottom plates or sealed blocking				
	2.1 Wall Behind Shower/Tub	Y / N	Y / N	Y / N	Y / N
	2.2 Wall Behind Fireplace	Y / N	Y / N	Y / N	Y / N
	2.3 Insulated Attic Slopes/Walls	Y / N	Y / N	Y / N	Y / N
	2.4 Attic Knee Walls	Y / N	Y / N	Y / N	Y / N
	2.5 Skylight Shaft Walls	Y / N	Y / N	Y / N	Y / N
	2.6 Wall Adjoining Porch Roof	Y / N	Y / N	Y / N	Y / N
	2.7 Staircase Walls	Y / N	Y / N	Y / N	Y / N
	2.8 Double Walls	Y / N	Y / N	Y / N	Y / N
3. Floors between Conditioned and Exterior Spaces	Requirements: • Air barrier is installed at any exposed fibrous insulation edges • Insulation is installed to maintain permanent contact with sub-floor above including necessary supports (e.g., staves for blankets, netting for blown-in) • Blanket insulation is verified to have no gaps, voids or compression. • Blown-in insulation is verified to have proper density with firm packing				
	3.1 Insulated Floor Above Garage	Y / N	Y / N	Y / N	Y / N
	3.2 Cantilevered Floor	Y / N	Y / N	Y / N	Y / N
4. Shafts	Requirements: Openings to unconditioned space are fully sealed with solid blocking or flashing and any remaining gaps are sealed with caulk or foam (provide fire-rated collars and caulking where required)				
	4.1 Duct Shaft	Y / N	Y / N	Y / N	Y / N
	4.2 Piping Shaft/Penetrations	Y / N	Y / N	Y / N	Y / N
	4.3 Flue Shaft	Y / N	Y / N	Y / N	Y / N
5. Attic / Ceiling Interface	Requirements: • All attic penetrations and dropped ceilings include a full interior air barrier aligned with insulation with any gaps fully sealed with caulk, foam or tape • Movable insulation fits snugly in opening and air barrier is fully gasketed				
	5.1 Attic Access Panel (fully gasketed and insulated)	Y / N	Y / N	Y / N	Y / N
	5.2 Attic Drop-down Stair (fully gasketed and insulated)	Y / N	Y / N	Y / N	Y / N
	5.3 Dropped Ceiling/Soffit (full air barrier aligned with insulation)	Y / N	Y / N	Y / N	Y / N
	5.4 Recessed Lighting Fixtures (ICAT labeled and sealed to drywall)	Y / N	Y / N	Y / N	Y / N
	5.5 Whole-house Fan (insulated cover gasketed to the opening)	Y / N	Y / N	Y / N	Y / N

6. Common Walls Between Dwelling Units	Requirements: Gap between drywall shaft wall (i.e., common wall) and the structural framing between units is fully sealed at all exterior boundary conditions			
	6.1 Common Wall Between Dwelling Units	Y / N	Y / N	Y / N
Home Energy Rating Provider: _____ Rater Inspection Date: _____				
Home Energy Rater Company Name: _____				
Home Energy Rater Signature: _____				
Builder Company Name: _____ Builder Inspection Date: _____				
Builder Employee Signature: _____				

(3) 402.4.3 Fireplaces. See this section of the IECC and add the following **exception**: wood burning masonry fireplaces without a gas log igniter are allowed without gasketed doors providing: **1)** the residence being constructed exceeds compliance of the energy code by 20% or better with compliance demonstrated by either section 401.2(2) or (3); and **2)** the fireplaces have outdoor combustion air supplied directly to the fireboxes.
[14.7.6.13 NMAC - Rp, 14.7.6.12 NMAC, 1-28-11]

14.7.6.14 CHAPTER 4 - RESIDENTIAL ENERGY EFFICIENCY. Section 403 Systems. See this section of the IECC except as provided below.

A. 403.1 Controls (mandatory). See this section of the IECC and add the following exceptions to **sub-section 403.1.1 Programmable thermostat. Exceptions:** **1)** where the home is registered in a performance-based certification program the requirement for a programmable thermostat shall be waived; **2)** where approved alternative methods of construction and/or materials are being used, programmable thermostats may be omitted.

B. 403.2 Ducts. See this section of the IECC except as follows.

(1) 403.2.1 Insulation. Delete the text of this section and replace with the following: Ducts shall be insulated to the following levels.

(a) Heating only ducts:

- (i)** exterior: R-8;
- (ii)** ventilated attic: R-6;
- (iii)** unvented attic w/ backloaded ceiling: R-6;
- (iv)** unvented attic w/ roof insulation: R-6;
- (v)** unconditioned space: R-6;
- (vi)** indirectly conditioned space: R3.5;
- (vii)** buried: none.

(b) Cooling only ducts:

- (i)** exterior: R-8 or the R-factor of insulation in the exterior wall on which the duct is located;
- (ii)** ventilated Attic: R-6;
- (iii)** unvented attic w/ backloaded ceiling: R-6;
- (iv)** unvented attic w/ roof insulation: R-6;
- (v)** unconditioned space: R-6;
- (vi)** indirectly conditioned space: R3.5;
- (vii)** buried: none.

(c) Combined heating and cooling ducts:

- (i)** exterior: R-6;
- (ii)** ventilated attic: R-6;
- (iii)** unvented attic w/ backloaded ceiling: R-6;
- (iv)** unvented attic w/ roof insulation: R-6;
- (v)** unconditioned space: R-6;
- (vi)** indirectly conditioned space: R-3.5;
- (vii)** buried: R-3.5.

(2) 403.2.2 Sealing (mandatory). Delete the second sentence of this section and replace with the following: joints, seams and penetrations of duct systems shall be made air-tight by means of mastics, gasketing, or other means in accordance with the mechanical code. Register penetrations shall be sealed to the wall or floor assemblies. Where HVAC duct penetrates a conditioned space, the duct penetration shall be sealed to the wall or floor assembly to prevent leakage into an unconditioned space.

(3) 403.2.3 Building cavities (mandatory). See this section of the IECC.

(4) 403.2.4 Installation of ducts. Add the following new section: all HVAC ducts or duct systems shall be installed in accordance with the New Mexico Mechanical Code Chapter 6 and 17.

(5) 403.2.5 Materials Add the following new section: materials for HVAC ducts or duct systems shall comply with the provisions set forth in Chapter 6 of the New Mexico Mechanical Code. Factory made ducts shall be installed in accordance with Chapter 6 of the New Mexico Mechanical Code and UMC Standard 6-5. The use of flexible duct shall be limited to supply- and return-air run-outs of not more than 12 feet in length. Flexible duct shall not be used for the principle supply- and return-air plenum.

C. 403.3. Piping insulation (mandatory). Delete the text of this section of the IECC and replace with the following: All

plumbing and mechanical hot water piping systems shall be insulated to a minimum R-2. A means of manual disconnect must be installed on all circulating pumps.

D. 403.4 Circulating hot water systems (mandatory). Delete this section of the IECC with no replacement.

E. 403.5 Mechanical ventilation (mandatory). See this section of the IECC.

F. 403.6 Equipment sizing (mandatory). Delete the text of this section and replace with the following; heating and cooling equipment shall be sized in accordance with Chapter 9 of the New Mexico Mechanical Code, Section 902.0, and Chapter 17 of the New Mexico Mechanical Code, Standards table 17-1, Standards for Equipment and Materials. The calculations used to determine the equipment size for the residence must be included with the submittal documents and approved by the Authority Having Jurisdiction.

G. 403.7 Systems serving multiple dwelling units (mandatory). Delete the text of this section and replace with the following; In lieu of Section 403 systems serving multiple dwelling units as defined in the New Mexico residential building code shall comply with Sections 503 and 504 of this code, Chapter 6 Duct Systems, and Chapter 17 Mandatory Referenced Standards of the 2009 New Mexico Mechanical Code. The calculations used to determine the equipment size for the residence must be included with the submittal documents and approved by the Authority Having Jurisdiction.

H. 403.8 Snow melt system controls and 403.9 Pools (mandatory). See these sections of the IECC.

I. 403.10 Fans. Add this new section as follows: ventilating fans shall meet **energy star** requirements. **Exception:** Ventilating fans in half bathrooms that do not contain a bathtub, shower, spa, or similar source of moisture are exempt from the **energy star** requirement. [14.7.6.14 NMAC - Rp, 14.7.6.12 NMAC, 1-28-11]

14.7.6.15 CHAPTER - 4 RESIDENTIAL ENERGY EFFICIENCY. Section 404 Electrical power and lighting systems. Delete the text of this section and replace with the following.

A. 404.1 Lighting equipment (mandatory). A minimum of 75 percent of the lamps in permanently installed lighting fixtures shall be high- efficacy lamps or 50 percent of the permanently installed luminaires (lighting fixtures) shall be ENERGY STAR qualified.

B. 404.2 Lighting equipment (mandatory). On one and two family dwelling units, in addition to a wall switch, motion sensors, daylight sensors,

and timers shall be installed on at least 33% of the outdoor luminaries (light fixtures).

C. 404.3 Photovoltaic raceway. On new construction in one and two family dwelling units a listed non-flexible 3/4 inch minimum metallic electrical raceway shall be installed during rough-in from an accessible point in the garage or indoor designated solar photovoltaic equipment location to: **1)** the roof for roof mounted photovoltaic equipment; or **2)** an outside wall for remote mounted photovoltaic equipment. The conduit shall be sealed with a listed fitting or box at each end.

[14.7.6.15 NMAC - Rp, 14.7.6.12 NMAC, 1-28-11]

14.7.6.16 CHAPTER - 4 RESIDENTIAL ENERGY EFFICIENCY. Section 405 Simulated Performance Alternative. Delete this section of the IECC with no substitution.

[14.7.6.16 NMAC - Rp, 14.7.6.12 NMAC, 1-28-11]

14.7.6.17 CHAPTER - 4 RESIDENTIAL ENERGY EFFICIENCY. Section 406 Existing residential buildings. Add this new section as prescribed below: The following shall apply in residences where **additions or alterations** are made and any of the following are encountered: 1) the reconfiguration of space; 2) the addition or elimination of any door or window; or 3) the work area in the existing building exceeds 50% of the original aggregate floor space.

A. 406.1 Thermal envelope. Exposed openings to conditioned space in the existing building shall be fully sealed and insulated and any remaining gaps sealed with caulk or foam. Where required, fire rated material shall be used.

(1) 406.1.1 Openings. Exposed openings in the existing building between conditioned and unconditioned spaces, including those in cabinets or closets, shall be fully sealed and insulated, and any remaining gaps shall be sealed with approved materials. Where required, fire rated material shall be used.

(2) 406.1.2 Doors and windows. Openings between all exterior door and window assemblies and their respective jambs and framing shall be caulked, gasketed, weather-stripped or otherwise sealed with an approved material.

(3) 406.1.3 Skylight shaft insulation. Where access exists, all skylights shall be caulked, gasketed, or weather-stripped with an approved material. Knee walls shall be insulated to comply with table 402.1.1.

B. 406.2 Under floor insulation. Where access exists, insulate existing un-insulated floors (including floors above garages and cantilevered floors) in

accordance with the following: **a)** insulation shall be installed to maintain permanent contact with the underside of the sub-floor decking; **b)** batt and blown insulation shall be held in place by mechanical attachment; **c)** batt insulation shall be installed in accordance with manufacturers' specifications; **d)** manufacturers' published installation instructions for in-floor heating shall be followed.

C. 406.3 Duct sealing and insulation. Where access exists, compliance with applicable sections of 403.2 through 403.4 is required.

D. 406.4 Programmable thermostat. Reasonable measures shall be taken for retrofitting all existing non-programmable thermostats. Where the primary heating system is a forced-air furnace, at least one thermostat per dwelling unit shall be capable of controlling the heating and cooling system on a daily schedule to maintain different temperature set points at different times of the day. This thermostat shall include the capability to set back or temporarily operate the system to maintain zone temperatures down to 55 degrees fahrenheit (13 degrees celsius) or up to 85 degrees fahrenheit (29 degrees celsius). The thermostat shall initially be programmed with a heating temperature set point no higher than 70 degrees fahrenheit (21 degrees celsius) and a cooling temperature set point no lower than 78 degrees fahrenheit (26 degrees celsius). **Exceptions:** 1) where the home is registered in a performance-based certification program the requirement for a programmable thermostat shall be waived; 2) where approved alternative methods of construction and materials are being used, programmable thermostats may be omitted. [14.7.6.17 NMAC - Rp, 14.7.6.12 NMAC, 1-28-11]

14.7.6.18 CHAPTER 5 - COMMERCIAL ENERGY EFFICIENCY: Section 501 General. See this section of the IECC except as provided below.

A. 501.1 Scope. See this section of the IECC except delete the second sentence of this section with no replacement.

B. 501.2 Application. Delete the text of this section of the IECC and replace with the following: The *commercial building* project shall comply with the requirements in Sections 502 (building envelope requirements), 503 (building mechanical systems), 504 (service water heating) and 505 (electrical power and lighting systems) in its entirety and one option from 506 (additional efficiency package options). **Exception:** building conforming to Section 507 provided Sections 502.4, 503.2, 504, 505.2, 505.3, 505.4, 505.6, and 505.7 are each satisfied. [14.7.6.18 NMAC - Rp, 14.7.6.13 NMAC,

1-28-11]

14.7.6.19 **CHAPTER 5 - COMMERCIAL ENERGY EFFICIENCY: Section 502 Building Envelope Requirements.** See this section of the IECC except as provided below.

A. 502.1 General (prescriptive). See this section of the IECC except as provided below. **Table 502.1.2 building envelope requirements opaque element, maximum U-factors.** Amend the table as follows:

TABLE 502.1.2								
Climate Zone	Building Envelope Requirements Opaque Element, Maximum U-Factors							
	1		2		3		4	
	All other	Group R	All other	Group R	All other	Group R	Except Marine	
							All other	Group R
Roofs								
Insulation entirely above deck	U-0.063	U-0.048	U-0.048	U-0.048	U-0.048	U-0.048	U-0.039	U-0.039
Metal buildings	U-0.065	U-0.065	U-0.055	U-0.055	U-0.035	U-0.035	U-0.035	U-0.035
Attic and other	U-0.034	U-0.027	U-0.027	U-0.027	U-0.027	U-0.027	U-0.027	U-0.027
Walls, Above Grade								
Mass	U-0.58	U-0.151	U-0.151	U-0.123	U-0.110	U-0.104	U-0.104	U-0.090
Metal building	U-0.093	U-0.093	U-0.093	U-0.093	U-0.079	U-0.052	U-0.052	U-0.052
Metal framed	U-0.124	U-0.124	U-0.124	U-0.064	U-0.077	U-0.064	U-0.064	U-0.064
Wood framed and other	U-0.089	U-0.089	U-0.089	U-0.089	U-0.064	U-0.064	U-0.064	U-0.064
Walls, Below Grade								
Below-grade wall ^a	C-1.140	C-1.140	C-1.140	C-1.140	C-1.140	C-1.140	C-0.119	C-0.119
Floors								
Mass	U-0.322	U-0.322	U-0.107	U-0.087	U-0.076	U-0.076	U-0.076	U-0.074
Joist/Framing	U-0.282	U-0.282	U-0.052	U-0.052	U-0.033	U-0.033	U-0.033	U-0.033
Slab-on-Grade Floors								
Unheated slabs	F-0.730	F-0.730	F-0.730	F-0.730	F-0.730	F-0.730	F-0.54	F-0.540
Heated slabs	F-1.020	F-1.020	F-1.020	F-1.020	F-0.700	F-0.700	F-0.650	F-0.650

Continue - TABLE 502.1.2								
Climate Zone	Building Envelope Requirements Opaque Element, Maximum U-Factors							
	5 and Marine 4		6		7		8	
	All other	Group R	All other	Group R	All other	Group R	All other	Group R
Roofs								
Insulation entirely above deck	U-0.039	U-0.039	U-0.048	U-0.048	U-0.039	U-0.039	U-0.039	U-0.039
Metal buildings	U-0.035	U-0.035	U-0.049	U-0.049	U-0.049	U-0.049	U-0.035	U-0.035
Attic and other	U-0.027	U-0.021	U-0.027	U-0.021	U-0.021	U-0.021	U-0.021	U-0.021
Walls, Above Grade								
Mass	U-0.078	U-0.078	U-0.080	U-0.071	U-0.071	U-0.071	U-0.071	U-0.052
Metal building	U-0.052	U-0.052	U-0.069	U-0.069	U-0.057	U-0.057	U-0.057	U-0.057
Metal framed	U-0.064	U-0.064	U-0.064	U-0.057	U-0.064	U-0.052	U-0.064	U-0.037
Wood framed and other	U-0.064	U-0.051	U-0.051	U-0.051	U-0.051	U-0.051	U-0.036	U-0.036
Walls, Below Grade								
Below-grade wall ^a	C-0.119	C-0.119	C-0.119	C-0.119	C-0.119	C-0.092	C-0.119	C-0.075
Floors								
Mass	U-0.074	U-0.064	U-0.064	U-0.057	U-0.064	U-0.051	U-0.057	U-0.051
Joist/Framing	U-0.033	U-0.033	U-0.033	U-0.033	U-0.033	U-0.033	U-0.033	U-0.033
Slab-on-Grade Floors								
Unheated slabs	F-0.540	F-0.540	F-0.540	F-0.520	F-0.520	F-0.520	F-0.520	F-0.510
Heated slabs	F-0.580	F-0.580	F-0.860	F-0.688	F-0.830	F-0.688	F-0.688	F-0.688

a. When heated slabs are placed below-grade, below grade walls must meet the *F*-factor requirements for perimeter insulation according to the heated slab-on-grade construction.

B. 502.2 Specific insulation requirements (prescriptive). See this section of the IECC except as provided below.

(1) Table 502.2(1) building envelope requirements opaque assemblies. Amend the table as follows:

Table 502.2(1) Building Envelope Requirements – Opaque Assemblies								
Climate Zone	1		2		3		4 Except Marine	
	All other	Group R	All other	Group R	All other	Group R	All other	Group R
Roofs								
Insulation entirely above deck	R-15	R-20ci	R-20ci	R-20ci	R-20ci	R-20ci	R-25ci	R-25ci
Metal buildings (with R-3.5 thermal blocks a,b)	R-19	R-19	R-13 + R-13	R-13 + R-13	R-19 + R11ci	R-19 + R11ci	R-19 + R11ci	R-19 + R11ci
Attic and other	R-30	R-38	R-38	R-38	R-38	R-38	R-38	R-38
Walls, Above Grade								
Mass	NR	R-5.7ci	R-5.7ci	R-7.6ci	R-7.6ci	R-9.5ci	R-9.5ci	R-11.4ci
Metal building ^b	R-16	R-16	R-16	R-16	R-13+ R-6.5c.i	R-13+ R-13c.i	R-13+ R-13c.i	R-13+ R-13c.i
Metal framed	R-13	R-13	R-13	R-13 + R-7.5ci	R-13 + R-5 ci	R-13 + R-7.5ci	R-13 + R-7.5	R-13 + R-7.5ci
Wood framed and other	R-13	R-13	R-13	R-13	R-13 + 3.8c.i. or R-20	R-13 + 3.8c.i. or R-20	R-13 + 3.8c.i. or R-20	R-13 + R-3.8ci or R-20
Walls, Below Grade								
Below-grade wall ^d	NR	NR	NR	NR	NR	NR	R-7.5ci	R-7.5ci
Floors								
Mass	NR	NR	R-6.3ci	R-8.3ci	R-10ci	R-10ci	R-10ci	R-10.4ci
Joist/Framing	NR	NR	R-19	R-30	R-19	R-30	R-30	R-30
Slab-on-Grade Floors								
Unheated slabs	NR	NR	NR	NR	NR	NR	R-10 for 24 in. below	R-10 for 24 in. below
Heated slabs	R-7.5 for 12 in. below	R-7.5 for 12 in. below	R-7.5 for 12 in. below	R-7.5 for 12 in. below	R-10 for 24 in. below	R-10 for 24 in. below	R-15 for 24 in. below	R-15 for 24 in. below
Opaque Doors								
Swinging	U-0.70	U-0.70	U-0.70	U-0.70	U-0.61	U-0.61	U-0.61	U-0.61
Roll-up or sliding	U-1.45	U-1.45	U-1.45	U-1.45	R-4.75	R-4.75	R-4.75	R-4.75

Continue - Table 502.2(1)

Building Envelope Requirements – Opaque Assemblies								
Climate Zone	5 and Marine 4		6		7		8	
	All other	Group R	All other	Group R	All other	Group R	All other	Group R
Roofs								
Insulation entirely above deck	R-25ci	R-25ci	R-20	R-20	R-25	R-25	R-25	R-25ci
Metal buildings (with R-3.5 thermal blocks a,b)	R-19 + R11ci	R-19 + R11ci	R-13 + R-19	R-19	R-13 + R-19	R-19 + R-10xx	R-11xx + R-19	R-19 + R-10xx
Attic and other	R-38	R-38	R-38	R-38	R-38	R-38	R-49	R-49
Walls, Above Grade								
Mass	R11.4ci	R13.3ci	R-13.3ci	R15.2ci	R15.2ci	R-15.2ci	R-25ci	R-25ci
Metal building ^b	R-13+ R-13c.i	R-13+ R-13c.i	R-13 + R-5.6ci	R-13 + R-5.6ci	R-19 + R-5.6ci	R-19 + R-5.6ci	R-19 + R-5.6ci	R-19 + R-5.6ci
Metal framed	R-13 + R-7.5ci	R-13 + R-7.5ci	R-13 + R-7.5ci	R-13 + R-7.5ci	R-13 + R-7.5ci	R-13 + R-15.6ci	R-13 + R-7.5ci	R-13 + R-18.8ci
Wood framed and other	R-13 + R-3.8ci or R-20	R-13 + R-7.5 c.i.	R-13 + R-7.5	R-13 + R-7.5	R-13 + R-7.5ci	R-13 + R-7.5ci	R-13 + R-15.6ci	R-13 + R-15.6ci
Walls, Below Grade								
Below-grade wall ^d	R-7.5ci	R-7.5ci	R-7.5ci	R-7.5ci	R-7.5ci	R-10ci	R-7.5ci	R-12.5ci
Floors								
Mass	R-10ci	R-12.5ci	R-12.5ci	R-14.6ci	R-15ci	R-16.7ci	R-15ci	R-16.7ci
Joist/Framing	R-30	R-30	R-30	R-30 ^e	R-30	R-30 ^e	R-30 ^e	R-30 ^e
Slab-on-Grade Floors								

Unheated slabs	R-10 for 24 in. below	R-10 for 24 in. below	R-10 for 24 in. below	R-15 for 24 in. below	R-15 for 24 in. below	R-15 for 24 in. below	R-15 for 24 in. below	R-20 for 24 in. Below
Heated slabs	R-15 for 36 in. below	R-15 for 36 in. below	R-15 for 36 in. below	R-20 for 48 in. below	R-20 for 24 in. below	R-20 for 48 in. below	R-20 for 48 in. below	R-20 for 48 in. below
Opaque Doors								
Swinging	U-0.37	U-0.37	U-0.70	U-0.70	U-0.50	U-0.50	U-0.50	U-0.50
Roll-up or sliding	R-4.75	R-4.75	U-0.50	U-0.50	U-0.50	U-0.50	U-0.50	U-0.50
<p>For SI: 1 inch = 25.4 mm. ci = continuous insulation. NR = no requirement. a. when using R-value compliance method, a thermal spacer block is required, otherwise use the U-factor compliance method. (see tables 502.1.2 and 502.2(2)); b. assembly descriptions can be found in table 502.2(2); c. 5.7 ci is allowed to be substituted with concrete block walls complying with ASTM C 90, ungrouted or partially grouted at 32 inches or less on center vertically and 48 inches or less on center horizontally, with ungrouted cores filled with material having a maximum thermal conductivity of 0.44 Btu-in./h-f^2 F; d. when heated slabs are placed below grade, below-grade walls must meet the exterior insulation requirements for perimeter insulation according to the heated slab-on-grade construction; e. steel floor joist systems shall to be R-38.</p>								

(2) **Table 502.2(2) building envelope requirements opaque assemblies.** Delete the text in this table and replace with the following:

Table 502.2(2) Building Envelope Requirements – Opaque Assemblies Metal Building assembly Descriptions		
Roofs	Description	Reference
R-19+R-11 ci ^c R-25+R-11 ci ^d R-30+R-11 ci ^c	Continuous insulation with thermal spacer block. A continuous membrane is installed below the purlins and uninterrupted by framing members. Uncompressed, un-faced insulation rests on top of the membrane between the purlins.	ASHRAE/IESNA 90.1 A2.3.2.4 and Table A2.3 including proposed 90.1-2007 Addendum “bb”
WALLS		
R-19	Single layer fiberglass insulation. The layer of R-19 fiberglass insulation is installed continuously perpendicular to the girts and is compressed when the metal skin is attached to the girts.	ASHRAE/IESNA 90.1 A2.3.2.4 and table A2.3 including proposed 90.1-2007 Addendum “bb”
R-13+R-6.5 ci ^a R-13+ R-13 ci ^b R-13+ R-19.5 ci ^d R-13+ R-26 ci ^c	Single layer fiberglass insulation with continuous insulation. The first R-value is for faced insulation batts installed perpendicular and compressed between the metal wall panels and the steel framing. The second rated R-value is for continuous rigid insulation installed between the metal panel and steel framing, or on the interior of the steel framing..	ASHRAE/IESNA 90.1 A2.3.2.4 and table A2.3 including proposed 90.1-2007 Addendum “bb”

- a. Applies to climate zone 3
- b. Applies to climate zones 4 and 5
- c. Applies to climate zones 3, 4, and 5
- d. Applies to climate zone 6
- e. Applies to climate zone 7

C. 502.3 Fenestration (prescriptive). See this section of the IECC except as provided below. **Table 502.3 building envelope requirements: fenestration.** Amend the table as follows:

Table 502.3 Building Envelope Requirements: Fenestration								
Climate Zone	1	2	3	4 except Marine	5 and Marine 4	6	7	8
Vertical Fenestration (30% maximum of above-grade wall)								
Framing materials other than metal with or without metal reinforcement or cladding								
<i>U</i> -Factor ^a	1.20	0.75	0.40	0.35	0.35	0.35	0.35	0.35
Metal framing with or without thermal break								
Curtain Wall/ Storefront <i>U</i> -Factor ^a	1.0	0.70	0.50	0.42	0.42	0.45	0.40	0.40
Entrance Door <i>U</i> -Factor	1.20	1.10	0.90	0.85	0.80	0.80	0.80	0.80
All Other <i>U</i> -Factor ^{a, b}	1.20	0.75	0.60	0.50	0.50	0.55	0.45	0.45
SHGC- All Frame Types								
SHGC: PF < 0.25	0.25	0.25	0.25	0.40	0.40	0.40	0.45	0.45
SHGC: 0.25 ≤ PF < 0.5	0.33	0.33	0.33	NR	NR	NR	NR	NR
SHGC: PF ≥ 0.5	0.40	0.40	0.40	NR	NR	NR	NR	NR
Skylights (3% maximum, 5% maximum with automatic day lighting controls^c)								
<i>U</i> -Factor	0.75	0.75	0.55	0.50	0.50	0.60	0.60	0.60
SHGC ^d	0.35	0.35	0.35	0.40	0.40	0.40	NR	NR
NR = No requirement. PF = Projection factor (see Section 502.3.2). a. the first <i>U</i> -factor applies when impact rated glazing is installed; b. "all others" includes operable windows, fixed windows, and doors other than entrance doors; c. automatic day lighting controls shall meet the requirements of Section 505.2.2.3; d. the SHGC for climate zones 1 - 6 can be increased to SHGC no greater than 0.60 if the visible transmittance (VT) is not less than 0.60 and automatic day lighting controls are installed that meet the requirements of Section 505.2.2.3.								

D. 502.4 Air Leakage (mandatory). See this section of the IECC except as provided below.

502.4.5 Outdoor air intakes and exhaust openings. Delete the text of this section and replace with the following: Stair and elevator shaft vents and other exhaust openings shall be provided with dampers in accordance with Sections 502.4.5.1 and 502.4.5.2. Dampers shall be installed with controls so that they are capable of automatically opening upon: **1)** the activation of any fire alarm initiating device of the building's fire alarm system; **2)** the interruption of power to the damper. **Exception:** Delete the text of the exception and replace with the following: Gravity (non-motorized) dampers having a maximum leakage rate of 20 cfm per square foot (34 L/s · C m2) at 1.0 inch water gauge (w.g.) (1250 Pa) when tested in accordance with AMCA 500D are permitted to be used where the design exhaust capacity does not exceed 300 cfm or barometric relief dampers integral with manufacturer's equipment or by engineer designed systems. Add the following new sub-sections:

(1) 502.4.5.1 Stair and shaft vents. Add new sub-section as follows: Stair and shaft vents shall be provided with class IA motorized dampers with a maximum leakage rate of 3 cfm per square foot (5.1 L/s · C m2) at 1.0 inch water gauge (w.g.) (1250 Pa) when tested in accordance with AMCA 500D.

(2) 502.4.5.2 Outdoor air intakes and exhausts. Add new sub-section as follows: Outdoor air supply and exhaust openings shall be provided with Class IA motorized dampers with a maximum leakage rate of 3 cfm per square foot (5.1 L/s · C m2) at 1.0 inch water gauge (w.g.) (1250 Pa) when tested in accordance with AMCA 500D.

[14.7.6.19 NMAC - Rp, 14.7.6.13 NMAC, 1-28-11]

14.7.6.20 CHAPTER 5 - COMMERCIAL ENERGY EFFICIENCY: Section 503 Building Mechanical Systems. See this section of the IECC except as provided below.

A. 503.1 General. See this section of the IECC.

B. 503.2 Provisions applicable to all mechanical systems (mandatory). See this section of the IECC except as provided

below.

(1) 503.2.1 Calculation of heating and cooling loads. See this section of the IECC and add the following sentence after the first sentence: The design loads shall account for the building envelope, lighting, ventilation and occupancy loads based on the project design.

(2) 503.2.2 Equipment and system sizing. Delete the text of this section and replace with the following: The output capacity of the heating and cooling equipment and systems shall not exceed the loads calculated in accordance with Section 503.2.1. A single piece of equipment providing both heating and cooling must satisfy this provision for one function with the capacity for the other function and be as small as possible within available equipment options. Standby equipment and systems shall be provided with controls and devices that allow such systems or equipment to operate automatically only when the primary equipment is not operating. **Exception:** Multiple units of the same equipment type with combined capacities exceeding the design load and provided with controls that have the capability to sequence the operation of each unit based on load.

(3) 503.2.3 HVAC equipment performance requirements. See this section of the IECC.

(4) 503.2.4 HVAC system controls. Delete the text of sections 503.2.4 through 503.2.4.3.2 of the IECC and replace with the following.

(a) 503.2.4.1 Zone thermostatic controls.

(i) 503.2.4.1.1 General. The supply of heating and cooling energy to each zone shall be individually controlled by thermostatic controls responding to temperature within the zone. For the purposes of Section 503.2.4.1, a dwelling unit shall be permitted to be considered a single zone. (ASHRAE 90.1: 6.4.3.1.1). **Exceptions:** Independent perimeter systems that are designed to offset only building envelope loads shall be permitted to serve one or more zones also served by an interior system provided: **1)** the perimeter system includes at least one thermostatic control zone for each building exposure having exterior walls facing only one orientation for 50 contiguous feet or more; **2)** the perimeter system heating and cooling supply is controlled by a thermostatic control(s) located within the zone(s) served by the system. Exterior walls are considered to have different orientations if the directions they face differ by more than 45 degrees.

(ii) 503.2.4.1.2 Dead band. Where used to control both heating and cooling, zone thermostatic controls shall be capable of providing a temperature range or dead band of at least 5 degrees fahrenheit within which the supply of heating and cooling energy to the zone is shut off or reduced to a minimum. (ASHRAE 90.1: 6.4.3.1.2). **Exceptions:** **a)** thermostats that require manual changeover between heating and cooling modes; **b)** special occupancy or special applications where wide temperature ranges are not acceptable (such as retirement homes, process applications, museums, some areas of hospitals) and are approved by the authority having jurisdiction.

(b) 503.2.4.2 Setpoint overlap restriction. Where heating and cooling to a zone are controlled by separate zone thermostatic controls located within the zone, means (such as limit switches, mechanical stops, or, for DDC systems, software programming) shall be provided to prevent the heating setpoint from exceeding the cooling set point minus any applicable proportional band. (ASHRAE 90.1: 6.4.3.2).

(c) 503.2.4.3 Off-hour controls. HVAC systems shall have the off-hour controls required by Sections 503.2.4.3.1 through 503.2.4.3.4. (ASHRAE 90.1: 6.4.3.3). **Exceptions:** **1)** HVAC systems intended to operate continuously; **2)** HVAC systems having a design heating capacity and cooling capacity less than 15,000 Btu/h that are equipped with readily accessible manual ON/OFF controls.

(i) 503.2.4.3.1 Automatic shutdown. HVAC systems shall be equipped with at least one of the following: **1)** controls that can start and stop the system under different time schedules for seven different day-types per week, are capable of retaining programming and time setting during loss of power for a period of at least ten hours, and include an accessible manual override, or equivalent function, that allows temporary operation of the system for up to two hours; **2)** an occupant sensor that is capable of shutting the system off when no occupant is sensed for a period of up to 30 minutes; **3)** a manually operated timer capable of being adjusted to operate the system for up to two hours; **4)** an interlock to a security system that shuts the system off when the security system is activated. (ASHRAE 90.1: 6.3.3.1). **Exception:** residential occupancies may use controls that can start and stop the system under two different time schedules per week.

(ii) 503.2.4.3.2 Setback controls. Heating systems located in climate zones 2-8 shall be equipped with controls that have the capability to automatically restart and temporarily operate the system as required to maintain zone temperatures above a heating setpoint adjustable down to 55 degrees fahrenheit or lower. Cooling systems located in climate zones 1b, 2b, 3b, 4b, and 5b shall be equipped with controls that have the capability to automatically restart and temporarily operate the system as required to maintain zone temperatures below a cooling setpoint adjustable up to 90 degrees fahrenheit or higher or to prevent high space humidity levels. (ASHRAE 90.1: 6.4.3.3.2). **Exception:** radiant floor and ceiling heating systems.

(iii) 503.2.4.3.3 Optimum start controls. Individual heating and cooling air distribution systems with a total design supply air capacity exceeding 10,000 cfm, served by one or more supply fans shall have optimum start controls. The control algorithm shall, as a minimum, be a function of the difference between space temperature and occupied setpoint and the amount of time prior to scheduled occupancy. (ASHRAE 90.1: 6.4.3.3.3).

(iv) 503.2.4.3.4 Zone isolation. HVAC systems serving zones that are intended to operate or be occupied nonsimultaneously shall be divided into isolation areas. Zones may be grouped into a single isolation area provided it does not exceed 25,000 ft² of conditioned floor area nor include more than one floor. Each isolation area shall be equipped with isolation devices capable of automatically shutting off the supply of conditioned air and outdoor air to and exhaust air from the area. Each isolation area shall be controlled independently by a device meeting the requirements of Section 503.2.4.3.1, automatic shutdown. For central systems and plants, controls and devices shall be provided to allow stable system and equipment operation for any length of time while serving only the smallest isolation area served by the system or plant. (ASHRAE 90.1: 6.4.3.3.4). **Exceptions:** isolation devices and controls are not required for the following: **1)** exhaust air and outdoor air connections to isolation zones when the fan system to which they connect is 5000 cfm and smaller; **2)** exhaust airflow from a single isolation zone of less than 10% of the design airflow of the exhaust system to which it connects; **3)** zones intended to operate continuously or intended to be inoperative only when all other zones are inoperative.

(v) 503.2.4.3.5 Automatic start capabilities. Controls designed to automatically adjust the start time of an HVAC system each day to allow for automatically bringing the space to desired occupied temperature levels before scheduled occupancy shall be provided on each system.

(d) 503.2.4.4 Shutoff damper controls. See this section of the IECC except delete the three exceptions and replace with the following exception: exception: gravity (nonmotorized) dampers having a maximum leakage rate of 20 cfm per square foot (34 L/s • C m²) at 1.0 inch water gauge (w.g.) (1250 Pa) when tested in accordance with AMCA 500D are permitted to be used where the design exhaust capacity does not exceed 300 cfm or barometric relief dampers integral with manufacturer's equipment or by engineered systems.

(e) **503.2.4.5 Snow melt system controls.** See this section of the IECC.

(f) **503.2.4.6 Freeze protection.** Freeze protection systems shall include automatic controls capable of shutting off the systems when outdoor air temperatures are above 40 degrees fahrenheit or when the conditions of the protected fluid will prevent freezing. Freeze protection systems shall be installed as allowed under alternate materials and methods of installation and in accordance with currently recognized engineering practices.

(5) **503.2.5 Ventilation.** See this section of the IECC except as provided below.

(a) **503.2.5.1 Demand or CO2 controlled ventilation.** Demand control ventilation (DCV) or CO2 controlled ventilation is required for spaces larger than 500 ft² (50m²) and with an average occupant load of 25 people per 1000 ft²(93 m²) of floor area and served by systems with one or more of the following: **1)** An air-side economizer; **2)** Automatic modulating control of the outdoor air damper; or **3)** A design outdoor airflow greater than 3,000 cfm (1400 L/s). **Exceptions:** **a)** systems with energy recovery complying with Section 503.2.6; **b)** multiple-zone systems without direct digital control of individual zones communicating with a central control panel; **c)** system with a design outdoor airflow less than 1,200 cfm (600 L/s); **d)** spaces where the supply airflow rate minus any makeup or outgoing transfer air requirement is less than 1,200 cfm (600 L/s); **e)** building spaces where the primary ventilation needs are for process loads.

(b) **503.2.5.2 Kitchen hoods.** Individual commercial kitchen exhaust hoods shall be provided with makeup air sized for at least 50% of exhaust air volume that is unheated or heated to no more than 60 degrees fahrenheit and uncooled or cooled without the use of mechanical cooling. **Exceptions:** **1)** where hoods are used to exhaust ventilation air that would otherwise exfiltrate or be exhausted by other fan systems; **2)** certified grease extractor hoods that require a face velocity no greater than 60 fpm.

(6) **503.2.6 Energy recovery ventilation systems.** Delete the text of this section and replace with the following: Individual fan systems that have both a design supply air capacity of 3,000 cfm (1.42 m³/s) or greater and a minimum outside air supply of 50 percent or greater of the design supply air quantity shall have an energy recovery system that provides a change in the enthalpy of the outdoor air supply of 50 percent or more of the difference between the outdoor air and return air at design conditions. Provision shall be made to bypass or control the energy recovery system to permit cooling with outdoor air where cooling with outdoor air is required. **Exceptions:** **1)** laboratory systems; **2)** systems serving spaces that are not cooled and that are heated to less than 60 degrees fahrenheit; **3)** systems exhausting toxic, flammable, paint, or corrosive fumes or dust; **4)** commercial kitchen hoods used for collecting and removing grease vapors and smoke; **5)** where more than 60 percent of the outdoor air heating energy is provided from site recovered or site-solar energy; **6)** where the largest exhaust source is less than 75 percent of the design outdoor airflow; **7)** systems requiring dehumidification that employ energy recovery in series with the cooling coil.

(7) **503.2.7 Duct and Plenum insulation and sealing and 503.2.8 Piping insulation.** Delete these sections of the IECC and see section 14.8.2.11D(1) of the New Mexico mechanical code.

(8) **503.2.9 Mechanical systems test and balancing requirements.** Delete the text of this section and replace with the following: mechanical systems test and balancing shall be in accordance with the provisions of Section 503.2.9.1 through 503.2.9.3.4. **Exception:** buildings less than 4,000 sq. ft.

(a) **503.2.9.1 System test and balancing.** Delete the text of this section and replace with the following: the construction documents shall require test and balancing in accordance with this section. In addition to test and balancing prerequisites, construction documents shall be permitted to refer to equipment specifications for further requirements. The building official shall be provided test and balancing documentation for review purposes.

(i) **503.2.9.1.1 Test and balance plan.** Add this new sub-section as follows; test and balancing shall be performed for all HVAC systems in accordance with level 1, basic commissioning of the SMACNA HVAC systems commissioning manual; note: see appendix C of the uniform mechanical code for additional information on HVAC system testing. A test and balancing plan shall be prepared for all systems as described in Section 503.2.1 and shall include as a minimum the following items: **1)** a detailed explanation of the building's project requirements for mechanical design; **2)** a narrative describing the activities that will be accomplished during each phase of test and balancing, including guidance on who accomplishes the activities and how they are completed; **3)** equipment and systems to be tested, including the extent of tests; **4)** functions to be tested (for example calibration, economizer control, etc.); **5)** conditions under which the test shall be performed (for example winter and summer design conditions, full outside air, etc.); **6)** measurable criteria for acceptable performance; **7)** a building purge of volatile organic compounds and other toxins, or air sampling and monitoring to ensure the a building has reached an acceptable level of air quality by time of construction completion shall be specified by the appropriate design/construction professional; **8)** a final system test and balance within 90 days of occupancy and subsequent to building purge; **9)** a line-item completion schedule for inspection review; **10)** an engineer's certificate of acceptance;

(ii) **503.2.9.1.2 Systems adjusting and balancing.** Add this new sub-section as follows: All HVAC systems shall be balanced in accordance with generally accepted engineering standards. Air and water flow rates shall be measured and adjusted to deliver final flow rates within 10% of design rates. Test and balance activities shall include as a minimum the following items: **1)** air systems balancing: each supply air outlet and zone terminal device shall be equipped with means for air balancing; discharge dampers are prohibited on constant volume fans and variable volume fans with motors 5 hp (9.3 kW) and larger; air systems shall be balanced in a manner to first minimize throttling losses, then for fans with system power of greater than 1 hp; fan speed shall be adjusted to meet design flow conditions. **Exception:** fans with fan motors of 1 hp or less; **2)** hydronic systems balancing: individual hydronic heating and cooling coils shall be equipped with means for balancing and pressure test connections; hydronic systems shall be proportionately balanced in a manner to first minimize throttling losses, then the pump impeller shall be trimmed or pump speed shall be adjusted to meet design flow conditions; each hydronic system shall have either the ability to measure pressure across the pump, or test ports at each side of each pump. **Exceptions:** **a)** pumps with pump motors of 2 hp or less; **b)** when throttling results in no greater than five percent of the nameplate horsepower draw above that required if the impeller were trimmed.

(iii) **503.2.9.1.3 Functional performance testing.** Add this new sub-section as follows: Equipment functional performance testing shall be in accordance with Section 503.2.9.1.3.1. Functional testing of HVAC controls shall be in accordance with Section 503.2.9.1.3.2 and shall be specified by the appropriate design/construction professional. **1) 503.2.9.1.3.1 Equipment functional performance testing.** Add this new sub-section as follows: Equipment functional performance testing shall demonstrate the correct installation and operation of components, systems, and system-to-system interfacing relationships in accordance with approved plans and specifications. This demonstration is to prove the operation, function, and maintenance serviceability for each of the systems. Testing shall include all modes of operation, including: **a)** all modes as described in the sequence of operation; **b)** redundant or automatic back-up

mode; c) performance of alarms; and d) mode of operation upon a loss of power and restored power. 2) **503.2.9.1.3.2 Controls functional performance testing.** Add this new sub-section as follows: HVAC control systems shall be tested to document that control devices, components, equipment, and systems are calibrated, adjusted and operate in accordance with approved plans and specifications. Sequences of operation shall be functionally tested to document they operate in accordance with approved plans and specifications.

(iv) **503.2.9.1.4 Test and balance report.** Add this new sub-section as follows: A report of test and balancing procedures and results shall be completed and provided to the building owner. The report shall be identified as “test and balance report” and shall identify: a) itemization of deficiencies found during testing required by this section which have not been corrected at the time of report preparation and the anticipated date of correction; b) deferred tests which cannot be performed at the time of report preparation due to climatic conditions; c) climatic conditions required for performance of the deferred tests, and the anticipated date of each deferred test.

(b) **503.2.9.2** Delete the text and title of this section and replace with the following: **Acceptance.** Buildings, or portions thereof, required to comply with this section shall not be issued a final certificate of occupancy until such time that the code official has received a certificate of acceptance per Section 503.2.9.1.1 item 10 from the engineer of record that states they have received the preliminary test and balance report as required by Section 503.2.9.1.4. At the request of the code official, a copy of the preliminary test and balance report shall be made available for review. **Exception:** in cases where a third party is contracted to complete the testing and balancing, a certificate of occupancy may be issued prior to receipt of test and balance report

(c) **503.2.9.3** Delete the text and title of this section and replace with the following: **Completion requirements.**

(i) **503.2.9.3.1 Drawings.** Add this new sub-section to the IECC. Construction documents shall include as a minimum the location and performance data on each piece of equipment.

(ii) **503.2.9.3.2 Manuals.** Add this new sub-section to the IECC. An operating manual and a maintenance manual shall be in accordance with industry-accepted standards and shall include, at a minimum, the following: 1) capacity (input and output) and required maintenance actions for each piece of equipment; 2) operation and maintenance manuals for each piece of equipment; 3) manufacturer’s operation manuals and maintenance manuals for each piece of equipment requiring maintenance, except equipment not furnished as part of the project. Required routine maintenance actions shall be clearly identified; 4) names and addresses of at least one service agency; 5) HVAC controls system maintenance and calibration information, including wiring diagrams, schematics, and control sequence descriptions. Desired or field-determined setpoints shall be permanently recorded on control drawings at control devices or, for digital control systems, in programming comments; 6) a complete narrative of how each system is intended to operate, including suggested recommended setpoints.

(iii) **503.2.9.3.3 System balancing report.** Add this new sub-section to the IECC. A written report describing the activities and measurements completed in accordance with Section 503.2.9.1.2.

C. 503.3 HVAC systems and equipment (prescriptive). See this section of the IECC except as provided below: Delete the second paragraph of this section with no replacement.

(1) **503.3.1 Economizers.** Delete the text of this section and replace with the following: Each cooling system that has a fan shall include either an air or water economizer meeting the requirements of Sections 503.3.1.1 through 503.3.3. **Exceptions:** economizers are not required for the systems listed below: 1) packaged rooftop equipment with less than 60,000 Btu cooling; 2) individual fan-cooling units with a supply capacity less than the minimum listed in table 503.3.1(1); 3) systems that require filtration equipment in order to meet the minimum ventilation requirements of Chapter 4 of the New Mexico Mechanical Code; 4) where more than 25% of the air designed to be supplied by the system is to spaces that are designed to be humidified above 35 degrees fahrenheit dew-point temperature to satisfy process needs; 5) systems that include a condenser heat recovery system required by Section 503.4.6; 6) systems that serve residential spaces where the system capacity is less than five times the requirement listed in table 503.3.1(1); 7) systems that serve spaces whose sensible cooling load at design conditions, excluding transmission and infiltration loads, is less than or equal to transmission and infiltration losses at an outdoor temperature of 60 degrees fahrenheit; 8) systems expected to operate less than 20 hours per week; 9) where the use of outdoor air for cooling will affect supermarket open refrigerated casework systems; 10) where the cooling *efficiency* meets or exceeds the *efficiency* requirements in table 503.3.1(2).

(a) **503.3.1.1 Air economizers.** Add this new sub-section as follows: Air economizers shall be designed in accordance with Sections 503.3.1.1.1 through 503.3.1.1.4.

(i) **503.3.1.1.1 Design capacity.** Add this new sub-section as follows: Air economizer systems shall be capable of modulating *outdoor air* and return air dampers to provide up to 100% of the design supply air quantity as *outdoor air* for cooling. 1)

503.3.1.1.1.1 System control. Air economizer control systems shall be wired to ensure economizer will operate when mechanical cooling is enabled. The cooling unit shall utilize a staged control system that also allows for the economizer to operate when the unit compressor is not under operation.

(ii) **503.3.1.1.2 Control signal.** Add this new sub-section as follows: Economizer dampers shall be capable of being sequenced with the mechanical cooling equipment and shall not be controlled by only mixed air temperature. **Exception:** the use of mixed air temperature limit control shall be permitted for systems controlled from space temperature (such as single-zone systems).

(iii) **503.3.1.1.3 High-limit shutoff.** Add this new sub-section and tables as follows: All air economizers shall be capable of automatically reducing *outdoor air* intake to the design minimum *outdoor air* quantity when *outdoor air* intake will no longer reduce cooling energy usage. High-limit shutoff control types for specific climates shall be chosen from table 503.3.1.1.3(1). High-limit shutoff control settings for these control types shall be those listed in table 503.3.1.1.3(2).

Climate Zones	Allowed Control Types	Prohibited Control Types
1b, 2b, 3b, 3c, 4b, 4c, 5b, 5c, 6b, 7, 8	Fixed dry bulb Differential dry bulb Electronic enthalpy ^a Differential enthalpy Dew-point and dry-bulb temperatures	Fixed enthalpy

1a, 2a, 3a, 4a	Fixed dry bulb Fixed enthalpy Electronic enthalpy ^a Differential enthalpy Dew-point and dry-bulb temperatures	Differential dry bulb
All other climates	Fixed dry bulb Differential dry bulb Fixed enthalpy Electronic enthalpy ^a Differential enthalpy Dew-point and dry-bulb temperatures	

a. Electronic enthalpy controllers are devices that use a combination of humidity and dry-bulb temperature in their switching algorithm.

Table 503.3.1.1.3(2) High-Limit Shutoff Control Setting for Air Economizers			
Device Type	Climate	Required High Limit (Economizer Off When):	
		Equation	Description
Fixed dry bulb	1b, 2b, 3b, 3c, 4b, 4c, 5b, 5c, 6b, 7, 8,	$T_{OA} > 75^{\circ}\text{F}$	Outdoor air temperature exceeds 75°F
	5a, 6a, 7a	$T_{OA} > 70^{\circ}\text{F}$	Outdoor air temperature exceeds 70°F
	All other zones	$T_{OA} > 65^{\circ}\text{F}$	Outdoor air temperature exceeds 65°F
Differential dry bulb	1b, 2b, 3b, 3c, 4b, 4c, 5a, 5b, 5c, 6a, 6b, 7, 8	$T_{OA} > \text{TRA}$	Outdoor air temperature exceeds return air temperature
Fixed enthalpy	All	$h_{OA} > 28 \text{ Btu/lb}^a$	Outdoor air enthalpy exceeds 28 Btu/lb of dry air ^a
Electronic Enthalpy	All	$(T_{OA}, RH_{OA}) > A$	Outdoor air temperature/RH exceeds the "A" setpoint curve ^b
Differential enthalpy	All	$h_{OA} > h_{RA}$	Outdoor air enthalpy exceeds return air enthalpy
Dew-point and dry bulb temperatures	All	$DP_{OA} > 55^{\circ}\text{F}$ or $T_{OA} > 75^{\circ}\text{F}$	Outdoor air dry bulb exceeds 75°F or outside dew point exceeds 55°F (65 gr/lb)

a. At altitudes substantially different than sea level, the Fixed Enthalpy limit shall be set to the enthalpy value at 75 degrees fahrenheit and 50 percent relative humidity. As an example, at approximately 6000 ft elevation the fixed enthalpy limit is approximately 30.7 Btu/lb.

b. Setpoint "A" corresponds to a curve on the psychometric chart that goes through a point at approximately 75 degrees fahrenheit and 40 percent relative humidity and is nearly parallel to dry-bulb lines at low humidity levels and nearly parallel to enthalpy lines at high humidity levels.

(iv) **503.3.1.1.4 Relief of excess outdoor air.** Add this new sub-section as follows: Systems shall provide a means to relieve excess *outdoor air* during air economizer operation to prevent over-pressurizing the building. The relief air outlet shall be located to avoid recirculation into the building.

(b) **503.3.1.2 Water economizers.** Water economizer systems for complex HVAC equipment shall be designed in accordance with Sections 503.3.2.1.1 through 503.3.2.2.

(i) **503.3.1.2.1 Design capacity.** Add this new sub-section as follows: Water economizer systems shall be capable of cooling supply air by indirect evaporation and providing up to 100% of the expected system cooling load at *outdoor air* temperatures of 50 degrees fahrenheit dry bulb/45 degrees wet bulb and below. **Exception:** systems in which a water economizer is used and where dehumidification requirements cannot be met using outdoor air temperatures of 50 degrees fahrenheit dry bulb/ 45 degrees fahrenheit wet bulb must satisfy 100 percent of the expected system cooling load at 45 degrees fahrenheit dry bulb/45 degrees fahrenheit wet bulb.

(ii) **503.3.1.2.2 Maximum pressure drop.** Add this new sub-section as follows: Pre-cooling coils and water-to-water heat exchangers used as part of a water economizer system shall either have a water-side pressure drop of less than 15 ft of water or a secondary loop shall be created so that the coil or heat exchanger pressure drop is not seen by the circulating pumps when the system is in the normal cooling (non-economizer) mode.

(2) **503.3.2 Integrated economizer control.** Delete the text of this section and replace with the following. Economizer systems

shall be integrated with the mechanical cooling system and be capable of providing partial cooling even when additional mechanical cooling is required to meet the remainder of the cooling load. **Exceptions:** **1)** direct expansion systems that include controls that reduce the quantity of *outdoor air* required to prevent coil frosting at the lowest step of compressor unloading, provided this lowest step is no greater than 25 percent of the total system capacity; **2)** individual direct expansion units that have a rated cooling capacity less than 54,000 Btu/h and use non-integrated economizer controls that preclude simultaneous operation of the economizer and mechanical cooling; **3)** systems in climate zones 1A, 1B, 2A, 7, 8.

(3) 503.3.3 Economizer heating system impact. Add this new sub-section as follows: HVAC system design and economizer controls shall be such that economizer operation does not increase the building heating energy use during normal operation. **Exception:** economizers on VAV systems that cause zone level heating to increase due to a reduction in supply air temperature.

D. 503.4 Complex HVAC systems and equipment (prescriptive). See this section of the IECC except as provided below.

503.4.2 Variable air volume (VAV) fan control. Delete the text of this section and replace with the following three paragraphs.

(1) Individual VAV fans with motors of 7.5 horsepower (5.6 kW) or greater shall be: **a)** Driven by a mechanical or electrical variable speed drive; **b)** Driven by a vane-axial fan with variable-pitch blades; or **(c)** The fan shall have controls or devices that will result in fan motor demand of no more than 30 percent of their design wattage at 50 percent of design airflow when static pressure set point equals one-third of the total design static pressure, based on manufacturer's certified fan data.

(2) Static pressure sensors used to control VAV fans shall be placed in a position such that the controller setpoint is no greater than one-third the total design fan static pressure, except for systems with direct digital control. If this results in the sensor being located downstream of major duct splits, multiple sensors shall be installed in each major branch to ensure the static pressure can be maintained in each branch.

(3) For systems with direct digital control of individual *zone* boxes reporting to the central control panel, the static pressure set point shall be reset based on the *zone* requiring the most pressure, i.e., the set point is reset lower until one *zone* damper is nearly wide open.

[14.7.6.20 NMAC - Rp, 14.7.6.13 NMAC, 1-28-11]

14.7.6.21 CHAPTER 5 - COMMERCIAL ENERGY EFFICIENCY: Section 504 Service Water Heating (mandatory). See this section of the IECC.

[14.7.6.21 NMAC - Rp, 14.7.6.13 NMAC, 1-28-11]

14.7.6.22 CHAPTER 5 - COMMERCIAL ENERGY EFFICIENCY: Section 505 Electrical Power and Lighting Systems. See this section of the IECC except as provided below:

A. 505.1 General (mandatory). See this section of the IECC and add the following paragraph: Lighting within dwelling units shall have 75 percent or more of the permanently installed interior light fixtures fitted with high-efficacy lamps or a minimum of 75 percent of the permanently installed lighting fixtures shall contain only high efficacy lamps. **Exception:** Delete the text of the exception and replace with the following: Low-voltage lighting.

B. 505.2 Lighting controls (mandatory). See this section of the IECC except as provided below.

(1) 505.2.2 Additional controls. See this section of this code except as provided below.

(a) 505.2.2.1 Light reduction controls. See this section of the IECC except on Exception #4 remove the text in parenthesis without replacement and add exception #6 Daylight spaces complying with Section 505.2.2.2.3 Automatic daylighting controls.

(b) 505.2.2.2. Automatic lighting shutoff and 505.2.2.3 Daylight zone control. Delete these two sections of the IECC and replace with the following: **505.2.2.2 Automatic lighting controls.** All commercial buildings shall be equipped with automatic control devices to shut off lighting in compliance with one of the following automatic control technologies: 1. Section 505.2.2.2.1 Occupancy sensors; 2. Section 505.2.2.2.2 Time clock controls; 3. Section 505.2.2.3 Automatic daylighting controls.

(i) 505.2.2.2.1 Occupancy sensors. Occupancy sensors shall be installed in all classrooms, conference/meeting rooms, employee lunch and break rooms, private offices, restrooms, storage rooms and janitorial closets, and other spaces 300 sf. or less enclosed by ceiling height partitions. These automatic control devices shall be installed to automatically turn off lights within 30 minutes of all occupants leaving the space, except spaces with multi-scene control.

(ii) 505.2.2.2.2 Time clock controls In areas not controlled by occupancy sensors, automatic time switch control devices shall be used. It shall incorporate an override switching device that: **1)** Is readily accessible; **2)** Is located so that a person using the device can see the lights or the area controlled by that switch, or so that the area being lit is annunciated; **3)** Is manually operated; **4)** Allows the lighting to remain on for no more than 2 hours when an override is initiated; **5)** Controls an area not exceeding 5,000 square feet (465 m²); **exceptions:** **a)** In malls and arcades, auditoriums, single-tenant retail spaces, industrial facilities and arenas, where captive-key override is utilized, override time may exceed 2 hours; **b)** In malls and arcades, auditoriums, single-tenant retail spaces, industrial facilities and arenas, the area controlled may not exceed 20,000 square feet (1860 m²).

(c) 505.2.2.3 Automatic daylighting controls. Delete the text of this section and replace with the following: Automatic controls installed in daylight zones shall control lights in the daylit areas separately from the non-day-lit areas. Controls for calibration adjustments to the lighting control device shall be readily accessible to authorized personnel. Each daylight control zone shall not exceed 2,500 square feet. Automatic daylighting controls must incorporate an automatic shut-off ability based on time or occupancy in addition to lighting power reduction controls. Controls will automatically reduce lighting power in response to available daylight by either one of the following method: **1) Continuous dimming** using dimming ballasts and daylight-sensing automatic controls that are capable of reducing the power of general lighting in the daylit zone continuously to less than 35% of rated power at maximum light output; **2) Stepped dimming** using multi-level switching and daylight-sensing controls that are capable of reducing lighting power automatically. The system should provide a minimum of two control channels per zone and be installed in a manner such that at least one control step shall reduce power of general lighting in the daylit zone by 30% to 50% of rated power and another control step that reduces lighting power by 65% to 100%. Stepped dimming control is not allowed in continuously occupied areas with ceiling heights of 14 feet or lower; **exception:** Daylight spaces enclosed by walls or ceiling height partitions and containing 2 or fewer luminaire are not required to have a separate switch for general area lighting.

(2) 505.2.3 Delete the text and title of this section of the IECC and replace with the following: **Specific application controls.** Specific application controls shall be provided for the following: **1)** Display/Accent Lighting-display or accent lighting shall have a separate control device; **2)** Case Lighting-lighting in cases used for display purposes shall have a separate control device; **3)** Hotel and Motel Guest

Room Lighting-hotel and motel guest rooms and guest suites shall have a master control device at the main room entry that controls all permanently installed luminaires and switched receptacles; **4) Task Lighting**-supplemental task lighting, including permanently installed under-shelf or under-cabinet lighting, shall have a control device integral to the luminaires or be controlled by a wall-mounted control device provided the control device is readily accessible and located so that the occupant can see the controlled lighting; **5) Non-visual Lighting**-lighting for non-visual applications, such as plant growth and food warming, shall have a separate control device; **6) Demonstration Lighting**-lighting equipment that is for sale or for demonstrations in lighting education shall have a separate control device. **Exception:** Where LED lighting is used no additional control is required for items 1, 2, or 4.

(3) 505.2.4 Functional testing. Controls for automatic lighting systems shall be tested prior to and as a condition for issuance of an approval under Section 104.8. Testing shall ensure that control hardware and software are calibrated, adjusted, programmed, and in proper working condition in accordance with the construction documents and manufacturer's installation instructions. The contractor shall be responsible for completing, or having completed, the functional testing and shall provide documentation to the *code official* certifying that the installed lighting controls meet the provisions of Section 505. When *occupant sensors*, time switches, programmable schedule controls, *photo sensors* or *day-lighting controls* are installed, at a minimum, the following procedures shall be performed: **1)** Confirm that the placement, sensitivity and time-out adjustments for *occupant sensors* yield acceptable performance, i.e. lights turn off only after space is vacated and do not turn on unless space is occupied; **2)** Confirm that the time switches and programmable schedule controls are programmed to turn the lights off; **3)** Confirm that photosensor controls reduce electric light based on the amount of usable daylight in the space as specified.

C. 505.3 Tandem wiring (mandatory) and 505.4 Exit signs (mandatory). See these sections of the IECC.

D. 505.5 Interior lighting power requirements (prescriptive). See this section of the IECC except as provided below:

(1) 505.5.2 Interior lighting power. See this section of the IECC and add the following: for the space-by space method, the interior lighting power allowances is determined by multiplying the floor area of each space times the value for the space-by-space type in table 505.5.2 that most closely represents the proposed use of the space, and then summing the lighting power allowances for all spaces. Trade-offs among spaces are permitted.

(2) Table 505.5.2 Delete the text of this table and replace with the following:

Table 505.5.2 Lighting Power Density		
	Whole Building	Space by Space
Building Area Type ^a	(W/ft ²)	
Active Storage		0.8
Atrium - First Three Floors		0.6
Atrium - Each Additional Floor		0.2
Automotive Facility	0.9	
Classroom/lecture/training		1.3
Conference/Meeting/Multipurpose		1.1
Corridor/Transition		0.5
Electrical/Mechanical		1.1
Food Preparation		1.2
Inactive Storage		0.2
Lobby		1.1
Restroom		0.8
Stairway		0.6
Convention Center	1.2	
Exhibit Space		1.3
Audience/Seating Area		0.9
COURTHOUSE	1.2	
Audience/Seating Area		0.9
Courtroom		1.9
Confinement Cells		0.9
Judges Chambers		1.3
Dressing/Locker/Fitting Room		0.6
Dining: Bar Lounge/Leisure	1.3	
Lounge/Leisure Dining		1.4
Dining: Cafeteria/Fast Food	1.4	
Dining: Family	1.6	
Dining		1.4

Kitchen		1.2
Dormitory	1	
Living Quarters		1.1
Bedroom		0.5
Study Hall		1.4
Exercise Center	1	
Dressing/Locker/Fitting Room		0.6
Audience/Seating Area		0.3
Exercise Area		0.9
Exercise Area/Gymnasium		0.9
Retail: Supermarket	1.3	
Gymnasium	1.1	
Dressing/Locker/Fitting Room		0.6
Audience/Seating Area		0.4
Playing Area		1.4
Exercise Area		0.9
Healthcare Clinic	1	
Corridors w/patient waiting, exam		1
Exam/Treatment		1.5
Emergency		2.7
Public & Staff Lounge		0.8
Hospital/Medical supplies		1.4
Hospital - Nursery		0.6
Nurse station		1
Physical therapy		0.9
Patient Room		0.7
Pharmacy		1.2
Hospital/Radiology		0.4
Operating Room		2.2
Recovery		0.8
Active storage		0.9
Laundry-Washing		0.6
Hotel	1	
Dining Area		1.3
Guest quarters		1.1
Reception/Waiting		2.5
Lobby		1.1
Library	1.3	
Library-Audio Visual		0.7
Stacks		1.7
Card File & Cataloguing		1.1
Reading Area		1.2
Manufacturing Facility	1.3	
Motel	1	
Dining Area		1.2
Guest quarters		1.1
Reception/Waiting		2.1
Motion Picture Theater	1.2	
Audience/Seating Area		1.2
Lobby		1
Multi-Family	0.7	
Museum	1.1	
Active Storage		0.8

General exhibition		1
Restoration		1.7
Office	0.9	
Enclosed		1
Open Plan		1
Penitentiary	1.0	
Parking Garage	0.3	
Performing Arts Theater	1.6	
Audience/Seating Area		2.6
Lobby		3.3
Dressing/Locker/Fitting Room		1.1
Police Stations	1	
Fire Stations	0.8	
Fire Station Engine Room		0.8
Sleeping Quarters		0.3
Audience/Seating Area		0.8
Police Station Laboratory		1.4
Post Offices/SF	1.1	
Sorting Area		1.2
Lobby		1
Religious Buildings	1.3	
Lobby		0.6
Worship/Pulpit/Choir		2.4
Retail	1.3	
Department Store Sales Area		1.3
Specialty Store Sales Area		1.8
Fine Merchandise Sales Area		2.9
Supermarket Sales Area		1.3
Personal Services Sales Area		1.3
Mass Merchandising Sales Area		1.3
Mall Concourse		1.7
School/University	1.2	
Classroom		1.3
Audience		0.7
Dining		1.1
Office		1.1
Corridor		0.5
Storage		0.5
Laboratory		1.1
Retail: Specialty^b	1.6	
Town Hall	1.1	
Transportation	1	
Dining Area		2.1
Baggage Area		1
Airport - Concourse		0.6
Terminal - Ticket Counter		1.5
Reception/Waiting		0.5
Sports Arena	1.1	
Warehouse	0.6	
Fine Material		1.4
Medium/Bulky Material		0.6
Workshop	1.4	

For SI: 1 foot = 304.8 mm, 1 watt per square foot = W/0.0929 m².

a. In cases where both a general building area type and a more specific building area type are listed, the more specific building area type shall apply.

b. Where lighting equipment is specified to be installed to highlight specific merchandise in addition to lighting equipment specified for general lighting and is switched or dimmed on circuits different from the circuits for general lighting, the smaller of the actual wattage of the lighting equipment installed specifically for merchandise, or additional lighting power as determined below shall be added to the interior lighting power determined in accordance with this line item. Calculate the additional lighting power as follows: Additional Interior Lighting Power Allowance = (Retail Area 1 X 0.6 4W/ft²) + (Retail Area 2 X 0.6 W/ft²) + (Retail Area 3 X 1.4 0.9 W/ft²) + (Retail Area 4 X 2.5 1.5 W/ft²).

where:

Retail Area 1 = The floor area for all products not listed in Retail Area 2, 3 or 4;

Retail Area 2 = The floor area used for the sale of vehicles, sporting goods and small electronics.

Retail Area 3 = The floor area used for the sale of furniture, clothing, cosmetics and artwork.

Retail Area 4 = The floor area used for the sale of jewelry, crystal and china.

Exception: Other merchandise categories are permitted to be included in Retail Areas 2 through 4 above, provided that justification documenting the need for additional lighting power based on visual inspection, contrast, or other critical display is *approved* by the authority having jurisdiction.

E. 505.6 Exterior lighting (mandatory) and 505.7 Electrical energy consumption (mandatory). See these sections of the IECC.
[14.7.6.22 NMAC - Rp, 14.7.6.13 NMAC, 1-28-11]

14.7.6.23 CHAPTER 5 - COMMERCIAL ENERGY EFFICIENCY: Replace **section 506** of the IECC with the following:
Additional efficiency package options. NOTE: The provisions of section 506 are deferred until January 1, 2013.

A. 506.1 Requirements. Buildings shall comply with at least one of the following: **1)** 506.2 Efficient HVAC Performance Requirement; **2)** 506.3 Efficient Lighting System Requirement; **3)** 506.4 On-Site Supply of Renewable Energy. At the time of plan submittal, the *code official* shall be provided, by the permittee, documentation designating the intent to comply with Section 506.2, 506.3 or 506.4 in their entirety. Individual tenant spaces must comply with either 506.2 or 506.3 in their entirety unless documentation can be provided that demonstrates compliance with Section 506.4 for the entire building.

B. 506.2 Efficient mechanical equipment. Equipment shall meet the minimum efficiency requirements of tables 506.2(1) through 506.2(7) in addition to the requirements in Section 503. This section shall only be used where an equipment efficiency option is available.

Table 506.2(1) Unitary Air Conditioners and Condensing Units, Electrically operated, efficiency requirements			
Equipment Type	Size category	Subcategory or rating condition	Required efficiency ^a
Air conditioners, Water and evaporatively cooled	≥ 760,000 Btu/h		For zones 1 to 5: 10.2 EER ^b , 11.0 IPLV ^b For zones 6 to 8: 9.7 EER ^b , 11.0 IPLV ^b
		Split system and single package	14.0 EER
Air conditioners, Air cooled	< 65,000 Btu/hd	Split system	For zones 1 to 5: 15.0 SEER, 12.5 EER For zones 6 to 8: 14 SEER, 12 EER
		Single package	For zones 1 to 5: 15.0 SEER, 12.0 EER For zones 6 to 8: 14.0 SEER 11.6 EER
	≥ 65,000 Btuh/h and < 240,000 Btu/h	Split system and single package	For zones 1 to 5: 12.0 EER ^b , 12.4 IPLV ^b For zones 6 to 8: 11.5 EER ^b , 11.9 IPLV ^b
	≥ 240,000 Btu/h and < 760,000 Btu/h	Split system and single package	For zones 1 to 5: 10.8 EER ^b , 12.0 IPLV ^b For zones 6 to 8: 10.5 EER ^b , 10.9 IPLV ^b

For SI: 1 British thermal unit per hour = 0.2931 W.

a. IPLVs are only applicable to equipment with capacity modulation.

b. Deduct 0.2 from the required EERs and IPLVs for units with a heating section other than electric resistance heat.

Table 506.2(2) Unitary and applied Heat Pumps, Electrically Operated, Efficiency Requirements			
Equipment type	Size category	Subcategory or rating condition	Required efficiency ^a
Air cooled (Cooling mode)	< 65,000 Btu/h	Split system	For zones 1 to 5: 15.0 SEER, 12.5 EER For zones 6 to 8: 14.0 SEER, 12.0 EER
		Single package	For zones 1 to 5: 15.0 SEER, 12.0 EER For zones 6 to 8: 14.0 SEER, 11.6 EER
	≥ 65,000 Btu/h and < 240,000 Btu/h	Split system and single package	For zones 1 to 5: 12.0 SEER, 12.4 EER For zones 6 to 8: 11.5 EER ^b , 11.9 IPLV ^b
	≥ 240,000 Btu/h	Split system and single package	For zones 1 to 5: 12.0 SEER, 12.4 EER For zones 6 to 8: 10.5 EER ^b , 10.9 IPLV ^b
Water SOURCES (Cooling mode)	< 135,000 Btu/h	85°F entering water	14.0 EER
Air cooled (Heating mode)	< 65,000 Btu/h (Cooling capacity)	Split system	For zones 1 to 5: 9.0 HSPF For zones 6 to 8: 8.5 HSPF
		Single package	For zones 1 to 5: 8.5 HSPF For zones 6 to 8: 8.0 HSPF
	≥ 65,000 Btu/h and < 135,000 Btu/h (Cooling capacity)	47°F db/43°F wb outdoor air	3.4 COP
		17°F db/15°F wb outdoor air	2.4 COP
	≥ 135,000 Btu/h (Cooling capacity)	47°F db/43°F wb outdoor air	3.2 COP
		77°F db/15°F wb outdoor air	2.1 COP
Water SOURCES (Heating mode)	< 135,000 Btu/h (Cooling capacity)	70°F entering water	4.6 COP

For SI: °C = ((°F) - 32) / 1.8, 1 British thermal unit per hour = 0.2931 W.
db = dry-bulb temperature, °F; wb = wet-bulb temperature, °F
a. IPLVs and part load rating conditions are only applicable to equipment with capacity modulation.
b. Deduct 0.2 from the required EERs and IPLVs for units with a heating section other than electric resistance heat.

Table 506.2(3) Packaged Terminal Air Conditioners and Packaged Terminal Heat Pumps		
Equipment type	Size category	Required efficiency ^a
Air conditioners	< 7,000 Btu / h	11.9 EER
& Heat Pumps (Cooling Mode)	7,000 Btu / h and < 10,000 Btu / h	11.3 EER
	10,000 Btu / h and < 13,000 Btu / h	10.7 EER
	> 13,000 Btu / h	9.5 EER

a. Replacement units must be factory labeled as follows: "MANUFACTURED FOR REPLACEMENT APPLICATIONS ONLY: NOT TO BE INSTALLED IN NEW CONSTRUCTION PROJECTS." Replacement efficiencies apply only to units with existing sleeves less than 16 inches (406 mm) high and less than 42 inches (1067 mm) wide.

Table 506.2(4) Warm Air Furnaces and Combination Warm Air Furnaces/Air-conditioning Units, Warm Air Duct Furnaces and Unit Heaters, Efficiency Requirements				
Equipment type	Size category (input)	Subcategory or rating condition	Required efficiency	Test procedure
Warm air furnaces, gas fired	< 225,000 Btu/h		For zones 1 & 2, NR. For zones 3 & 4, 90 AFUE or 90 Et For zones 4 to 8, 92 AFUE or 92 Et	DOE 10 CFR Part 430 or ANSI Z21.47
	≥ 225,000 Btu/h	Maximum capacity	90% Ec note 1	ANSI Z21.47

Warm air furnaces, oil fired	< 225,000 Btu/h		For zones 1 & 2, NR. For zones 3 to 8, 85 AFUE or 85 Et	DOE 10 CFR Part 430 or UL 727
	≥ 225,000 Btu/h	Maximum capacity	85% Et, Note 1	UL 727
Warm air duct furnaces, gas fired	All capacities	Maximum capacity	90% <i>Ec</i>	ANSI Z83.8
Warm air unit heaters, gas fired	All capacities	Maximum capacity	90% <i>Ec</i>	ANSI Z83.8
Warm air unit heaters, oil fired	All capacities	Maximum capacity	90% <i>Ec</i>	UL 731

For SI: 1 British thermal unit per hour = 0.2931 W.

1 Units must also include an IID (intermittent ignition device), have jackets not exceeding 0.75 percent of the input rating, and have either power venting or a flue damper. A vent damper is an acceptable alternative to a flue damper for those furnaces where combustion air is drawn from the conditioned space. Where there are two ratings for units not covered by the National Appliance Energy Conservation Act of 1987 (NAECA) (3-phase power or cooling capacity greater than or equal to 65,000 Btu/h (19 kW) shall comply with either rating.

Et = Thermal efficiency.

Ec = Combustion efficiency (100% less flue losses).

Efficient furnace fan: All fossil fuel furnaces in zones 3 to 8 shall have a furnace electricity ratio not greater than 2% and shall include a manufacturer's designation of the furnace electricity ratio.

**Table 506.2(5)
Boiler, Efficiency Requirements**

Equipment type	Size category	Test Procedure	Required efficiency
Gas Hot Water	< 300,000 Btu / h	DOE 10 CFR Part 430	90% Et
	> 300,000 Btu / h and > 2.5 mBtu/h	DOE 10 CFR Part 431	89% Et
Gas Steam	< 300,000 Btu / h	DOE 10 CFR Part 430	89% Et
	> 300,000 Btu / h	DOE 10 CFR Part 431	89% Et
Oil	< 300,000 Btu / h	DOE 10 CFR Part 430	90% Et
	> 300,000 Btu / h	DOE 10 CFR Part 431	89% Et

Et = thermal efficiency

**Table 506.2(6)
Chillers – Efficiency Requirements**

Equipment type	Size category	Required efficiency – chillers ^{a, b}		Optional compliance path – required efficiency – chillers with VSD ^{a, b}	
		Full Load (KW /TON)	IPLV (KW /TON)	Full Load (KW /TON)	IPLV (KW /TON)
Air Cooled w/ Condenser	All	1.2	1.0	N/A	N/A
Air Cooled w/o Condenser	All	1.08	1.08	N/A	N/A
Water Cooled, Reciprocating	All	0.840	0.630	N/A	N/A
Water Cooled, Rotary Screw and Scroll	< 90 tons	0.780	0.600	N/A	N/A
	>90 tons and < 150 tons	0.730	0.550	N/A	N/A
	>150 tons and < 300 tons	0.610	0.510	N/A	N/A
	> 300 tons	0.600	0.490	N/A	N/A
Water Cooled, Centrifugal	< 150 tons	0.610	0.620	0.630	0.400
	>150 tons and < 300 tons	0.590	0.560	0.600	0.400
Water Cooled, Centrifugal	>300 tons and < 600 tons	0.570	0.510	0.580	0.400
	> 600 tons	0.550	0.510	0.550	0.400

- a. Compliance with full load efficiency numbers and IPLV numbers are both required.
 - b. Only chillers with variable speed drives (VSD) may use the optional compliance path for chiller efficiency.
- N/A - No credit can be taken for this option

Table 506.2(7) Absorption Chillers – Efficiency Requirements	
Equipment Type	Required Efficiency Full Load COP (IPLV)
Air Cooled, Single Effect	0.60, allowed only in heat recovery applications
Water Cooled, Single Effect	0.70, allowed only in heat recovery applications
Double Effect - Direct Fired	1.0 (1.05)
Double Effect - Indirect Fired	1.20

C. 506.3 Efficient lighting system. Whole building lighting power density (Watts/sf) shall meet the requirements of table 506.3. and automatic daylighting control requirements in section 506.3.2.

(1) 506.3.1 Reduced lighting power density - The total interior lighting power (watts) is the sum of all interior lighting powers for all areas in the building. The interior lighting power is the floor area for the building times the value from table 506.3.

Table 506.3 Reduced Interior Lighting Power	
Building type ^a	Reduced whole building (Watts/Ft2)
Automotive Facility	0.79
Convention Center	1.16
Courthouse	1.08
Dining: Bar Lounge/Leisure	1.19
Dining: Cafeteria/Fast Food	1.34
Dining: Family	1.50
Dormitory	0.90
Exercise Center	0.92
Fire Stations	0.74
Gymnasium	1.07
Healthcare Clinic	0.89
Hotel	0.90
Library	1.00
Manufacturing Facility	1.24
Motel	0.90
Motion Picture Theater	1.18
Museum	1.04
Office	0.80
Performing Arts Theater	1.46
Police Stations	0.89
Post Office	0.98
Religious Buildings	1.18
Retail	1.30
Retail: Specialty	1.40
Retail: Supermarket	1.30
School/University	1.01
Town Hall	0.94
Transportation	0.85
Warehouse ^b	0.60
WORKSHOP	1.20

For SI: 1 foot = 304.8 mm, 1 watt per square foot = W/0.0929 m².

- a. In cases where both a general building area type and a more specific building area type are listed, the more specific building area type shall apply.
- b. At least one half of the floor area shall be in the daylight zone. Automatic day-lighting controls shall be installed in day-lit zones and shall meet the requirements of Section 505.2.2.2.3.

(2) 506.3.2 Automatic Day-lighting Controls. Automatic day-lighting controls shall be installed in all daylight zones and shall meet the requirements of Section 505.2.2.3.

D. 506.4 On-site Supply of Renewable Energy. The building or surrounding property shall supply 3% or more of the building energy use associated with systems and equipment covered by this code through on-site renewable energy. On-site power generation using nonrenewable sources does not meet this requirement. The *code official* shall be provided with an energy analysis as described in Section 507 that documents that on-site renewable energy production is capable of providing at least 3% of the total estimated annual purchased energy for the building functions regulated by this code, or a calculation demonstrating that on-site renewable energy production has a nominal (maximum) rating of at least 1.75 BTUs or at least 0.50 watts per square foot of conditioned floor area.

[14.7.6.23 NMAC - Rp, 14.7.6.13 NMAC, 1-28-11]

14.7.6.24 CHAPTER 5 - COMMERCIAL ENERGY EFFICIENCY: Re-number IECC section 506 Total building performance to read section 507 Total building performance. See this section of the IECC.

[14.7.6.24 NMAC - Rp, 14.7.6.13 NMAC, 1-28-11]

14.7.6.25 CHAPTER 6 - REFERENCED STANDARDS: See this section of the IECC.

[14.7.6.25 NMAC - Rp, 14.7.6.14 NMAC, 1-28-11]

HISTORY OF 14.7.6 NMAC:

Pre NMAC History: None.

History of Repealed Material:

14.7.6 NMAC, 2003 New Mexico Energy Conservation Code (filed 5-27-04) repealed 1-7-04.

14.7.6 NMAC, 2006 New Mexico Energy Conservation Code (filed 8-16-2007) repealed 1-28-11.

NMAC History:

14.7.6 NMAC, 2003 New Mexico Energy Conservation Code (filed 5-27-04) replaced by 14.7.6 NMAC, 2006 New Mexico Energy Conservation Code, effective 1-1-08.

14.7.6 NMAC, 2006 New Mexico Energy Conservation Code (filed 8-16-2007) replaced by 14.7.6 NMAC, 2009 New Mexico New Mexico Energy Conservation Code, effective 1-28-11.

[Continued on page 119]

**NEW MEXICO
REGULATION AND
LICENSING DEPARTMENT
CONSTRUCTION INDUSTRIES
DIVISION**

**TITLE 14 HOUSING AND
CONSTRUCTION
CHAPTER 8 PLUMBING CODES
PART 2 2009 NEW MEXICO
PLUMBING CODE**

14.8.2.1 ISSUING AGENCY: Construction Industries Division (CID) of the Regulation and Licensing Department. [14.8.2.1 NMAC - Rp, 14.8.2.1 NMAC, 1-28-11]

14.8.2.2 SCOPE: This rule applies to all contracting work performed in New Mexico on or after January 28, 2011, that is subject to the jurisdiction of CID, unless performed pursuant to a permit for which an application was received by CID before that date. [14.8.2.2 NMAC - Rp, 14.8.2.2 NMAC, 1-28-11]

14.8.2.3 STATUTORY AUTHORITY: NMSA 1978 Section 60-13-9 and 60-13-44. [14.8.2.3 NMAC - Rp, 14.8.2.3 NMAC, 1-28-11]

14.8.2.4 DURATION: Permanent. [14.8.2.4 NMAC - Rp, 14.8.2.4 NMAC, 1-28-11]

14.8.2.5 EFFECTIVE DATE: January 28, 2011, unless a later date is cited at the end of a section. [14.8.2.5 NMAC - Rp, 14.8.2.5 NMAC, 1-28-11]

14.8.2.6 OBJECTIVE: The purpose of this rule is to establish minimum standards for all plumbing, as defined in CILA Section 60-12-32, in New Mexico. [14.8.2.6 NMAC - Rp, 14.8.2.6 NMAC, 1-28-11]

14.8.2.7 DEFINITIONS: See 14.5.1 NMAC, General Provisions and chapter 2 of the 2009 uniform plumbing code (UPC) as amended in 14.8.2.10 NMAC. [14.8.2.7 NMAC - Rp, 14.8.2.7 NMAC, 1-28-11]

14.8.2.8 ADOPTION OF THE 2009 UNIFORM PLUMBING CODE:

A. This rule adopts by reference the 2009 uniform plumbing code and all appendices, as amended by this rule.

B. In this rule, the internal numbering of each provision corresponds

with the numbering of the 2009 uniform plumbing code.

C. This rule is to be applied in conjunction with 14.7.6 NMAC, the 2009 New Mexico energy conservation code. [14.8.2.8 NMAC - Rp, 14.8.2.8 NMAC, 1-28-11]

**14.8.2.9 CHAPTER 1
ADMINISTRATION:**

A. 101.0 - Title, Scope and General.

(1) 101.1 Title. Delete this section of the UPC and substitute: This code shall be known as the 2009 New Mexico plumbing code (NMPC).

(2) 101.2 Purpose. Delete this section of the UPC and see 14.8.2.6 NMAC.

(3) 101.3 Plans required. Delete this section of the UPC except as provided in 14.5.2 NMAC, Permits.

(4) 101.4 Scope.

(a) 101.4.1 Delete this section of the UPC and see 14.8.2.2 NMAC.

(i) 101.4.1.1 Repairs and alterations. See this section of the UPC.

(ii) 101.4.1.2 Maintenance. Delete this section of the UPC.

(iii) 101.4.1.3 Existing construction. Delete this section of the UPC.

(iv) 101.4.1.4 Conflicts between codes. Delete this section of the UPC and see 14.5.1 General Provisions.

(b) 101.4.2 See this section of the UPC.

(c) 101.4.3 Appendices. Delete this section of the UPC except as provided in 14.8.2.27 NMAC, below.

(5) 101.5 Application to existing plumbing system. See this section of the UPC.

B. 102.0 - Organization and Enforcement.

(1) 102.1 Authority having jurisdiction. Delete this section of the UPC.

(2) 102.2 Duties and powers of the authority having jurisdiction.

(a) 102.2.1 Appointments. Delete this section of the UPC and see CILA Section 60-13-8 through 60-13-41 and NMSA 1978 Section 9-16-7.

(b) 102.2.2 Right of entry. Delete this section of the UPC and see CILA Section 60-13-42.

(c) 102.2.3 Stop orders. Delete this section of the UPC and see 14.5.2 NMAC, Permits.

(d) 102.2.4 Authority to disconnect utilities in emergencies. Delete this section of the UPC and see CILA Section 60-13-42.

(e) 102.2.5 Authority to condemn. Delete this section of the UPC and see 14.5.1 NMAC, General Provisions.

(f) 102.2.6 Liability. Delete this section of the UPC and see CILA Section 60-13-26.

(3) 102.3 Violations and penalties. Delete this section of the UPC and see CILA Section 60-13-1 et seq., and 14.5.3, Inspections.

C. 103.0 - Permits and inspections.

(1) 103.1 Permits. Delete this section of the UPC except as provided in 14.5.2 NMAC, Permits.

(2) 103.2 Application for permit. Delete this section of the UPC except as provided in 14.5.2 NMAC, Permits.

(3) 103.3 Permit issuance. Delete this section of the UPC except as provided in 14.5.2 NMAC, Permits

(4) 103.4 Fees. Delete this section of the UPC and see 14.5.5 NMAC, Fees.

(5) 103.5 Inspections. Delete this section except as provided in 14.5.3 NMAC, Inspections.

(6) 103.6 Connection approval. Delete this section of the UPC and see 14.5.3 NMAC, Inspections.

(7) 103.7 Unconstitutional. Delete this section of the UPC and see 14.5.1 NMAC, General Provisions.

(8) 103.8 Validity. Delete this section of the UPC and see 14.5.1 NMAC, General Provisions.

(9) Table 1.1 Plumbing permit fees. Delete plumbing permit fees, table 1-1, from the UPC.

[14.8.2.9 NMAC - Rp, 14.8.2.9, NMAC 1-28-11]

**14.8.2.10 CHAPTER 2
DEFINITIONS:** See this chapter of the UPC, except as provided below.

A. 203.0 Authority having jurisdiction. Delete the text of this definition and substitute: The authority having jurisdiction is the construction industries division (CID) and the bureau chief of the mechanical and plumbing bureau of CID.

B. 206.0 Design Flood Elevation. See this definition of the UPC and add the following text at the end of the definition: In areas designated as Zone AO, the design flood elevation shall be the elevation of the highest existing grade of the building's perimeter plus the depth number (in feet) specified on the flood hazard map. In areas designated as Zone AO where a depth number is not specified on the map, the depth number shall be taken as being equal to 2 feet (610 mm).

C. 214.0 Listing agency. See this definition in the UPC and section 60-13-44.B. of the CILA.

[14.8.2.10 NMAC - Rp, 14.8.2.10 NMAC, 1-28-11]

**14.8.2.11 CHAPTER 3
GENERAL REGULATIONS:** See this

chapter of the UPC except as provided below.

A. 301.2 Alternate materials and methods of construction equivalency. Delete this section of the UPC and see 14.5.1 NMAC.

B. 301.3 Flood hazard resistance. See this section of the UPC.

C. 301.4 Alternative engineered design. See this section of the UPC except as provided below.

(1) **301.4.1 Design criteria.** See this section of the UPC and 14.5.2 NMAC permits.

(2) **301.4.2 Permit application.** Delete this section of the UPC and see 14.5.2 NMAC permits.

(3) **301.4.3 Technical data.** See this section of the UPC.

(4) **301.4.4 Design documents.** See this section of the UPC and 14.5.2 NMAC permits.

(5) **301.4.5 Design approval.** Delete this section of the UPC and see 14.5.2 NMAC permits.

(6) **301.4.6 Design review.** Delete this section of the UPC and see 14.5.2 NMAC permits.

(7) **301.4.7 Inspection and testing.** Delete this section of the UPC and see 14.5.2 NMAC permits and 14.5.3 NMAC inspections.

D. 313. Protection of piping, materials and structures. See this section of the UPC except as provided below:

(1) **313.6.** All residential hot water piping, including circulating supply and return piping shall be insulated to a minimum R-2. All commercial hot water piping, including circulating supply and return piping shall be insulated to a minimum R-4. A means of manual shut off must be installed on all circulating pumps.

(2) **313.13 Protection against damage.** Plastic materials for water service piping outside underground shall have a blue insulated copper tracer wire or other approved conductor installed adjacent to the piping. Access shall be provided to the tracer wire or the tracer wire shall terminate above ground at each end of the nonmetallic piping. The tracer wire shall be not less than 18 AWG and the insulation type shall be suitable for direct burial.

[14.8.2.11 NMAC - Rp, 14.8.2.11 NMAC, 1-28-11]

14.8.2.12 CHAPTER 4 PLUMBING FIXTURES AND FIXTURE FITTINGS: See this chapter of the UPC except as provided below.

A. 402.3.1 Nonwater urinals. Delete the text of this section and replace with the following: Nonwater urinals shall be listed and comply with the applicable standards in Table 14-1 and manufacturer's

specifications. Nonwater urinals shall have a barrier liquid sealant to maintain a trap seal. Nonwater urinals shall be located on the downstream side of a frequently used water-using fixture. Nonwater urinals shall permit the uninhibited flow of waste through the urinal to the sanitary drainage system. Nonwater urinals shall be cleaned and maintained in accordance with the manufacturer's instructions after installation. Where nonwater urinals are installed they shall have a water distribution line rough-in to the urinal location to allow for the installation of an approved backflow prevention device in the event of a retrofit.

B. 405.0 Prohibited fixtures.

(1) **405.1** See this section of the UPC.

(2) **405.2** See this section of the UPC.

(3) **405.3** See this section of the UPC and add the following: "the authority having jurisdiction reserves the right to require the contractor to install water and drain lines to be used for installation of a flush-type toilet should the chemical/dry toilet fail.

C. 411.12.3 Solar-ready stub outs. Water piping stub outs, sufficient for the installation and operation of a solar water heating system, shall be installed in the building mechanical room or designated solar equipment location. Such stub outs shall not be less than three-quarter inch (3/4") in diameter.

D. 412.0 Minimum number of required fixtures. See this section of the UPC except as provided below.

(1) **Section 412.1 Fixture count.** See this section of the UPC except delete the reference to "Table 4.1" and substitute: the 2009 New Mexico building code, Subsection B of 14.7.2.37 NMAC: Minimum Plumbing Facilities.

(2) **Section 412.2 Access to fixtures.** Delete this section of the UPC.

(3) **Section 412.3 Separate facilities.** Delete this section of the UPC.

(4) **Section 412.4. Fixture requirements for special occupancies.** See this section of the UPC except delete section 412.4.3.

(5) **Section 412.5 Facilities in mercantile and business occupancies serving customers.** Delete this section of the UPC.

(6) **Section 412.6 Toilet facilities for workers.** Delete this section of the UPC

E. Section 413.0 Fixtures and fixture fittings for persons with disabilities. Delete this section of the UPC.

F. Table A Occupant load factor. Delete this table of the UPC.

[14.8.2.12 NMAC - Rp, 14.8.2.12 NMAC, 1-28-11]

14.8.2.13 CHAPTER 5 WATER HEATERS PART I: See this chapter of the UPC except as provided below.

A. Section 501.0 General. See this section of the UPC except delete the following sentence: "The minimum capacity for water heaters shall be in accordance with the first hour rating listed in Table 5-1."

B. Section 508.14 Installation in residential garages. At the end of the last sentence in subsection (1) delete the following text: "unless listed as flammable vapor ignition resistant".

C. Section 509.3 Access to equipment on roofs.

(1) **509.3.1** See this section of the UPC.

(2) **509.3.2** See this section of the UPC except after the words "in height" add the following: except those designated as R-3 occupancies.

(3) **509.3.3** See this section of the UPC.

[14.8.2.13 NMAC - Rp, 14.8.2.13 NMAC, 1-28-11]

14.8.2.14 CHAPTER 5 WATER HEATERS PART II - SIZING OF VENTING SYSTEMS SERVING APPLIANCES EQUIPPED WITH DRAFT HOODS, CATEGORY I APPLIANCES, AND APPLIANCES LISTED FOR USE WITH TYPE B VENTS: See this chapter of the UPC.

[14.8.2.14 NMAC - Rp, 14.8.2.14 NMAC, 1-28-11]

14.8.2.15 CHAPTER 6 WATER SUPPLY AND DISTRIBUTION: See this chapter of the UPC except as provided below.

604.8 See this section of the UPC except delete the following text from the exception: "Plastic materials for water service piping outside underground shall have a blue insulated copper tracer wire or other approved conductor installed adjacent to the piping. Access shall be provided to the tracer wire or the tracer wire shall terminate above ground at each end of the nonmetallic piping. The tracer wire shall be not less than 18 AWG and the insulation type shall be suitable for direct burial".

[14.8.2.15 NMAC - Rp, 14.8.2.15 NMAC, 1-28-11]

14.8.2.16 CHAPTER 7 SANITARY DRAINAGE PART I - DRAINAGE SYSTEMS: See this chapter of the UPC except as provided below.

A. Section 704.0 Fixture connections (drainage).

(1) **704.1.** See this section of the UPC.

(2) **704.2.** See this section of the UPC.

(3) **704.3.** Delete the text this section of the UPC and substitute with

the following: pot sinks, scullery sinks, dishwashing sinks, silverware sinks, commercial dishwashing machines, silverware washing machines, and other similar fixtures shall not be connected directly to the drainage system. Such equipment or fixtures shall be drained by means of indirect waste pipes, as defined in chapter 2 of the UPC, and all wastes drained by them shall discharge through an airgap into an open floor sink or other approved type receptor that is properly connected to the drainage system. Food waste disposal units shall be connected directly to the drainage system. A floor drain shall be provided adjacent to the disposal unit, and the disposal unit shall be connected on the sewer side of the floor drain trap, provided that no other drainage line is connected between the floor drain waste connection and the disposal unit drain. The floor drain shall be trapped and vented as required in this code.

B. 712.2 Media. See this section of the UPC except add the following text to the end: When testing during weather conditions that could result in damage to piping, adequate provisions shall be made to protect such piping from freezing.
[14.8.2.16 NMAC - Rp, 14.8.2.16 NMAC, 1-28-11]

14.8.2.17 CHAPTER 7 SANITARY DRAINAGE PART II - BUILDING SEWERS: See this chapter of the UPC.
[14.8.2.17 NMAC - Rp, 14.8.2.17 NMAC, 1-28-11]

14.8.2.18 CHAPTER 8 INDIRECT WASTES: See this chapter of the UPC.
[14.8.2.18 NMAC - Rp, 14.8.2.18 NMAC, 1-28-11]

14.8.2.19 CHAPTER 9 VENTS: See this chapter of the UPC.
[14.8.2.19 NMAC - Rp, 14.8.2.19 NMAC, 1-28-11]

14.8.2.20 CHAPTER 10 TRAPS AND INTERCEPTORS: See this chapter of the UPC.
[14.8.2.20 NMAC - Rp, 14.8.2.20 NMAC, 1-28-11]

14.8.2.21 CHAPTER 11 STORM DRAINAGE: See this chapter of the UPC except as provided below. **1101.5 Subsoil drains. 1101.5.1** See this section of the UPC except after the words "Subsoil drains shall be provided" in the first sentence add the following text: "as required by the NMCBC, 14.7.2 NMAC".
[14.8.2.21 NMAC - Rp, 14.8.2.21 NMAC, 1-28-11]

14.8.2.22 CHAPTER 12 FUEL PIPING: See this chapter of the UPC except as provided below.

A. 1209.5.2.3 Delete this section of the UPC and substitute: Copper and brass pipe shall not be used. Threaded aluminum alloy pipe shall not be used with gases corrosive to such material.

B. 1209.5.3.2 Delete this section of the UPC and substitute: Copper and brass pipe shall not be used.

C. 1211.1.2 Protection against damage. Delete Subsection A of this section of the UPC and substitute the following: Underground piping systems shall be installed with a minimum of 18 inches (460 mm) of cover. Where a minimum of 18 inches (460 mm) of cover cannot be provided, the pipe shall be installed in conduit or bridged (shielded).

D. 1211.11.3 Emergency shutoff valves. See this section of the UPC except delete the following: "The emergency shutoff valves shall be plainly marked as such and their locations posted as required by the authority having jurisdiction" and replace with the following text: For purposes of isolation and safety, an additional gas shut off shall be installed downstream of the serving supplier gas meter prior to any distribution of gas into the gas piping system.

E. 1211.15 Electrical bonding and grounding. Delete this section of the UPC and see 14.10.4 NMAC the New Mexico electrical code (NMEC).

F. 1213.0 Liquefied petroleum gas facilities and piping. Delete this section of the UPC and substitute the following: Liquefied petroleum gas facilities shall comply with 19.15.40 NMAC, Liquefied Petroleum Gas Standards, and NMSA 1978 70-5-1 et seq., liquefied and compressed gasses.
[14.8.2.22 NMAC - Rp, 14.8.2.22 NMAC, 1-28-11]

14.8.2.23 CHAPTER 13 HEALTH CARE FACILITIES AND MEDICAL GAS AND VACUUM SYSTEMS PART I - SPECIAL REQUIREMENTS FOR HEALTH CARE FACILITIES: [Reserved]
[14.8.2.23 NMAC - Rp, 14.8.2.23 NMAC, 1-28-11]

14.8.2.24 CHAPTER 13 HEALTH CARE FACILITIES AND MEDICAL GAS AND VACUUM SYSTEMS PART II - MEDICAL GAS AND VACUUM SYSTEMS: See this chapter of the UPC except as provided below: **1320.3** Delete the text of this section of the UPC and replace with the following text: Shutoff valves shall be provided for the connection of future piping, and shall meet the following requirements:

A. be locked in a restricted area;

B. be locked, closed, and capped;

C. be identified in accordance with section 1323.0 (NFPA 99:5.1.4.10).

[14.8.2.24 NMAC - Rp, 14.8.2.24 NMAC, 1-28-11]

14.8.2.25 CHAPTER 14 MANDATORY REFERENCED STANDARDS: See this chapter of the UPC and add the following referenced standard: ARCSA - American rain catchment systems association.

[14.8.2.25 NMAC - Rp, 14.8.2.25 NMAC, 1-28-11]

14.8.2.26 CHAPTER 15 FIRESTOP PROTECTION: See this chapter of the UPC.

[14.8.2.26 NMAC - Rp, 14.8.2.26 NMAC, 1-28-11]

14.8.2.27 CHAPTER 16 NONPOTABLE WATER REUSE SYSTEMS PART I - GRAY WATER SYSTEMS. See this chapter of the UPC except as provided below.

A. 1601.0 Gray water systems - general. Delete this section of the UPC.

B. 1602.0 Definition. See this section of the UPC.

C. 1603.0 Permits. Delete this section of the UPC and see NMAC 14.5.2 permits and add the following: For permitting gray water systems outside the structure, see NMAC 20.7.3.810 and 20.7.3.811.

D. 1605.0 Inspection and testing. Delete this section of the UPC.

E. 1606.0 Procedure for estimating gray water discharge. Delete this section of the UPC.

F. 1607.0 Required area of subsurface irrigation/disposal fields. Delete this section of the UPC.

G. 1608.0 Determination of maximum absorption capacity. Delete this section of the UPC.

H. 1609.0 Holding tank construction. Delete this section of the UPC.

I. 1610.0 Gray water systems. See this section of the UPC.

J. 1611.0 Irrigation/disposal field construction. Delete this section of the UPC.

K. Table 16-1 Location of gray water system. Delete this section of the UPC.

L. Table 16-2 Design criteria of six typical soils. Delete this section of the UPC.

M. Table 16-3 (Metric)

design criteria of typical soils. Delete this section of the UPC.

[14.8.2.27 NMAC - Rp, 14.8.2.27 NMAC, 1-28-11]

14.8.2.28 CHAPTER 16 NONPOTABLE WATER REUSE SYSTEMS PART II - RECLAIMED WATER SYSTEMS. See this chapter of the UPC.

[14.8.2.28 NMAC - N, 1-28-11]

14.8.2.29 APPENDICIES.

See this chapter of the UPC and add the following to appendix L.1.3: All alternate plumbing systems must be pre-approved in writing by the authority having jurisdiction. [14.8.2.29 NMAC - Rp, 14.8.2.28 NMAC, 1-28-11]

HISTORY OF 14.8.2 NMAC:

Pre-NMAC History: The material in this part was derived from that previously filed with state records center and archives under: CIC MB 68-2, 1964 New Mexico Plumbing Code, filed 1/23/68.

CIC MB 70-8, 1970 Plumbing Code of New Mexico, filed 4/29/70.

CIC MB 71-4, 1970 Plumbing Code of New Mexico, filed 6/8/71.

CIC MB 74-9, 1973 Uniform Plumbing Code, filed 11/20/74.

CIC 76-1, 1976 Uniform Plumbing Code, filed 5/4/76.

CIC MB 80-5, 1979 Uniform Plumbing Code, filed 4/24/80.

MB-UPC-82-1, 1982 Uniform Plumbing Code, filed 11/4/82.

MB-UPC-85-1, 1985 Uniform Plumbing Code, filed 10/1/85.

MB-UPC-88-1, 1988 Uniform Plumbing Code, filed 12/15/88.

MB-UPC-91-1, 1991 Uniform Plumbing Code, filed 7/28/92.

CIC MB 68-3, 1966 New Mexico Gas Code, filed 1/23/68.

CIC MB 70-7, 1970 Natural Gas Code of New Mexico, filed 4/29/70.

CIC MB 71-3, 1970 Natural Gas Code of New Mexico, filed 6/8/71.

CIC-74-8, 1973 Uniform Mechanical Code, filed 11/20/74.

CIC 76-4, 1976 Uniform Mechanical Code, filed 11/24/76.

CID MB 80-3, 1979 Uniform Mechanical Code, filed 4/23/80.

MB-UMC-82-1, 1982 Uniform Mechanical Code, filed 11/4/82.

MB-UMC-85-1, 1985 Uniform Mechanical Code, filed 10/1/85.

MB-UMC-88-1, 1988 Uniform Mechanical Code, filed 12/15/88.

MB-UMC-91-1, 1991 Uniform Mechanical Code, filed 7/28/92.

CIC 77-3, 1976 New Mexico Uniform Solar Energy Code, 2/26/77.

CID MB-80-6, 1979 Uniform Solar Energy

Code, 4/24/80.

MB-USEC-82-1, 1982 Uniform Solar Energy Code, filed 11/4/82.

MB-USEC-85-1, 1985 Uniform Solar Energy Code, 12/23/85.

MB-USEC-88-1, 1988 Uniform Solar Energy Code, 12/15/88.

MB-USEC-91-1, 1991 Uniform Solar Energy Code, 7/28/92.

CIC-75-1, 1973 Uniform Swimming Pool Code, Section 1.7, 10/31/75.

CIC-76-3, 1976 Uniform Swimming Pool Code, 7/27/76.

CIC MB 80-4, 1979 Uniform Swimming Pool Code, filed 4/23/80.

MB-USPC-82-1, 1982 Uniform Swimming Pool Code, 11/4/82.

MB-USPS and HTC-85-1, 1985 Uniform Swimming Pool, Spa and Hot Tub Code, 12/23/85.

MB-USPS and HTC-88-1; 1988 Uniform Swimming Pool, Spa and Hot Tub Code, 12/15/88.

MB-USPS and HTC-91-1, 1991 Uniform Swimming Pool, Spa and Hot Tub Code, 7/28/92.

CID-MB-NMP&M 91-1, 1991 New Mexico Plumbing and Mechanical Code, 7/7/92.

CIC MB 68-2, 1964 New Mexico Plumbing Code, filed 1/23/68.

CIC MB 70-8, 1970 Plumbing Code of New Mexico, filed 4/29/70.

CIC MB 71-4, 1970 New Mexico Plumbing Code, filed 6/8/71.

CIC 74-9, 1973 Uniform Plumbing Code, filed 11/20/74.

CIC 76-1, 1976 Uniform Plumbing Code, filed 5/4/76.

CIC MB 80-5, 1979 Uniform Plumbing Code, filed 4/24/80.

MB-UPC-82-1, 1982 Uniform Plumbing Code, filed 11/4/82.

MB-UPC-85-1, 1985 Uniform Plumbing Code, filed 10/1/85.

MB-UPC-88-1, 1988 Uniform Plumbing Code, filed 12/15/88.

MB-UPC-91-1, 1991 Uniform Plumbing Code, filed 7/28/92.

History of Repealed Material:

14.8.2 NMAC, 2003 New Mexico Plumbing Code (filed 5-27-04) repealed 1-7-04.

14.8.2 NMAC, 2006 New Mexico (filed 8-16-07) repealed 1-28-11.

Other History:

CID-MB-NMP&M 91-1, 1991 New Mexico Plumbing and Mechanical Code, (filed 7/7/92), replaced by 14 NMAC 9.2, 1997 New Mexico Plumbing and Mechanical Code, effective 12-31-98.

14 NMAC 9.2, 1997 New Mexico Plumbing and Mechanical Code (filed 10-30-98) and MB-UPC-91-1, 1991 Uniform Plumbing Code, filed 7/28/92 both replaced by 14.8.2 NMAC, 2003 New Mexico Plumbing Code, effective 7-1-04.

14.8.2 NMAC, 2003 New Mexico Plumbing Code (filed 5-27-04) replaced by 14.8.2 NMAC, 2006 New Mexico Plumbing Code, effective 1-1-08.

14.8.2 NMAC, 2006 New Mexico (filed 8-16-07) replaced by 14.8.2 NMAC, 2009 New Mexico Plumbing Code, effective 1-28-11.

NEW MEXICO REGULATION AND LICENSING DEPARTMENT CONSTRUCTION INDUSTRIES DIVISION

TITLE 14 HOUSING AND CONSTRUCTION CHAPTER 9 MECHANICAL CODES PART 2 2009 NEW MEXICO MECHANICAL CODE

14.9.2.1 ISSUING AGENCY:

Construction Industries Division (CID) of the Regulation and Licensing Department.

[14.9.2.1 NMAC - Rp, 14.9.2.1 NMAC, 1-28-11]

14.9.2.2 SCOPE:

This rule applies to all contracting work performed in New Mexico on or after January 28, 2011, that is subject to the jurisdiction of CID, unless performed pursuant to a permit for which an application was received by CID before that date.

[14.9.2.2 NMAC - Rp, 14.9.2.2 NMAC, 1-28-11]

14.9.2.3 STATUTORY

AUTHORITY: NMSA 1978 Sections 60-13-9 and 60-13-44.

[14.9.2.3 NMAC - Rp, 14.9.2.3 NMAC, 1-28-11]

14.9.2.4 DURATION:

Permanent.

[14.9.2.4 NMAC - Rp, 14.9.2.4 NMAC, 1-28-11]

14.9.2.5 EFFECTIVE DATE:

January 28, 2011, unless a later date is cited at the end of a section.

[14.9.2.5 NMAC - Rp, 14.9.2.5 NMAC, 1-28-11]

14.9.2.6 OBJECTIVE:

The purpose of this rule is to establish minimum standards for the installation, repair, and replacement of mechanical systems including equipment, appliances, fixtures, fittings and appurtenances including ventilating, heating, cooling, air conditioning, and refrigeration systems, incinerators, and other energy related systems in New Mexico.

[14.9.2.6 NMAC - Rp, 14.9.2.6 NMAC, 1-28-11]

14.9.2.7 DEFINITIONS: See 14.5.1 NMAC, General Provisions and chapter 2 of the 2009 uniform mechanical code (UMC) as amended in 14.9.2.10 NMAC.
[14.9.2.7 NMAC - Rp, 14.9.2.7 NMAC, 1-28-11]

14.9.2.8 ADOPTION OF THE 2009 UNIFORM MECHANICAL CODE:

A. This rule adopts by reference the 2009 uniform mechanical code, as amended by this rule.

B. In this rule, each provision is numbered to correspond with the numbering of the 2009 uniform mechanical code.

C. This rule is to be applied in conjunction with 14.7.6 NMAC, the 2009 New Mexico energy conservation code.
[14.9.2.8 NMAC - Rp, 14.9.2.8 NMAC, 1-28-11]

14.9.2.9 CHAPTER 1 ADMINISTRATION.

A. Part 1 - General.

(1) 101.0 Title. Delete this section of the UMC and substitute: This code shall be known as the 2009 New Mexico mechanical code (NMMC).

(2) 102.0 Purpose. Delete this section of the UMC and see 14.9.2.6 NMAC.

(3) 103.0 Scope. Delete this section of the UMC and see 14.9.2.2 NMAC.

(4) 104.0 Application to existing mechanical systems. See this section of the UMC.

(5) 105.0 Alternate materials and methods of construction. Delete this section of the UMC and see 14.5.1 NMAC, General Provisions.

(6) 106.0 Modifications. Delete this section of the UMC and see 14.5.1 NMAC, General Provisions.

(7) 107.0 Tests. See this section of the UMC.

B. Part II - Organization and enforcement.

(1) 108.0 Powers and duties of the authority having jurisdiction.

(a) 108.1 General. Delete this section of the UMC and see CILA.

(b) 108.2 Deputies. Delete this section of the UMC and see CILA Sections 60-13-8 and 60-13-41 and NMSA 1978 Section 9-16-7.

(c) 108.3 Right of entry. Delete this section of the UMC and see CILA Section 60-13-42.

(d) 108.4 Stop orders. Delete this section of the UMC and see 14.5.2 NMAC, Permits.

(e) 108.5 Authority to disconnect utilities in emergencies. Delete this section of the UMC and see CILA Section 60-13-42.

(f) 108.6 Authority to condemn equipment. Delete this section of the UMC

and see 14.5.1 NMAC, General Provisions.

(g) 108.7 Connection after order to disconnect. Delete this section of the UMC and see 14.5.1 NMAC, General Provisions.

(h) 108.8 Liability. Delete this section of the UMC and see CILA Section 60-13-26.

(i) 108.9 Cooperation of other officials and officers. Delete this section of the UMC.

(2) 109.0 Unsafe equipment. Delete this section of the UMC and see 14.5.1 NMAC, General Provisions.

(3) 110.0 Board of appeals. Delete this section of the UMC and see 14.5.1 NMAC, General Provisions.

(4) 111.0 Violations. Delete this section of the UMC and see CILA Section 60-13-1 et seq., and 14.5.3 NMAC, Inspections.

C. Part III - Permits and inspections.

(1) 112.0 Permits. See 14.5.2 NMAC, Permits.

(2) 113.0 Application for permit. Delete this section of the UMC and see 14.5.2 NMAC, Permits.

(3) 114.0 Permit issuance. Delete this section of the UMC and see 14.5.2 NMAC, Permits.

(4) 115.0 Fees. Delete this section of the UMC and see 14.5.5 NMAC, Fees.

(5) 116.0 Inspections. Delete this section of the UMC and see 14.5.3 NMAC, Inspections.

(6) 117.0 Connection approval. Delete this section of the UMC and see 14.5.2 NMAC, Permits.

(7) Table 1.1 Mechanical permit fees. Delete this table from the UMC and see 14.5.5 NMAC, Fees.

D. 116.6 Reinspection. Delete this section of the UMC and see 14.5.5.14 (G) NMAC.

[14.9.2.9 NMAC - Rp, 14.9.2.9, NMAC, 1-28-11]

14.9.2.10 CHAPTER 2 DEFINITIONS: See this chapter of the UMC except as provided below.

A. 203.0 Authority having jurisdiction. Delete the text of this definition and substitute: The authority having jurisdiction is the construction industries division (CID) and the bureau chief of the mechanical and plumbing bureau of CID.

B. 214.0 Listed and listing. See this definition in the UPC and add the following provision at the end of the definition: A manufacturer may select the independent certification organization of its choice to certify its products, provided that the certification organization has been accredited by the American national standards institute (ANSI), or another

certification organization that CID has approved in writing.

[14.9.2.10 NMAC - Rp, 14.9.2.10 NMAC, 1-28-11]

14.9.2.11 CHAPTER 3 GENERAL REQUIREMENTS: See this chapter of the UMC except as provided below.

A. 305.0 Automatic control devices. See this section of the UMC and 14.7.6 NMAC.

B. 311.0 Heating and cooling air system. See this section of the UMC except as provided below.

(1) 311.1 Source. See this section of the UMC

(2) 311.2 Air filters. See this section of the UMC except delete the exception.

(3) 311.3 Prohibited source. See this section of the UMC except delete the text of location (5) and replace with the following: a closet, bathroom, laundry room, toilet room or kitchen and add location (7) to read as follows: where it will pick up objectionable odors, fumes, or flammable vapors.

[14.9.2.11 NMAC - Rp, 14.9.2.11 NMAC, 1-28-11]

14.9.2.12 CHAPTER 4 VENTILATION AIR SUPPLY: See this

chapter of the UMC and add the following material to section 405.0 Evaporative cooling systems: "Barometric relief dampers shall be installed on all new residential evaporative cooling systems to allow conditioned air from occupied spaces to exit the occupied space through a discreet opening in the ceiling, allowing the required air change to pass through the attic space to the outdoors. The authority having jurisdiction shall determine whether relief dampers shall be required on retrofits. Barometric relief dampers shall not be required on flat roof construction. Water saving or water management pumps shall be installed on all new and replaced evaporative coolers."

[14.9.2.12 NMAC - Rp, 14.9.2.12 NMAC, 1-28-11]

14.9.2.13 CHAPTER 5 EXHAUST SYSTEMS: See this chapter of the UMC except as provided below.

511.3 Replacement air. See this section of the UMC except add the following: windows and doors shall not be used for the purpose of providing replacement air. The exhaust and replacement air systems shall be connected by an electrical interlocking switch. When using equipment that is not listed for make-up air, a device to sense continued air movement within the replacement air plenum shall be installed initiating a complete system shut-down if air-flow is interrupted.

[14.9.2.13 NMAC - Rp, 14.9.2.13 NMAC,

1-28-11]

14.9.2.14 CHAPTER 6 DUCT SYSTEMS: See this chapter of the UMC except as follows.

A. Section 604.7. Location of ducts. Duct work shall not be installed in exterior walls or exterior to the thermal envelope unless the insulation of the duct work meets or exceeds the insulation requirement applicable to the exterior walls of the building.

B. Section 604.3 Factory-made air ducts. See this section of the UMC and add the following text to the end of the third paragraph: The use of flexible duct shall be limited to supply- and return-air run-outs of not more than 12 feet in length. Flexible duct shall not be used for the main supply or return-air plenum.

C. Section 605.0 Insulation of ducts. See this section of the UMC except as follows.

(1) Table 6-6 A. Minimum duct insulation R value cooling and heating only supply ducts and return ducts.

(a) Heating only ducts - Delete the entries for envelope criteria table 5-13 to 5-15 and substitute the following:

(i) exterior: R-8;

(ii) ventilated attic: R-6;

(iii) unvented attic w/ backloaded ceiling: R-6;

(iv) unvented attic w/ roof insulation: R-6;

(v) unconditioned space:

R-6;

(vi) indirectly conditioned space: R-3.5;

(vii) buried: none.

(b) Cooling only ducts - Delete the entries for envelope criteria table 5-7, 9, 11, 13, 16 and substitute the following:

(i) exterior: R-8 or the R-factor of insulation in the exterior wall on which the duct is located;

(ii) ventilated attic: R-6;

(iii) unvented attic w/ backloaded ceiling: R-6;

(iv) unvented attic w/ roof insulation: R-6;

(v) unconditioned space: R-6;

(vi) indirectly conditioned space: R3.5;

(vii) buried: none.

(2) Table 6-6 B Minimum duct insulation R value combined heating and cooling ducts. Delete the entries for envelope criteria table 5-13 and substitute the following:

(a) exterior: R-8;

(b) ventilated attic: R-6;

(c) unvented attic w/ backloaded ceiling: R-6;

(d) unvented attic w/ roof insulation: R-6;

(e) unconditioned space: R-6;
(f) indirectly conditioned space:

3.5

(g) buried: R-3.5.

(3) Delete exception (C).

D. Section 604.2. Metal ducts. See this section of the UMC and add the following to the last sentence of the second paragraph, "and be installed so as to support the weight of the concrete during encasement."

E. Section 609.0 Automatic shutoffs: See this section of the UMC and add the following to the exception: (6) Automatic shutoffs are not required on evaporative coolers that derive all of their air from outside the building. [14.9.2.14 NMAC - Rp, 14.9.2.14 NMAC, 1-28-11]

14.9.2.15 CHAPTER 7 COMBUSTION AIR: See this chapter of the UMC.

[14.9.2.15 NMAC - Rp, 14.9.2.15 NMAC, 1-28-11]

14.9.2.16 CHAPTER 8 CHIMNEYS AND VENTS: See this chapter of the UMC.

[14.9.2.16 NMAC - Rp, 14.9.2.16 NMAC, 1-28-11]

14.9.2.17 CHAPTER 9 INSTALLATION OF SPECIFIC EQUIPMENT: See this chapter of the UMC except as provided below.

A. Section 904.10.3 Access to equipment on roofs.

(1) 904.10.1 See this section of the UMC.

(2) 904.10.2 See this section of the UMC except after the words "in height" add the following: except those designated as R-3 occupancies.

B. 907.2 Installation. See this section of the UMC except add the following: Installation of gas logs in solid fuel burning fireplaces. Approved gas logs may be installed in solid fuel burning fireplaces, provided.

(1) The gas log is installed in accordance with the manufacturer's installation instructions

(2) If the fireplace is equipped with a damper, it shall be permanently blocked open by welding or cutting a hole of sufficient size to prevent spillage of combustion products into the room. On eight (8) inch and smaller flues, the damper shall be removed.

(3) The minimum flue passageway shall not be less than 1 square inch per 2000 Btu/h input.

(4) Gas logs shall be equipped with a pilot and listed safety shutoff valve.

(5) The use of flexible gas connections shall not be permitted within a

firebox, unless it is part of the listed gas log assembly.

(6) Factory built fireplaces shall be approved for installation of gas logs and provided with a means of installing the gas piping.

(7) All gas outlets located in a barbecue or fireplace shall be controlled by an approved separating valve located in the same room and outside the hearth, but not less than six (6) feet from such outlets.

C. Section 928.2 Location. See this section of the UMC except add the following to the end: unlisted wall furnaces shall be installed with clearances to combustible material of not less than eighteen (18) inches (460 mm).

[14.9.2.17 NMAC - Rp, 14.9.2.17 NMAC, 1-28-11]

14.9.2.18 CHAPTER 10 STEAM AND HOT WATER BOILERS: See this chapter of the UMC.

[14.9.2.18 NMAC - Rp, 14.9.2.18 NMAC, 1-28-11]

14.9.2.19 CHAPTER 11 REFRIGERATION: See this chapter of the UMC.

[14.9.2.19 NMAC - Rp, 14.9.2.19 NMAC, 1-28-11]

14.9.2.20 CHAPTER 12 HYDRONICS: See this chapter of the UMC except as provided below.

A. 1201.2.8.3 Pressure test. See this section of the UMC except delete the first sentence and substitute: piping shall be tested with a hydrostatic pressure or an air test of not less than 1.5 times operating pressure.

B. 1201.3.1.1. PEX tubing. See this section of the UMC except add the following: tubing shall be manufactured with an approved oxygen diffusion barrier.

[14.9.2.20 NMAC - Rp, 14.9.2.20 NMAC, 1-28-11]

14.9.2.21 CHAPTER 13 FUEL PIPING: See this chapter of the UMC except as provided below.

A. 1309.5.2.3 Copper and brass pipe shall not be used. Aluminum alloy pipe shall not be used with gases corrosive to such material.

B. 1312.1.2 Protection against damage. Delete the text of subsection (A) of this section of the UMC, cover requirements, and substitute: Underground piping systems shall be installed with a minimum of 18 inches (460 mm) of cover. Where 18 inches (460 mm) of cover cannot be provided, the pipe shall be installed in conduit or bridged (shielded).

C. 1312.9.3 Emergency shutoff valves. See this section of the UMC

except delete the following: the emergency shutoff valves shall be plainly marked as such and their locations posted as required by the authority having jurisdiction. See this section of the UMC except add the following to the end: For purposes of isolation and safety, an additional gas shut off shall be installed downstream of the serving supplier gas meter prior to any distribution of gas into the gas piping system

D. 1312.13 Electrical bonding and grounding. Delete this section of the UMC and see the New Mexico Electrical Code (NMEC).

E. 1315.0 Liquefied petroleum gas facilities and piping. Delete this section of the UPC and substitute the following: Liquefied petroleum gas facilities shall comply with 19.15.40 NMAC, liquefied petroleum gas standards, and NMSA 1978 70-5-1 et seq., liquefied and compressed gasses.

[14.9.2.21 NMAC - Rp, 14.9.2.21 NMAC, 1-28-11]

14.9.2.22 CHAPTER 14 PROCESS PIPING: See this chapter of the UMC.

[14.9.2.22 NMAC - Rp, 14.9.2.22 NMAC, 1-28-11]

14.9.2.23 CHAPTER 15 SOLAR SYSTEMS: See this chapter of the UMC.

[14.9.2.23 NMAC - Rp, 14.9.2.23 NMAC, 1-28-11]

14.9.2.24 CHAPTER 16 STATIONARY POWER PLANTS: See this chapter of the UMC.

[14.9.2.24 NMAC - Rp, 14.9.2.24 NMAC, 1-28-11]

14.9.2.25 CHAPTER 17 STANDARDS: See this chapter of the UMC and add the following: ACCA manual S -2003.

[14.9.2.25 NMAC - Rp, 14.9.2.25 NMAC, 1-28-11]

14.9.2.26 APPENDICIES: See this section of the UMC.

[14.9.2.26 NMAC - Rp, 14.9.2.26 NMAC, 1-28-11]

14.9.2.27 RESIDENTIAL ENERGY EFFICIENCY. See this chapter of the 2009 New Mexico energy conservation code and include the following.

A. 403.1 Controls (mandatory). See this section of the IECC and add the following exceptions to **sub-section 403.1.1 Programmable thermostat. Exceptions:** 1) where the home is registered in a performance-based certification program the requirement for a programmable thermostat shall be waived; 2) where approved alternative methods of

construction and materials are being used, programmable thermostats may be omitted.

B. 403.2 Ducts. See this section of the IECC except as follows.

(1) 403.2.1 Insulation. Delete the text of this section and replace with the following: Ducts shall be insulated to the following levels.

(a) Heating only ducts:

(i) exterior: R-8;

(ii) ventilated attic: R-6;

(iii) unvented attic w/ backloaded ceiling: R-6;

(iv) unvented attic w/ roof insulation: R-6;

(v) unconditioned space: R-6;

(vi) indirectly conditioned space: R3.5;

(vii) buried: none.

(b) Cooling only ducts:

(i) exterior: R-8 or the R-factor of insulation in the exterior wall on which the duct is located;

(ii) ventilated attic: R-6;

(iii) unvented attic w/ backloaded ceiling: R-6;

(iv) unvented attic w/ roof insulation: R-6;

(v) unconditioned space: R-6;

(vi) indirectly conditioned space: R3.5;

(vii) buried: none.

(c) Combined heating and cooling ducts:

(i) exterior: R-6;

(ii) ventilated attic: R-6;

(iii) unvented attic w/ backloaded ceiling: R-6;

(iv) unvented attic w/ roof insulation: R-6;

(v) unconditioned space: R-6;

(vi) indirectly conditioned space: R-3.5;

(vii) buried: R-3.5.

(2) 403.2.2 Sealing (mandatory).

Delete the second sentence of this section and replace with the following: joints, seams and penetrations of duct systems shall be made air-tight by means of mastics, gasketing, or other means in accordance with the mechanical code. Register penetrations shall be sealed to the wall or floor assemblies. Where HVAC duct penetrates a conditioned space, the duct penetration shall be sealed to the wall or floor assembly to prevent leakage into an unconditioned space.

(3) 403.2.3 Building cavities (mandatory). See this section of the IECC.

(4) 403.2.4 Installation of ducts. Add the following new section: all HVAC ducts or duct systems shall be installed in accordance with the New Mexico Mechanical Code Chapter 6 and 17.

(5) 403.2.5 Materials. Add the

following new section: materials for HVAC ducts or duct systems shall comply with the provisions set forth in Chapter 6 of the New Mexico Mechanical Code. Factory made ducts shall be installed in accordance with Chapter 6 of the New Mexico Mechanical Code and UMC Standard 6-5. The use of flexible duct shall be limited to supply- and return-air run-outs of not more than 12 feet in length. Flexible duct shall not be used for the principle supply- and return-air plenum.

C. 403.3. Piping insulation (mandatory). Delete the text of this section of the IECC and replace with the following: All plumbing and mechanical hot water piping systems shall be insulated to a minimum R-2. A means of manual disconnect must be installed on all circulating pumps.

D. 403.4 Circulating hot water systems (mandatory). Delete this section of the IECC with no replacement.

E. 403.5 Mechanical ventilation (mandatory). See this section of the IECC.

F. 403.6 Equipment sizing (mandatory). Delete the text of this section and replace with the following: heating and cooling equipment shall be sized in accordance with Chapter 9 of the New Mexico Mechanical Code, Section 902.0, and Chapter 17 of the New Mexico Mechanical Code, Standards table 17-1, Standards for Equipment and Materials. The calculations used to determine the equipment size for the residence must be included with the submittal documents and approved by the authority having jurisdiction.

G. 403.7 Systems serving multiple dwelling units (mandatory). Delete the text of this section and replace with the following: In lieu of Section 403 systems serving multiple dwelling units as defined in the New Mexico residential building code shall comply with Sections 503 and 504 of this code, Chapter 6 Duct Systems, and Chapter 17 Mandatory Referenced Standards of the 2009 New Mexico Mechanical Code. The calculations used to determine the equipment size for the residence must be included with the submittal documents and approved by the Authority Having Jurisdiction.

H. 403.8 Snow melt system controls and 403.9 Pools (mandatory). See these sections of the IECC.

I. 403.10 Fans. Add this new section as follows: ventilating fans shall meet *energy star* requirements. **Exception:** Ventilating fans in half bathrooms that do not contain a bathtub, shower, spa, or similar source of moisture are exempt from the *energy star* requirement.

[14.9.2.27 NMAC - N, 1-28-11]

14.9.2.28 COMMERCIAL ENERGY EFFICIENCY: See this chapter

of the 2009 New Mexico energy conservation code and include the following.

A. 503.1 General. See this section of the IECC.

B. 503.2 Provisions applicable to all mechanical systems (mandatory). See this section of the IECC except as provided below.

(1) 503.2.1 Calculation of heating and cooling loads. See this section of the IECC and add the following sentence after the first sentence: The design loads shall account for the building envelope, lighting, ventilation and occupancy loads based on the project design.

(2) 503.2.2 Equipment and system sizing. Delete the text of this section and replace with the following: The output capacity of the heating and cooling equipment and systems shall not exceed the loads calculated in accordance with Section 503.2.1. A single piece of equipment providing both heating and cooling must satisfy this provision for one function with the capacity for the other function and be as small as possible within available equipment options. Standby equipment and systems shall be provided with controls and devices that allow such systems or equipment to operate automatically only when the primary equipment is not operating. **Exception:** Multiple units of the same equipment type with combined capacities exceeding the design load and provided with controls that have the capability to sequence the operation of each unit based on load.

(3) 503.2.3 HVAC equipment performance requirements. See this section of the IECC.

(4) 503.2.4 HVAC system controls. Delete the text of sections 503.2.4 through 503.2.4.3.2 of the IECC and replace with the following.

(a) 503.2.4.1 Zone thermostat controls.

(i) 503.2.4.1.1 General.

The supply of heating and cooling energy to each zone shall be individually controlled by thermostatic controls responding to temperature within the zone. For the purposes of Section 503.2.4.1, a dwelling unit shall be permitted to be considered a single zone. (ASHRAE 90.1: 6.4.3.1.1). **Exceptions:** Independent perimeter systems that are designed to offset only building envelope loads shall be permitted to serve one or more zones also served by an interior system provided: **1)** the perimeter system includes at least one thermostatic control zone for each building exposure having exterior walls facing only one orientation for 50 contiguous feet or more; **2)** the perimeter system heating and cooling supply is controlled by a thermostatic control(s) located within the zones(s) served by the system. Exterior walls are considered to have different orientations if the directions

they face differ by more than 45 degrees.

(ii) 503.2.4.1.2 Dead band. Where used to control both heating and cooling, zone thermostatic controls shall be capable of providing a temperature range or dead band of at least 5 degrees fahrenheit within which the supply of heating and cooling energy to the zone is shut off or reduced to a minimum. (ASHRAE 90.1: 6.4.3.1.2). **Exceptions:** **a)** thermostats that require manual changeover between heating and cooling modes; **b)** special occupancy or special applications where wide temperature ranges are not acceptable (such as retirement homes, process applications, museums, some areas of hospitals) and are approved by the authority having jurisdiction.

(b) 503.2.4.2 Setpoint overlap restriction. Where heating and cooling to a zone are controlled by separate zone thermostatic controls located within the zone, means (such as limit switches, mechanical stops, or, for DDC systems, software programming) shall be provided to prevent the heating setpoint from exceeding the cooling set point minus any applicable proportional band. (ASHRAE 90.1: 6.4.3.2).

(c) 503.2.4.3 Off-hour controls. HVAC systems shall have the off-hour controls required by Sections 503.2.4.3.1 through 503.2.4.3.4. (ASHRAE 90.1: 6.4.3.3). **Exceptions:** **1)** HVAC systems intended to operate continuously; **2)** HVAC systems having a design heating capacity and cooling capacity less than 15,000 Btu/h that are equipped with readily accessible manual ON/ OFF controls.

(i) 503.2.4.3.1 Automatic shutdown. HVAC systems shall be equipped with at least one of the following: **1)** controls that can start and stop the system under different time schedules for seven different day-types per week, are capable of retaining programming and time setting during loss of power for a period of at least ten hours, and include an accessible manual override, or equivalent function, that allows temporary operation of the system for up to two hours; **2)** an occupant sensor that is capable of shutting the system off when no occupant is sensed for a period of up to 30 minutes; **3)** a manually operated timer capable of being adjusted to operate the system for up to two hours; **4)** an interlock to a security system that shuts the system off when the security system is activated. (ASHRAE 90.1: 6.3.3.1). **Exception:** residential occupancies may use controls that can start and stop the system under two different time schedules per week.

(ii) 503.2.4.3.2 Setback controls. Heating systems located in climate zones 2-8 shall be equipped with controls that have the capability to automatically restart and temporarily operate the system as required to maintain zone temperatures above a heating setpoint adjustable down

to 55 degrees fahrenheit or lower. Cooling systems located in climate zones 1b, 2b, 3b, 4b, and 5b shall be equipped with controls that have the capability to automatically restart and temporarily operate the system as required to maintain zone temperatures below a cooling setpoint adjustable up to 90 degrees fahrenheit or higher or to prevent high space humidity levels. (ASHRAE 90.1: 6.4.3.3.2). **Exception:** radiant floor and ceiling heating systems.

(iii) 503.2.4.3.3 Optimum start controls. Individual heating and cooling air distribution systems with a total design supply air capacity exceeding 10,000 cfm, served by one or more supply fans shall have optimum start controls. The control algorithm shall, as a minimum, be a function of the difference between space temperature and occupied setpoint and the amount of time prior to scheduled occupancy. (ASHRAE 90.1: 6.4.3.3.3).

(iv) 503.2.4.3.4 Zone isolation. HVAC systems serving zones that are intended to operate or be occupied nonsimultaneously shall be divided into isolation areas. Zones may be grouped into a single isolation area provided it does not exceed 25,000 ft² of conditioned floor area nor include more than one floor. Each isolation area shall be equipped with isolation devices capable of automatically shutting off the supply of conditioned air and outdoor air to and exhaust air from the area. Each isolation area shall be controlled independently by a device meeting the requirements of Section 503.2.4.3.1, automatic shutdown. For central systems and plants, controls and devices shall be provided to allow stable system and equipment operation for any length of time while serving only the smallest isolation area served by the system or plant. (ASHRAE 90.1: 6.4.3.3.4). **Exceptions:** isolation devices and controls are not required for the following: **1)** exhaust air and outdoor air connections to isolation zones when the fan system to which they connect is 5000 cfm and smaller; **2)** exhaust airflow from a single isolation zone of less than 10% of the design airflow of the exhaust system to which it connects; **3)** zones intended to operate continuously or intended to be inoperative only when all other zones are inoperative

(v) 503.2.4.3.5 Automatic start capabilities. Controls designed to automatically adjust the start time of an HVAC system each day to allow for automatically bringing the space to desired occupied temperature levels before scheduled occupancy shall be provided on each system.

(d) 503.2.4.4 Shutoff damper controls. See this section of the IECC except delete the three exceptions and replace with the following exception: exception: gravity (nonmotorized) dampers having a maximum leakage rate of 20 cfm per square foot (34

L/s • C m2) at 1.0 inch water gauge (w.g.) (1250 Pa) when tested in accordance with AMCA 500D are permitted to be used where the design exhaust capacity does not exceed 300 cfm or barometric relief dampers integral with manufacturer's equipment or by engineered systems.

(e) 503.2.4.5 Snow melt system controls. See this section of the IECC.

(f) 503.2.4.6 Freeze protection. Freeze protection systems shall include automatic controls capable of shutting off the systems when outdoor air temperatures are above 40 degrees fahrenheit or when the conditions of the protected fluid will prevent freezing. Freeze protection systems shall be installed as allowed under alternate materials and methods of installation and in accordance with currently recognized engineering practices.

(5) 503.2.5 Ventilation. See this section of the IECC except as provided below.

(a) 503.2.5.1 Demand or CO2 controlled ventilation. Demand control ventilation (DCV) or CO2 controlled ventilation is required for spaces larger than 500 ft² (50m²) and with an average occupant load of 25 people per 1000 ft² (93 m²) of floor area and served by systems with one or more of the following: **1)** An air-side economizer; **2)** Automatic modulating control of the outdoor air damper; or **3)** A design outdoor airflow greater than 3,000 cfm (1400 L/s). **Exceptions:** **a)** systems with energy recovery complying with Section 503.2.6; **b)** multiple-zone systems without direct digital control of individual zones communicating with a central control panel; **c)** system with a design outdoor airflow less than 1,200 cfm (600 L/s); **d)** spaces where the supply airflow rate minus any makeup or outgoing transfer air requirement is less than 1,200 cfm (600 L/s); **e)** building spaces where the primary ventilation needs are for process loads.

(b) 503.2.5.2 Kitchen hoods. Individual commercial kitchen exhaust hoods shall be provided with makeup air sized for at least 50% of exhaust air volume that is unheated or heated to no more than 60 degrees fahrenheit and uncooled or cooled without the use of mechanical cooling. **Exceptions:** **1)** where hoods are used to exhaust ventilation air that would otherwise exfiltrate or be exhausted by other fan systems; **2)** certified grease extractor hoods that require a face velocity no greater than 60 fpm.

(6) 503.2.6 Energy recovery ventilation systems. Delete the text of this section and replace with the following: Individual fan systems that have both a design supply air capacity of 3,000 cfm (1.42 m³/s) or greater and a minimum outside air supply of 50 percent or greater of the design supply air quantity shall have an energy recovery

system that provides a change in the enthalpy of the outdoor air supply of 50 percent or more of the difference between the outdoor air and return air at design conditions. Provision shall be made to bypass or control the energy recovery system to permit cooling with outdoor air where cooling with outdoor air is required. **Exceptions:** **1)** laboratory systems; **2)** systems serving spaces that are not cooled and that are heated to less than 60 degrees fahrenheit; **3)** systems exhausting toxic, flammable, paint, or corrosive fumes or dust; **4)** commercial kitchen hoods used for collecting and removing grease vapors and smoke; **5)** where more than 60 percent of the outdoor air heating energy is provided from site recovered or site-solar energy; **6)** where the largest exhaust source is less than 75 percent of the design outdoor airflow; **7)** systems requiring dehumidification that employ energy recovery in series with the cooling coil.

(7) 503.2.7 Duct and plenum insulation and sealing and 503.2.8 Piping insulation. Delete these sections of the IECC and see section 14.8.2.11D(1) of the New Mexico mechanical code.

(8) 503.2.9 Mechanical systems test and balancing requirements. Delete the text of this section and replace with the following: mechanical systems test and balancing shall be in accordance with the provisions of Section 503.2.9.1 through 503.2.9.3.4. **Exception:** buildings less than 4,000 sq. ft.

(a) 503.2.9.1 System test and balancing. Delete the text of this section and replace with the following: the construction documents shall require test and balancing in accordance with this section. In addition to test and balancing prerequisites, construction documents shall be permitted to refer to equipment specifications for further requirements. The building official shall be provided test and balancing documentation for review purposes.

(i) 503.2.9.1.1 Test and balance plan. Add this new sub-section as follows; test and balancing shall be performed for all HVAC systems in accordance with level 1, basic commissioning of the SMACNA HVAC systems commissioning manual; note: see appendix C of the uniform mechanical code for additional information on HVAC system testing. A test and balancing plan shall be prepared for all systems as described in Section 503.2.1 and shall include as a minimum the following items: **1)** a detailed explanation of the building's project requirements for mechanical design; **2)** a narrative describing the activities that will be accomplished during each phase of test and balancing, including guidance on who accomplishes the activities and how they are completed; **3)** equipment and systems to be tested, including the extent of tests; **4)** functions to be tested (for

example calibration, economizer control, etc.); **5)** conditions under which the test shall be performed (for example winter and summer design conditions, full outside air, etc.); **6)** measurable criteria for acceptable performance; **7)** a building purge of volatile organic compounds and other toxins, or air sampling and monitoring to ensure the a building has reached an acceptable level of air quality by time of construction completion shall be specified by the appropriate design/construction professional; **8)** a final system test and balance within 90 days of occupancy and subsequent to building purge; **9)** a line-item completion schedule for inspection review; **10)** an engineer's certificate of acceptance;

(ii) 503.2.9.1.2 Systems adjusting and balancing. Add this new sub-section as follows: All HVAC systems shall be balanced in accordance with generally accepted engineering standards. Air and water flow rates shall be measured and adjusted to deliver final flow rates within 10% of design rates. Test and balance activities shall include as a minimum the following items: **1)** air systems balancing: each supply air outlet and zone terminal device shall be equipped with means for air balancing; discharge dampers are prohibited on constant volume fans and variable volume fans with motors 5 hp (9.3 kW) and larger; air systems shall be balanced in a manner to first minimize throttling losses, then for fans with system power of greater than 1 hp; fan speed shall be adjusted to meet design flow conditions. **Exception:** fans with fan motors of 1 hp or less; **2)** hydronic systems balancing: individual hydronic heating and cooling coils shall be equipped with means for balancing and pressure test connections; hydronic systems shall be proportionately balanced in a manner to first minimize throttling losses, then the pump impeller shall be trimmed or pump speed shall be adjusted to meet design flow conditions; each hydronic system shall have either the ability to measure pressure across the pump, or test ports at each side of each pump. **Exceptions:** **a)** pumps with pump motors of 2 hp or less; **b)** when throttling results in no greater than five percent of the nameplate horsepower draw above that required if the impeller were trimmed.

(iii) 503.2.9.1.3 Functional performance testing. Add this new sub-section as follows: Equipment functional performance testing shall be in accordance with Section 503.2.9.1.3.1. Functional testing of HVAC controls shall be in accordance with Section 503.2.9.1.3.2 and shall be specified by the appropriate design/construction professional. **1) 503.2.9.1.3.1 Equipment functional performance testing.** Add this new sub-section as follows: Equipment functional performance testing shall demonstrate the correct installation and

operation of components, systems, and system-to-system interfacing relationships in accordance with approved plans and specifications. This demonstration is to prove the operation, function, and maintenance serviceability for each of the systems. Testing shall include all modes of operation, including: **a)** all modes as described in the sequence of operation; **b)** redundant or automatic back-up mode; **c)** performance of alarms; and **d)** mode of operation upon a loss of power and restored power. **2) 503.2.9.1.3.2 Controls functional performance testing.** Add this new sub-section as follows: HVAC control systems shall be tested to document that control devices, components, equipment, and systems are calibrated, adjusted and operate in accordance with approved plans and specifications. Sequences of operation shall be functionally tested to document they operate in accordance with approved plans and specifications.

(iv) 503.2.9.1.4 Test and balance report. Add this new sub-section as follows: A report of test and balancing procedures and results shall be completed and provided to the building owner. The report shall be identified as "test and balance report" and shall identify: **a)** itemization of deficiencies found during testing required by this section which have not been corrected at the time of report preparation and the anticipated date of correction; **b)** deferred tests which cannot be performed at the time of report preparation due to climatic conditions; **c)** climatic conditions required for performance of the deferred tests, and the anticipated date of each deferred test.

(b) 503.2.9.2 Delete the text and title of this section and replace with the following: **Acceptance.** Buildings, or portions thereof, required to comply with this section shall not be issued a final certificate of occupancy until such time that the code official has received a certificate of acceptance per Section 503.2.9.1.1 item 10 from the engineer of record that states they have received the preliminary test and balance report as required by Section 503.2.9.1.4. At the request of the code official, a copy of the preliminary test and balance report shall be made available for review. **Exception:** in cases where a third party is contracted to complete the testing and balancing, a certificate of occupancy may be issued prior to receipt of test and balance report

(c) 503.2.9.3 Delete the text and title of this section and replace with the following: **Completion requirements.**

(i) 503.2.9.3.1 Drawings. Add this new sub-section to the IECC. Construction documents shall include as a minimum the location and performance data on each piece of equipment.

(ii) 503.2.9.3.2 Manuals. Add this new sub-section to the IECC. An operating manual and a maintenance manual shall be in accordance with industry-accepted standards and shall include, at a minimum, the following: **1)** capacity (input and output) and required maintenance actions for each piece of equipment; **2)** operation and maintenance manuals for each piece of equipment; **3)** manufacturer's operation manuals and maintenance manuals for each piece of equipment requiring maintenance, except equipment not furnished as part of the project. Required routine maintenance actions shall be clearly identified; **4)** names and addresses of at least one service agency; **5)** HVAC controls system maintenance and calibration information, including wiring diagrams, schematics, and control sequence descriptions. Desired or field-determined setpoints shall be permanently recorded on control drawings at control devices or, for digital control systems, in programming comments; **6)** a complete narrative of how each system is intended to operate, including suggested recommended setpoints.

(iii) 503.2.9.3.3 System balancing report. Add this new sub-section to the IECC. A written report describing the activities and measurements completed in accordance with Section 503.2.9.1.2.

C. 503.3 HVAC systems and equipment (prescriptive). See this section of the IECC except as provided below: Delete the second paragraph of this section with no replacement.

(1) 503.3.1 Economizers. Delete the text of this section and replace with the following: Each cooling system that has a fan shall include either an air or water economizer meeting the requirements of Sections 503.3.1.1 through 503.3.3. **Exceptions:** economizers are not required for the systems listed below: **1)** packaged rooftop equipment with less than 60,000 Btu cooling; **2)** individual fan-cooling units with a supply capacity less than the minimum listed in table 503.3.1(1); **3)** systems that require filtration equipment in order to meet the minimum ventilation requirements of Chapter 4 of the New Mexico Mechanical Code; **4)** where more than 25% of the air designed to be supplied by the system is to spaces that are designed to be humidified above 35 degrees fahrenheit dew-point temperature to satisfy process needs; **5)** systems that include a condenser heat recovery system required by Section 503.4.6; **6)** systems that serve residential spaces where the system capacity is less than five times the requirement listed in table 503.3.1(1); **7)** systems that serve spaces whose sensible cooling load at design conditions, excluding transmission and infiltration loads, is less than or equal to transmission and infiltration losses at an outdoor temperature of 60 degrees fahrenheit; **8)** systems expected to operate less than 20 hours per week; **9)** where the use of outdoor air for cooling will affect supermarket open refrigerated casework systems; **10)** where the cooling *efficiency* meets or exceeds the *efficiency* requirements in table 503.3.1(2).

(a) 503.3.1.1 Air economizers. Add this new sub-section as follows: Air economizers shall be designed in accordance with Sections 503.3.1.1.1 through 503.3.1.1.4.

(i) 503.3.1.1.1 Design capacity. Add this new sub-section as follows: Air economizer systems shall be capable of modulating *outdoor air* and return air dampers to provide up to 100% of the design supply air quantity as *outdoor air* for cooling. **1) 503.3.1.1.1.1 System control.** Air economizer control systems shall be wired to ensure economizer will operate when mechanical cooling is enabled. The cooling unit shall utilize a staged control system that also allows for the economizer to operate when the unit compressor is not under operation.

(ii) 503.3.1.1.2 Control signal. Add this new sub-section as follows: Economizer dampers shall be capable of being sequenced with the mechanical cooling equipment and shall not be controlled by only mixed air temperature. **Exception:** the use of mixed air temperature limit control shall be permitted for systems controlled from space temperature (such as single-zone systems).

(iii) 503.3.1.1.3 High-limit shutoff. Add this new sub-section and tables as follows: All air economizers shall be capable of automatically reducing *outdoor air* intake to the design minimum *outdoor air* quantity when *outdoor air* intake will no longer reduce cooling energy usage. High-limit shutoff control types for specific climates shall be chosen from table 503.3.1.1.3(1). High-limit shutoff control settings for these control types shall be those listed in table 503.3.1.1.3(2).

Climate Zones	Allowed Control Types	Prohibited Control Types
1b, 2b, 3b, 3c, 4b, 4c, 5b, 5c, 6b, 7, 8	Fixed dry bulb Differential dry bulb Electronic enthalpy ^a Differential enthalpy Dew-point and dry-bulb temperatures	Fixed enthalpy
1a, 2a, 3a, 4a	Fixed dry bulb Fixed enthalpy Electronic enthalpy ^a Differential enthalpy Dew-point and dry-bulb temperatures	Differential dry bulb
All other climates	Fixed dry bulb Differential dry bulb Fixed enthalpy Electronic enthalpy ^a Differential enthalpy Dew-point and dry-bulb temperatures	

a. Electronic enthalpy controllers are devices that use a combination of humidity and dry-bulb temperature in their switching algorithm.

Device Type	Climate	Required High Limit (Economizer Off When):	
		Equation	Description
Fixed dry bulb	1b, 2b, 3b, 3c, 4b, 4c, 5b, 5c, 6b, 7, 8,	$T_{OA} > 75^{\circ}\text{F}$	Outdoor air temperature exceeds 75°F
	5a, 6a, 7a	$T_{OA} > 70^{\circ}\text{F}$	Outdoor air temperature exceeds 70°F
	All other zones	$T_{OA} > 65^{\circ}\text{F}$	Outdoor air temperature exceeds 65°F
Differential dry bulb	1b, 2b, 3b, 3c, 4b, 4c, 5a, 5b, 5c, 6a, 6b, 7, 8	$T_{OA} > \text{TRA}$	Outdoor air temperature exceeds return air temperature
Fixed enthalpy	All	$h_{OA} > 28 \text{ Btu/lb}^a$	Outdoor air enthalpy exceeds 28 Btu/lb of dry air ^a
Electronic Enthalpy	All	$(T_{OA}, \text{RH}_{OA}) > A$	Outdoor air temperature/RH exceeds the "A" setpoint curve ^b
Differential enthalpy	All	$h_{OA} > h_{RA}$	Outdoor air enthalpy exceeds return air enthalpy
Dew-point and dry bulb temperatures	All	$DP_{OA} > 55^{\circ}\text{F}$ or $T_{OA} > 75^{\circ}\text{F}$	Outdoor air dry bulb exceeds 75°F or outside dew point exceeds 55°F (65 gr/lb)

a. At altitudes substantially different than sea level, the Fixed Enthalpy limit shall be set to the enthalpy value at 75 degrees fahrenheit and 50 percent relative humidity. As an example, at approximately 6000 ft elevation the fixed enthalpy limit is approximately 30.7 Btu/lb.
 b. Setpoint "A" corresponds to a curve on the psychometric chart that goes through a point at approximately 75 degrees fahrenheit and 40 percent relative humidity and is nearly parallel to dry-bulb lines at low humidity levels and nearly parallel to enthalpy lines at high humidity levels.

(iv) 503.3.1.1.4 Relief of excess outdoor air. Add this new sub-section as follows: Systems shall provide a means to relieve excess *outdoor air* during air economizer operation to prevent over-pressurizing the building. The relief air outlet shall be located to avoid recirculation into the building.

(b) 503.3.1.2 Water economizers. Water economizer systems for complex HVAC equipment shall be designed in accordance with Sections 503.3.2.1.1 through 503.3.2.2.

(i) 503.3.1.2.1 Design capacity. Add this new sub-section as follows: Water economizer systems shall be capable

of cooling supply air by indirect evaporation and providing up to 100% of the expected system cooling load at *outdoor air* temperatures of 50 degrees fahrenheit dry bulb/45 degrees wet bulb and below. **Exception:** systems in which a water economizer is used and where dehumidification requirements cannot be met using outdoor air temperatures of 50 degrees fahrenheit dry bulb/ 45 degrees fahrenheit wet bulb must satisfy 100 percent of the expected system cooling load at 45 degrees fahrenheit dry bulb/45 degrees fahrenheit wet bulb.

(ii) 503.3.1.2.2 Maximum pressure drop. Add this new sub-section as follows: Pre-cooling coils and water-to-water heat exchangers used as part of a water economizer system shall either have a water-side pressure drop of less than 15 ft of water or a secondary loop shall be created so that the coil or heat exchanger pressure drop is not seen by the circulating pumps when the system is in the normal cooling (non-economizer) mode.

(2) 503.3.2 Integrated economizer control. Delete the text of this section and replace with the following. Economizer systems shall be integrated with the mechanical cooling system and be capable of providing partial cooling even when additional mechanical cooling is required to meet the remainder of the cooling load. **Exceptions: 1)** direct expansion systems that include controls that reduce the quantity of *outdoor air* required to prevent coil frosting at the lowest step of compressor unloading, provided this lowest step is no greater than 25 percent of the total system capacity; **2)** individual direct expansion units that have a rated cooling capacity less than 54,000 Btu/h and use non-integrated economizer controls that preclude simultaneous operation of the economizer and mechanical cooling; **3)** systems in climate zones 1A, 1B, 2A, 7, 8.

(3) 503.3.3 Economizer heating system impact. Add this new sub-section as follows: HVAC system design and economizer controls shall be such that economizer operation does not increase the building heating energy use during normal operation. **Exception:** economizers on VAV systems that cause zone level heating to increase due to a reduction in supply air temperature.

D. 503.4 Complex HVAC systems and equipment (prescriptive). See this section of the IECC except as provided below.

503.4.2 Variable air volume (VAV) fan control. Delete the text of this section and replace with the following three paragraphs: **1)** Individual VAV fans with motors of 7.5 horsepower (5.6 kW) or greater shall be: **a)** Driven by a mechanical or electrical variable speed drive; **b)** Driven by a vane-axial fan with variable-pitch blades; or **c)** The fan shall have controls or devices that will result in fan motor demand of no more than 30 percent of their design wattage at 50 percent of design airflow when static pressure set point equals one-third of the total design static pressure, based on manufacturer’s certified fan data. **2)** Static pressure sensors used to control VAV fans shall be placed in a position such that the controller setpoint is no greater than one-third the total design fan static pressure, except for systems with direct digital control. If this results in the sensor being located downstream of major duct splits, multiple sensors shall be installed in each major branch to ensure the static pressure can be maintained in each branch. **3)** For systems with direct digital control of individual *zone* boxes reporting to the central control panel, the static pressure set point shall be reset based on the *zone* requiring the most pressure, i.e., the set point is reset lower until one *zone* damper is nearly wide open.

[14.9.2.28 NMAC - N, 1-7-11]

14.9.2.29 CHAPTER 5 - COMMERCIAL ENERGY EFFICIENCY: Section 504 Service Water Heating (Mandatory). See this section of the IECC.

[14.9.2.29 NMAC - N, 1-28-11]

14.9.2.30 CHAPTER 5 - COMMERCIAL ENERGY EFFICIENCY: Replace **section 506** of the IECC with the following: **Additional efficiency package options. NOTE: The provisions of section 506 are deferred until January 1, 2013.**

A. 506.1 Requirements. Buildings shall comply with at least one of the following: **1)** 506.2 efficient HVAC performance requirement; **2)** 506.3 efficient lighting system requirement; **3)** 506.4 on-site supply of renewable energy. At the time of plan submittal, the *code official* shall be provided, by the permittee, documentation designating the intent to comply with Section 506.2, 506.3 or 506.4 in their entirety. Individual tenant spaces must comply with either 506.2 or 506.3 in their entirety unless documentation can be provided that demonstrates compliance with Section 506.4 for the entire building.

B. 506.2 Efficient mechanical equipment. Equipment shall meet the minimum efficiency requirements of tables 506.2(1) through 506.2(7) in addition to the requirements in Section 503. This section shall only be used where an equipment efficiency option is available.

Equipment Type	Size category	Subcategory or rating condition	Required efficiency ^a
Air conditioners, Water and evaporatively cooled	≥ 760,000 Btu/h		For zones 1 to 5: 10.2 EER ^b , 11.0 IPLV ^b For zones 6 to 8: 9.7 EER ^b , 11.0 IPLV ^b
		Split system and single package	14.0 EER
Air conditioners, Air cooled	< 65,000 Btu/hd	Split system	For zones 1 to 5: 15.0 SEER, 12.5 EER For zones 6 to 8: 14 SEER, 12 EER
		Single package	For zones 1 to 5: 15.0 SEER, 12.0 EER For zones 6 to 8: 14.0 SEER 11.6 EER
	≥ 65,000 Btuh/h and < 240,000 Btu/h	Split system and single package	For zones 1 to 5: 12.0 EER ^b , 12.4 IPLV ^b For zones 6 to 8: 11.5 EER ^b , 11.9 IPLV ^b
	≥ 240,000 Btu/h and < 760,000 Btu/h	Split system and single package	For zones 1 to 5: 10.8 EER ^b , 12.0 IPLV ^b For zones 6 to 8: 10.5 EER ^b , 10.9 IPLV ^b

For SI: 1 British thermal unit per hour = 0.2931 W.
 a. IPLVs are only applicable to equipment with capacity modulation.
 b. Deduct 0.2 from the required EERs and IPLVs for units with a heating section other than electric resistance heat.

Table 506.2(2) Unitary and applied Heat Pumps, Electrically Operated, Efficiency Requirements			
Equipment type	Size category	Subcategory or rating condition	Required efficiency ^a
Air cooled (Cooling mode)	< 65,000 Btu/h	Split system	For zones 1 to 5: 15.0 SEER, 12.5 EER For zones 6 to 8: 14.0 SEER, 12.0 EER
		Single package	For zones 1 to 5: 15.0 SEER, 12.0 EER For zones 6 to 8: 14.0 SEER, 11.6 EER
	≥ 65,000 Btu/h and < 240,000 Btu/h	Split system and single package	For zones 1 to 5: 12.0 SEER, 12.4 EER For zones 6 to 8: 11.5 EER ^b , 11.9 IPLV ^b
	≥ 240,000 Btu/h	Split system and single package	For zones 1 to 5: 12.0 SEER, 12.4 EER For zones 6 to 8: 10.5 EER ^b , 10.9 IPLV ^b
Water SOURCES (Cooling mode)	< 135,000 Btu/h	85°F entering water	14.0 EER
Air cooled (Heating mode)	< 65,000 Btu/h (Cooling capacity)	Split system	For zones 1 to 5: 9.0 HSPF For zones 6 to 8: 8.5 HSPF
		Single package	For zones 1 to 5: 8.5 HSPF For zones 6 to 8: 8.0 HSPF
	≥ 65,000 Btu/h and < 135,000 Btu/h (Cooling capacity)	47°F db/43°F wb outdoor air	3.4 COP
		17°F db/15°F wb outdoor air	2.4 COP
	≥ 135,000 Btu/h (Cooling capacity)	47°F db/43°F wb outdoor air	3.2 COP
		77°F db/15°F wb outdoor air	2.1 COP
Water SOURCES (Heating mode)	< 135,000 Btu/h (Cooling capacity)	70°F entering water	4.6 COP

For SI: °C = ((°F) - 32) / 1.8, 1 British thermal unit per hour = 0.2931 W.
 db = dry-bulb temperature, °F; wb = wet-bulb temperature, °F
 a. IPLVs and part load rating conditions are only applicable to equipment with capacity modulation.
 b. Deduct 0.2 from the required EERs and IPLVs for units with a heating section other than electric resistance heat.

Table 506.2(3) Packaged Terminal Air Conditioners and Packaged Terminal Heat Pumps		
Equipment type	Size category	Required efficiency ^a
Air conditioners	< 7,000 Btu / h	11.9 EER
& Heat Pumps (Cooling Mode)	7,000 Btu / h and < 10,000 Btu / h	11.3 EER
	10,000 Btu / h and < 13,000 Btu / h	10.7 EER
	> 13,000 Btu / h	9.5 EER

a. Replacement units must be factory labeled as follows: “MANUFACTURED FOR REPLACEMENT APPLICATIONS ONLY: NOT TO BE INSTALLED IN NEW CONSTRUCTION PROJECTS.” Replacement efficiencies apply only to units with existing sleeves less than 16 inches (406 mm) high and less than 42 inches (1067 mm) wide.

Table 506.2(4) Warm Air Furnaces and Combination Warm Air Furnaces/Air-conditioning Units, Warm Air Duct Furnaces and Unit Heaters, Efficiency Requirements				
Equipment type	Size category (input)	Subcategory or rating condition	Required efficiency	Test procedure

Warm air furnaces, gas fired	< 225,000 Btu/h		For zones 1 & 2, NR. For zones 3 & 4, 90 AFUE or 90 Et For zones 4 to 8, 92 AFUE or 92 Et	DOE 10 CFR Part 430 or ANSI Z21.47
	≥ 225,000 Btu/h	Maximum capacity	90% Ec note 1	ANSI Z21.47
Warm air furnaces, oil fired	< 225,000 Btu/h		For zones 1 & 2, NR. For zones 3 to 8, 85 AFUE or 85 Et	DOE 10 CFR Part 430 or UL 727
	≥ 225,000 Btu/h	Maximum capacity	85% Et, Note 1	UL 727
Warm air duct furnaces, gas fired	All capacities	Maximum capacity	90% Ec	ANSI Z83.8
Warm air unit heaters, gas fired	All capacities	Maximum capacity	90% Ec	ANSI Z83.8
Warm air unit heaters, oil fired	All capacities	Maximum capacity	90% Ec	UL 731

For SI: 1 British thermal unit per hour = 0.2931 W.

1 Units must also include an IID (intermittent ignition device), have jackets not exceeding 0.75 percent of the input rating, and have either power venting or a flue damper. A vent damper is an acceptable alternative to a flue damper for those furnaces where combustion air is drawn from the conditioned space. Where there are two ratings for units not covered by the National Appliance Energy Conservation Act of 1987 (NAECA) (3-phase power or cooling capacity greater than or equal to 65,000 Btu/h (19 kW) shall comply with either rating.

Et = Thermal efficiency.

Ec = Combustion efficiency (100% less flue losses).

Efficient furnace fan: All fossil fuel furnaces in zones 3 to 8 shall have a furnace electricity ratio not greater than 2% and shall include a manufacturer's designation of the furnace electricity ratio.

Table 506.2(5)
Boiler, Efficiency Requirements

Equipment type	Size category	Test Procedure	Required efficiency
Gas Hot Water	< 300,000 Btu / h	DOE 10 CFR Part 430	90% Et
	> 300,000 Btu / h and > 2.5 mBtu/h	DOE 10 CFR Part 431	89% Et
Gas Steam	< 300,000 Btu / h	DOE 10 CFR Part 430	89% Et
	> 300,000 Btu / h	DOE 10 CFR Part 431	89% Et
Oil	< 300,000 Btu / h	DOE 10 CFR Part 430	90% Et
	> 300,000 Btu / h	DOE 10 CFR Part 431	89% Et

Et = thermal efficiency

Table 506.2(6)
Chillers - Efficiency Requirements

Equipment type	Size category	Required efficiency – chillers ^{a, b}		Optional compliance path – required efficiency – chillers with VSD ^{a, b}	
		Full Load (KW /TON)	IPLV (KW /TON)	Full Load (KW /TON)	IPLV (KW /TON)
Air Cooled w/ Condenser	All	1.2	1.0	N/A	N/A
Air Cooled w/o Condenser	All	1.08	1.08	N/A	N/A
Water Cooled, Reciprocating	All	0.840	0.630	N/A	N/A

Water Cooled, Rotary Screw and Scroll	< 90 tons	0.780	0.600	N/A	N/A
	>90 tons and < 150 tons	0.730	0.550	N/A	N/A
	>150 tons and < 300 tons	0.610	0.510	N/A	N/A
	> 300 tons	0.600	0.490	N/A	N/A
Water Cooled, Centrifugal	< 150 tons	0.610	0.620	0.630	0.400
	>150 tons and < 300 tons	0.590	0.560	0.600	0.400
	>300 tons and < 600 tons	0.570	0.510	0.580	0.400
	> 600 tons	0.550	0.510	0.550	0.400
a. Compliance with full load efficiency numbers and IPLV numbers are both required.					
b. Only chillers with variable speed drives (VSD) may use the optional compliance path for chiller efficiency.					
N/A - No credit can be taken for this option					

Table 506.2(7)	
Absorption Chillers - Efficiency Requirements	
Equipment Type	Required Efficiency Full Load COP (IPLV)
Air Cooled, Single Effect	0.60, allowed only in heat recovery applications
Water Cooled, Single Effect	0.70, allowed only in heat recovery applications
Double Effect - Direct Fired	1.0 (1.05)
Double Effect - Indirect Fired	1.20

[14.9.2.30 NMAC - N, 1-28-11]

HISTORY OF 14.9.2 NMAC:

Pre-NMAC History: The material in this part was derived from that previously filed with state records center and archives under:

- CIC MB 68-2, 1964 New Mexico Plumbing Code, filed 1/23/68.
- CIC MB 70-8, 1970 Plumbing Code of New Mexico, filed 4/29/70.
- CIC MB 71-4, 1970 Plumbing Code of New Mexico, filed 6/8/71.
- CIC MB 74-9, 1973 Uniform Plumbing Code, filed 11/20/74.
- CIC 76-1, 1976 Uniform Plumbing Code, filed 5/4/76.
- CIC MB 80-5, 1979 Uniform Plumbing Code, filed 4/24/80.
- MB-UPC-82-1, 1982 Uniform Plumbing Code, filed 11/4/82.
- MB-UPC-85-1, 1985 Uniform Plumbing Code, filed 10/1/85.
- MB-UPC-88-1, 1988 Uniform Plumbing Code, filed 12/15/88.
- MB-UPC-91-1, 1991 Uniform Plumbing Code, filed 7/28/92.
- CIC MB 68-3, 1966 New Mexico Gas Code, filed 1/23/68.
- CIC MB 70-7, 1970 Natural Gas Code of New Mexico, filed 4/29/70.
- CIC MB 71-3, 1970 Natural Gas Code of New Mexico, filed 6/8/71.
- CIC-74-8, 1973 Uniform Mechanical Code, filed 11/20/74.
- CIC 76-4, 1976 Uniform Mechanical Code, filed 11/24/76.
- CID MB 80-3, 1979 Uniform Mechanical Code, filed 4/23/80.
- MB-UMC-82-1, 1982 Uniform Mechanical Code, filed 11/4/82.
- MB-UMC-85-1, 1985 Uniform Mechanical Code, filed 10/1/85.
- MB-UMC-88-1, 1988 Uniform Mechanical Code, filed 12/15/88.
- MB-UMC-91-1, 1991 Uniform Mechanical Code, filed 7/28/92.
- CIC 77-3, 1976 New Mexico Uniform Solar Energy Code, 2/26/77.
- CID MB-80-6, 1979 Uniform Solar Energy Code, 4/24/80.
- MB-USEC-82-1, 1982 Uniform Solar Energy Code, filed 11/4/82.
- MB-USEC-85-1, 1985 Uniform Solar Energy Code, 12/23/85.
- MB-USEC-88-1, 1988 Uniform Solar Energy Code, 12/15/88.
- MB-USEC-91-1, 1991 Uniform Solar Energy Code, 7/28/92.
- CIC-75-1, 1973 Uniform Swimming Pool Code, Section 1.7, 10/31/75.
- CIC-76-3, 1976 Uniform Swimming Pool Code, 7/27/76.
- CIC MB 80-4, 1979 Uniform Swimming Pool Code, filed 4/23/80.
- MB-USPC-82-1, 1982 Uniform Swimming Pool Code, 11/4/82.
- MB-USPS and HTC-85-1, 1985 Uniform Swimming Pool, Spa and Hot Tub Code, 12/23/85.
- MB-USPS and HTC-88-1; 1988 Uniform Swimming Pool, Spa and Hot Tub Code, 12/15/88.
- MB-USPS and HTC-91-1, 1991 Uniform Swimming Pool, Spa and Hot Tub Code, 7/28/92.
- CID-MB-NMP&M 91-1, 1991 New Mexico Plumbing and Mechanical Code, 7/7/92.

History of Repealed Material: 14 NMAC 9.2, 1997 New Mexico Plumbing and Mechanical Code (filed 10/30/98), repealed 7/1/04.

14.9.2 NMAC, 2003 New Mexico Mechanical Code (filed 5/27/04), repealed 1/7/04.

14.9.2 NMAC, 2006 New Mexico Mechanical Code (filed 08/16/07), repealed 1/28/11.

Other History:

CID-MB-NMP&M 91-1, 1991 New Mexico Plumbing and Mechanical Code, (filed 7/7/92), replaced by 14 NMAC 9.2, 1997 New Mexico Plumbing and Mechanical Code, effective 12-31-98.

14 NMAC 9.2, 1997 New Mexico Plumbing and Mechanical Code (filed 10-30-98) (that applicable portion) replaced by 14.9.2 NMAC, 2003 New Mexico Mechanical Code, effective 7/1/04.

14.9.2 NMAC, 2003 New Mexico Mechanical Code (filed 5/27/04) replaced by 14.9.2 NMAC, 2006 New Mexico Mechanical Code, effective 1/1/08.

14.9.2 NMAC, 2006 New Mexico Mechanical Code (filed 08/16/07) replaced by 14.9.2 NMAC, 2009 New Mexico Mechanical Code, effective 1/28/11.

NEW MEXICO REGULATION AND LICENSING DEPARTMENT CONSTRUCTION INDUSTRIES DIVISION

This is an amendment to 14.5.1 NMAC Sections 2, 7 and 9, effective 01-28-11.

14.5.1.2 SCOPE: This rule applies to all contracting work performed in New Mexico on or after January [1, 2008] 28, 2011, that is subject to the jurisdiction of CID, unless performed pursuant to a permit for which an application was received by CID before that date.

[14.5.1.2 NMAC - Rp, 14.1.1.2 NMAC, 7-1-04; A, 1-1-08; A, 01-28-11]

14.5.1.7 DEFINITIONS: The definitions in this section are used throughout the CID rules contained in Chapters 5 through 10 of Title 14.

A. Building official means the bureau chief of each trade bureau of the division] **Building/code official** means the officer or other designated authority charged with the administration and enforcement of this code, or a duly authorized representative.

B. CID and division mean the construction industries division of the regulation and licensing department.

C. CID rules means the rules compiled in Title 14, Chapters 5 through 10 of the New Mexico administrative code.

D. CILA means the Construction Industries Licensing Act,

NMSA 1978 Section 60-13-1 et seq.

E. Commission means the construction industries commission.

F. Commissioning means adjusting, balancing, documenting, and certifying the completion of an HVAC system.

G. Contracting has the meaning given in NMSA 1978 Section 60-13-3.

H. Director has the meaning given in NMSA 1978 Section 60-13-2.

I. IBC means the [2006] 2009 international building code.

J. IFC means the [2006] 2009 international fire code.

K. IRC means the [2006] 2009 international residential code.

L. LPG Standards means 19.15.40 NMAC, Liquefied Petroleum Gas Standards, and NMSA 1978 70-5-1 et seq., Liquefied and Compressed Gasses, collectively.

M. New Mexico construction code(s) means any of the rules compiled in Title 14, Chapters 7 through 10 of the New Mexico administrative code.

N. NMBSS means 14.7.5 NMAC, [2006] 2009 New Mexico Non-Load Bearing Baled Straw Construction Building Standards.

O. NMCBC means 14.7.2 NMAC, [2006] 2009 New Mexico Commercial Building Code, which adopts by reference and amends the [2006] 2009 international building code.

P. NMEBC means 14.7.7 NMAC, [2006] 2009 New Mexico Existing Building Code, which adopts by reference and amends the [2006] 2009 international existing building code.

Q. NMEBMC means 14.7.4 NMAC, [2006] 2009 New Mexico Earthen Building Materials Code.

R. NMEC means 14.10.4 NMAC, 2008 New Mexico Electrical Code, which adopts by reference and amends the 2008 national electrical code.

S. NMECC means 14.7.6 NMAC, [2006] 2009 New Mexico Energy Conservation Code, which adopts by reference and amends the [2006] 2009 international energy conservation code.

T. NMEC means 14.10.5 NMAC, 2007 New Mexico Electrical Safety Code, which adopts by reference and amends the 2007 national electrical safety code.

U. NMMC means 14.9.2 NMAC, [2006] 2009 New Mexico Mechanical Code, which adopts by reference and amends the [2006] 2009 uniform mechanical code.

V. NMPC means 14.8.2 NMAC, [2006] 2009 New Mexico Plumbing Code, which adopts by reference and amends the [2006] 2009 uniform plumbing code.

W. NMRBC means 14.7.3 NMAC, [2006] 2009 New Mexico Residential Building Code, which adopts by reference and amends the [2006] 2009 international residential code.

X. NMSEC means 14.9.6 NMAC, 2006 New Mexico Solar Energy Code, which adopts by reference and amends the 2006 uniform solar energy code.

Y. NMSPC means 14.8.3 NMAC, 2006 New Mexico Swimming Pool, Spa, and Hot Tub Code, which adopts by reference and amends the 2006 uniform swimming pool, spa, and hot tub code.

Z. Published code means any code or standard published by an entity other than the state of New Mexico and adopted by reference, or referred to as a standard in the CID rules.

AA. ULA means NMSA 1978 Section 61-1-1 et seq., the Uniform Licensing Act.

[14.5.1.7 NMAC - Rp, 14.1.1.7 NMAC, 7-1-04; A, 1-1-08; A, 10-24-08; A, 01-28-11]

14.5.1.9 CONFLICTS:

A. Between current New Mexico construction codes. When the provisions of one New Mexico construction code specifies different materials, methods, construction, or other requirements than the provisions of other New Mexico construction codes, the general rule of interpretation to be applied is that the most restrictive provision shall apply, and the most specific provision shall govern more general provisions. If it is determined by the building officials responsible for enforcing the codes that the conflict between the provisions should be resolved by a different interpretation, the building officials' determinations shall control.

B. With prior New Mexico construction codes. The New Mexico construction codes shall not apply to require a change in any structure existing at the time such code(s) become effective provided that the structure was constructed and has been maintained in compliance with the laws and CID rules in effect at the time the existing structure was constructed or maintained; provided that, if all or any part of the structure is determined to be unsafe, 14.5.1.12 NMAC will govern.

C. Between current New Mexico construction codes and codes adopted by other state agencies. The occupancy classification of a building shall be established by the building official having jurisdiction. When there is a conflict in interpretation of the application of the codes, including pursuant to Section 59A-52-15 NMSA, the interpretation of the building official shall prevail.

D. With requirements of other agencies. When a regulatory agency other than CID may or might have

jurisdiction over certain aspects of a project, a person working on the project must cooperate with any such agency to ensure compliance with all applicable requirements of that agency. Such aspects may include, but are not limited to, compliance with fire code standards enforced by the state fire marshal, or any local fire code enforcement agency; or any other applicable code or standard enforced by the state environment department; the state health department, state human services department; the public regulation commission; the governor's committee on the concerns of the handicapped; and local zoning and historical authorities. From time to time, CID may, as permitted by law, enter into agreements with other regulatory agencies pursuant to which the other agency's requirements are made a prerequisite to a CID action. In such cases, satisfaction of such a prerequisite will not constitute full compliance with the other agency's requirements.

~~[D.] E.~~ **With other laws.** The CID rules shall not be deemed to contravene or invalidate any other valid federal, state or local law.

~~[E.] E.~~ **With referenced and incorporated codes and standards.** The provisions of any published code or standard referenced in the CID rules shall be deemed to be incorporated into and made part of the CID rules, to the extent that such reference requires, and with all such modifications and amendments as may be made to the provision. If the reference results in a conflict between the provision of the published code or standard and the CID rules, the CID rules shall govern.

[14.5.1.9 NMAC - Rp, 14.7.2.8 NMAC, 14 NMAC 9.2.8, 14 NMAC.9.2. I.100, 14 NMAC 9.2.II.100 & 14.10.4.10 NMAC 7-1-04; A, 10-24-08; A, 01-28-11]

**NEW MEXICO
REGULATION AND
LICENSING DEPARTMENT
CONSTRUCTION INDUSTRIES
DIVISION**

This is an amendment to 14.5.2 NMAC Sections 2, 8, 10 and 11, effective 01-28-2011.

14.5.2.2 SCOPE: This rule applies to all contracting work performed in New Mexico on or after January [~~1-~~2008] 28, 2011, that is subject to the jurisdiction of CID, unless performed pursuant to a permit for which an application was received by CID before that date.

[14.5.2.2 NMAC - Rp, 14.5.2.2 NMAC, 7-1-04; A, 1-1-08; A, 1-28-11]

**14.5.2.8 P E R M I T S
REQUIRED:**

A. Permits required. Subject to CILA Section 60-13-3, section 60-13-45, and the provisions of the CID rules, no building or structure shall be erected, constructed, enlarged, altered, repaired, moved, improved, removed, converted or demolished, and no electrical wiring, plumbing or mechanical work as defined and described in the applicable New Mexico construction codes for those trades, may be installed, repaired or maintained in or on such building or structure, unless the applicable permit has first been obtained from the division. All re-roofs require a building permit and inspections.

B. Exceptions to permit requirement. Exceptions from permit requirements of the New Mexico construction codes shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of CILA, any part of the CID rules, or any other applicable law.

C. Previously permitted work; previously submitted plans.

(1) Any work for which a permit has lawfully been issued prior to the effective date of this rule, which permit has not expired, deactivated or been revoked or suspended by the division pursuant to this part, may proceed as permitted, and the rules, codes and standards in effect at the time the permit was issued shall be the rules, codes and standards governing the work and its inspection.

(2) Any work for which plans have been submitted and received by the division shall be permitted and inspected pursuant to the rules in effect at the time the plans were received.

D. Eligibility. No person who is not appropriately, validly and currently licensed by the division is eligible to apply for or be issued a permit under this rule. **Exception.** Subject to the provisions of this part, a homeowner's permit may be issued to an unlicensed person.

E. Application for permit. In order to obtain a permit, the applicant must complete and submit a written application on the form and in the manner indicated by the division for the type of permit sought.

F. Types. Separate permits are required for general building, electrical and mechanical/plumbing, and liquefied petroleum gas work.

[14.5.2.8 NMAC - Rp, 14.5.2.8 NMAC, 14.7.2.10 NMAC, 14 NMAC 9.2.I.100-105, 14 NMAC 9.2.II.100 & 14.10.4.8 NMAC, 7-1-04; A, 1-28-11]

**14.5.2.10 S U B M I T T A L
DOCUMENTS:**

A. Submittal documents.

(1) With each application for a permit, [~~and when required by the building official or elsewhere in the CID Rules;~~

two (2) sets of the following documents (collectively, submittal documents) must be submitted:

(a) type, occupancy including occupant load and kind of structure;

(b) plans;

(c) specifications;

(d) engineering calculations;

(e) diagrams;

(f) soil investigation reports;

(g) other any other data or document required by the building official or the plan review official; and

(h) exterior wall envelope; submittal documents for all buildings shall describe the exterior wall envelope in sufficient detail to enable the plan review to determine compliance with the NMCBC [~~and~~] the NMRBC and NMECC; the submittal documents shall show the exterior wall envelope in detail as required, including flashing, intersections with dissimilar materials, corners, end details, control joints, intersections at roof, eaves, or parapets, means of drainage, water-resistive membrane, and details around openings; roofing systems and manufacturers specifications are required to be submitted;

(i) mechanical design criteria for all buildings must be included with the submittal documents.

(2) For construction subject to the NMCBC, see sections [~~106.1.1, 106.1.2, 106.2~~] 107.1.1, 107.1.2, 107.2 of the IBC for other requirements regarding submittal documents, including form, means of egress, and site plans.

(3) For construction subject to NMRBC, see sections 106.1.1, 106.1.2, 106.1.3 and 106.2 of the IRC for other requirements regarding submittal documents, including form, manufacturer's installation instructions, construction in flood areas, and site plans.

(4) Upon approval, one (1) set of the submittal documents shall be retained by the division, and one (1) set shall be returned to the permittee, shall be available at the work site, and shall be available for inspection by the building official or inspector during the performance of the permitted work.

(5) The building official may require submission of any specifications, drawings or diagrams necessary to show clearly the kind and extent of building construction work for which a permit application has been submitted.

B. Professional seals requirements: The building official or the plan review official is authorized to require submittal documents to be prepared and sealed by an architect, registered in accordance with the New Mexico Architectural Act, and the rules promulgated pursuant thereto, [~~and~~] or by a professional structural engineer, registered in accordance with the New Mexico Engineering and

Surveying Practice Act, and the rules promulgated pursuant thereto. An architect [and/] or engineer stamp is required for all uses listed in table 1004.1.1 in the IBC.

C. Exceptions: The requirement for plans and specifications to be prepared by an architect [and/] or engineer shall not be required in any of the following instances unless, in the discretion of the building official, an exception is not in the best interests of public safety or health.

(1) Multiple dwellings of not more than two (2) stories in height and containing not more than four (4) dwelling units constructed of materials approved for use pursuant to the NMRBC, and provided that this exception is not construed to allow a person who is not an architect to design multiple clusters of four (4) dwelling units each where the total exceeds four (4) dwelling units on each lawfully divided lot.

(2) Garages or other structures not more than two (2) stories in height which are appurtenant to buildings described in paragraph (a) of this section.

(3) Group A, B, E divisions 1 and 2, F, M, S, U buildings or additions having a total occupant load of ten (10) or less (as defined in section 1003.2.2 and table 1003.2.2.2 of the IBC), and not more than two (2) stories in height.

(4) Alteration to buildings or structures that present no unusual conditions or hazards or change in occupancy.

(5) Single-family dwellings, not more than ~~two (2)~~ three stories in height.

D. Submission may be waived. The building official may waive the submission of plans, calculations, construction inspection requirements and other data if it is found that the nature of the work applied for is such that plan review is not necessary to obtain compliance with the New Mexico construction codes.

E. Deferred submittals. For the purposes of this section, deferred submittals are defined as those portions of the design that are not submitted with the application for the permit, and that are to be submitted, thereafter, within a period specified by the building official or the plan review official.

F. Approval. Deferral of any submittal items must have the prior approval of the building official. The responsible design professional shall list the deferred submittals on the submittal documents accompanying the permit application. Submittal documents for deferred submittal items must be submitted to the responsible design professional who shall review and forward them to the division with a notation indicating that the deferred submittal documents have been reviewed and that they have been found to be in general conformance with the design of the building. The items identified in the

deferred submittals shall not be installed until the building official has approved their design and submittal documents.

G. Responsible design professional. When submittal documents are required to be prepared by a registered design professional, the permit application shall indicate the registered design professional who shall be responsible for reviewing and coordinating submittal documents prepared by others, including phased and deferred submittal items, for compatibility with the design of the building. This design professional shall be deemed to be the "responsible design professional." The permittee shall notify the division in writing within a reasonable period of time, not to exceed ten (10) business days, if the responsible design professional is changed or is unable to continue to perform the duties required.

H. Special submissions. The building official or the plan review official is authorized to require, before and after the commencement of a project, the submission of any specification, drawing or diagram necessary to adequately and clearly show the kind, extent, and occupancy of the general building, mechanical [and/] or plumbing, and electrical work on the project that is covered by the permit issued, or that is required to be permitted under the CID rules.

I. Phased approval. See section 106.3.3 of the IBC for work subject to the NMCBC, and section 106.3.3 of the IRC for work subject to the NMRBC.

J. Correction of submittal documents. The issuance of a permit based on certain plans and specifications shall not prevent the building official from thereafter requiring the correction of any error in such plans or specifications, or from prohibiting work pursuant to those plans or specifications when a violation of the applicable code would result.

K. Electrical projects.

(1) Any installation with a calculated service capacity over 100 kVA single-phase or over 225 kVA three phase must be stamped by an electrical engineer, registered in accordance with the New Mexico Engineering and Surveying Practice Act. This requirement shall not apply to remote installations such as irrigation pumps. Any commercial project that requires an architect or engineer seal pursuant to this part, shall be submitted to the electrical bureau for review and approval.

(2) Submittal documents shall show the electrical riser, conductor size, grounding conductor size, method of grounding (available electrodes, etc.), load calculations, available fault calculations, size and location of disconnects, panel schedules, wiring methods, site and floor plan. General expressions such as "work shall be done in accordance with the New

Mexico Electrical Code" or "work shall be done to the satisfaction of the state building official" shall be considered inadequate, and incomplete.

(3) No permit for electrical work shall be issued for the addition to, or alteration of, wiring of an existing building unless the building as it will be wired conforms to the requirements of the code for new buildings, except that those portions of the existing wiring that have not been disturbed and are deemed safe by the inspector may remain in service.

L. Mechanical projects.

(1) The building official is authorized to require the stamp of a professional engineer, registered in accordance with the New Mexico Engineering and Surveying Practice Act on permits for mechanical [and/] or plumbing work with a total value of \$50,000.00, or more, [and/] or for commercial buildings three stories and higher.

(2) For plans for buildings for more than two stories in height, other than R-3 and U occupancies, see the second paragraph of section 113.3 of the UMC.

M. Permit contents and display. Pursuant to CILA Section 60-13-59, every permit or notice of permit issued by the division shall:

(1) clearly indicate the name and address of the owner of the property;

(2) contain a legal description of the property being built on either by "lot and block" description in a subdivision, by street address in a municipality, or by township, range and section numbers if outside a municipality or platted subdivision;

(3) contain the name, address and license number of the contractor or the homeowner to whom the permit is to be issued, and the name of the architect [and/] or engineer as may be required by the building official; and

(4) be prominently displayed on the site where the permitted work is to be performed.

N. Retention. The division shall retain construction documents, including submittal documents and permit applications, in accordance with New Mexico state laws governing document retention.

O. Preliminary inspection. As part of the document review process, before issuing a building permit, the building official is authorized to examine or cause to be examined buildings, structures and sites for which an application for a building permit has been filed.

[14.5.2.10 NMAC - Rp, 14.5.2.8 NMAC, 14.5.2.9 NMAC, 14.5.2.10 NMAC, 14.7.2.10 NMAC, 14 NMAC 9.2.I.100, 14 NMAC 9.2.II.100 NMAC & 14.10.4.8 NMAC, 7-1-04; A, 1-01-08; A, 1-28-11]

14.5.2.11 ISSUANCE:

A. Plan review. Within a reasonable time after receipt, the [division] building official shall review submittal documents for compliance with the applicable New Mexico construction codes and the CID rules. If the submittal documents do not comply, the [division] building official shall reject them and shall communicate the reasons for rejection to the applicant in writing. If the submittal documents meet the applicable codes and rules, the submittal documents shall be approved, in writing or by stamp, as "reviewed" and the [division] building official shall issue a permit to the applicant after payment in full of the applicable permit fees, as set forth in 14.5.5 NMAC, Fees.

B. Authorization to change. No change or modification may be made to approved submittal documents for which a permit has been issued without the express, written authorization of the building official. All work authorized by a permit must be performed in accordance with the approved submittal documents for which the permit was issued. Changes in the work, occupancy type, occupant load or kind of structure authorized by a permit must be reflected in an amended set of submittal documents, which must be resubmitted for approval by the [division] building official. [14.5.2.11 NMAC - Rp, 14.7.2.10 NMAC, 14 NMAC 9.2.I.100 & 14 NMAC 9.2.II.100, 7-1-04; A, 1-28-11]

**NEW MEXICO
REGULATION AND
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CONSTRUCTION INDUSTRIES
DIVISION**

This is an amendment to 14.5.3 NMAC Sections 2 and 9, effective 01-28-2011.

14.5.3.2 SCOPE: This rule applies to all contracting work performed in New Mexico on or after [July 1, 2004] January 28, 2011, that is subject to the jurisdiction of CID, unless performed pursuant to permit for which an application was received by CID before that date. [14.5.3.2 NMAC - Rp, 14.5.3.2 NMAC, 7-1-04; A, 1-28-11]

14.5.3.9 INSPECTIONS: The following inspections are required unless otherwise indicated.

A. For work subject to the NMCBC.

(1) Footing and foundation inspection, see section [409.3.1] 110 of the IBC.

(2) Concrete slab or under floor inspection, see section [409.3.2] 110 of the IBC.

(3) Lowest floor elevation, see section [409.3.3] 110 of the IBC.

(4) Frame inspection, see section [409.3.4] 110 of the IBC.

(5) Roof assembly inspection.

(6) Exterior wall opening flashings.

[(5)] (7) Weather resistive barrier inspection is to be made after installation of the appropriate weather resistive barrier and before such barrier is covered.

(8) Lath and gypsum board, see section 110 of the IBC.

(9) Fire and Smoke-resistant penetrations, see section 110 of the IBC.

(10) Energy efficiency inspections, see section 110 of the IBC.

(11) Other inspections required by the building official, see section 110 of the IBC.

(12) Special inspections, see section 110 of the IBC.

[(6)] (13) Final inspection, see section [409.3.10] 110 of the IBC.

B. For work subject to the NMRBC.

(1) Footing and foundation inspection, see section 109.1.1 of the IRC.

(2) Concrete slab or under floor inspection, see section 109 of the IRC.

[(2)] (3) Frame and masonry inspections, see section 109.1.4 of the IRC.

(4) Roof assembly inspection.

(5) Exterior wall opening flashings.

[(4)] (6) Weather resistive barrier inspection is to be made after installation of the appropriate weather resistive barrier and before such barrier is covered.

(7) Energy efficiency inspections and state of New Mexico thermal bypass inspection checklist verification.

(8) Lath and gypsum board, see section 1209 of the IRC.

(9) Other inspections required by the building official, see section 109 of the IRC.

[(3)] (10) Fire resistance rated construction inspection, see section 109.1.5.1 of the IRC.

(11) Special inspections, see section 109 of the IRC.

[(5)] (12) Final inspection, see section 109[1-6] of the IRC.

C. For work subject to the NMEC.

(1) Temporary pole (if applicable).

(2) Underground or under-slab (if applicable).

(3) Rough-in:

(a) on residential projects, all wiring must be installed and connections made-up;

(b) on commercial projects, perform inspections as required.

(4) Pre-final (if applicable).

(5) Final (electrical system is

complete and energized).

D. For work subject to the NMMC.

(1) Rough inspection of all mechanical work covered by permit after work has been installed and before it is covered or concealed.

(2) Temporary heat (if applicable).

(3) Final inspection after all mechanical work covered by permit has been installed and covered and after fixtures and appliances have been attached.

(4) Operation of mechanical equipment installed to replace existing equipment or fixtures. See section 116.2 of the UMC.

E. For work subject to the NMPCC.

(1) Rough inspection of all plumbing work covered by permit after work has been installed and before it is covered or concealed.

(2) Top-out inspection of all vented piping above floor and all extensions through the roof and/or walls. The top-out testing procedures are at the option of the inspector to insure the system is free from leaks or defects.

(3) Water distribution including all water piping inside and/or under a building.

(4) Water service piping from a service meter to a connection outside the building.

(5) Final inspection after all plumbing work covered by permit has been installed and covered and after fixtures and appliances have been attached.

(6) Operation of plumbing equipment to replace existing equipment or fixtures, see Section 103.5.2 of the UPC.

(7) Testing of systems, see sections 103.5.3, including subsections 103.5.3.1 through 5, 103.5.6.2, 103.5.4.2 and 103.5.5.2 of the UPC.

F. Additional inspections.

In addition to required inspections, the building official is authorized to make or require other inspections of any construction work to ascertain compliance with the provisions of the applicable New Mexico construction codes.

[14.5.3.9 NMAC - Rp, 14.5.3.8 NMAC, 14.7.2.10 NMAC, 14 NMAC 9.2.I.100, 14 NMAC 9.2.II.100 & 14.10.4.8 NMAC, 7-1-04; A, 1-28-11]

**NEW MEXICO
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CONSTRUCTION INDUSTRIES
DIVISION**

This is an amendment to 14.7.5 NMAC, the part name, the Sections 2 and 8, effective 01-28-11.

PART 5 [2006] 2009 NEW MEXICO NON-LOAD BEARING BALED STRAW CONSTRUCTION BUILDING STANDARDS

14.7.5.2 SCOPE: This rule applies to single family residential contracting work performed within the state of New Mexico on or after January [±, 2008] 28, 2011, involving non-loadbearing baled straw construction, unless performed pursuant to a permit for which an application was received prior to that date.
[14.7.5.2 NMAC - Rp, 14.7.5.2 NMAC, 1-1-08; A, 01-28-11]

14.7.5.8 GENERAL:

A. Baled straw shall not be used to support the weight of the building beyond the weight of the bales themselves. The bales will act as wall in-fill within or interior to the structural members.

B. The structural support of the building shall be designed according to the provisions of the [2006] 2009 New Mexico residential building code. All loadings shall be as required by 14.7.3.14 NMAC.

C. The vertical and horizontal members comprising the structural support of the building shall be wrapped in a moisture barrier according to the provisions of the [2006] 2009 New Mexico residential building code.

D. The general construction of the building shall comply with all provisions of all New Mexico building codes applicable to residential construction. (See Title 14, Chapters 5, 7, 8, 9 and 10 of the New Mexico administrative code - NMAC.) [14.7.5.8 NMAC - Rp, 14.7.5.8 NMAC, 1-1-08; A, 01-28-11]

**NEW MEXICO
REGULATION AND
LICENSING DEPARTMENT
CONSTRUCTION INDUSTRIES
DIVISION**

This is an amendment to 14.7.7 NMAC, the part name, the Sections 2, 8, 9 and 11, effective 01-28-11.

PART 7 [2006] 2009 NEW MEXICO EXISTING BUILDING CODE

14.7.7.2 SCOPE: This rule applies to contracting performed on existing buildings in New Mexico, but not contracting performed on detached one- and two- family dwellings or townhouses not more than three stories above grade plane in height with a separate means of egress, and their accessory structures, on or after January [±, 2008] 28, 2011, that is subject

to the jurisdiction of CID, unless performed pursuant to a permit for which an application was received by CID before that date, with the following exceptions:

A. Electrical. Electrical wiring as defined in CILA section 60-13-32, including installation, repair, alteration, change of occupancy, addition and relocation of existing buildings shall be in accordance with 14.10.4 NMAC, the [2005] 2008 New Mexico electrical code (NMEC).

B. Mechanical. All mechanical work, including installation, repair, alteration, change of occupancy, addition and relocation, on existing buildings shall be in accordance with 14.9.2 NMAC, the [2006] 2009 New Mexico mechanical code (NMMC).

C. Plumbing. All plumbing work, including installation, repair, alteration, change of occupancy, addition and relocation, on existing buildings shall be in accordance with 14.8.2 NMAC, the [2006] 2009 New Mexico plumbing code (NMPC).

D. LP Gas. All liquid petroleum and compressed natural gas work, including installation, repair, alteration, change of occupancy, addition and relocation, on existing buildings shall be in accordance with the NMGC or 19.15.40 NMAC, Liquefied petroleum gas standards, and NMSA 1978 70-5-1 et seq., Liquefied and compressed gasses (collectively the LP gas standards).
[14.7.7.2 NMAC - Rp, 14.7.7.2, NMAC, 1-1-08; A, 01-28-11]

14.7.7.8 ADOPTION OF THE [2006] 2009 NEW MEXICO EXISTING BUILDING CODE:

A. This rule adopts by reference, and amends, the [2006] 2009 international existing building code.

B. In this rule, each provision is numbered to correspond with the numbering of the [2006] 2009 international existing building code.
[14.7.7.8 NMAC - Rp, 14.7.7.8, NMAC, 1-1-08; A, 01-28-11]

14.7.7.9 CHAPTER 1 ADMINISTRATION:

A. Section 101 - General.

(1) 101.1 Title. Delete this section of the IEBC and substitute: this code shall be known as the [2006] 2009 New Mexico existing building code.

(2) 101.2 Scope. Delete this section of the IEBC and see 14.7.7.2 NMAC, Scope.

(3) 101.3 Intent. Delete this section of the IEBC and see 14.7.7.6 NMAC, Objective.

(4) 101.4 Applicability. Delete this section of the IEBC and substitute: the legal occupancy of any structure existing

on the effective date of this rule shall be permitted to continue without change, except as is specifically provided otherwise in this rule, in the [2006] 2009 New Mexico existing building code, or by the building official in consideration of the general safety and welfare of the occupants of any such building and the general public.

(5) 101.5 [Maintenance-Delete] Compliance methods. See this section of the IEBC.

(6) 101.6 Safeguards during construction. Delete this section of the IEBC.

(7) 101.7 Appendices. Delete this section of the IEBC and substitute: this rule adopts appendices A and B of the IEBC as they may be amended herein.

(8) 101.8 Correction of violations of other codes. Delete this section of the IEBC.

B. Section 102 - Applicability.

(1) Section 102.1 General. Delete this section of the IEBC and see 14.5.1 NMAC, General Provisions.

(2) Section 102.2 Other laws. Delete this section of the IEBC and see 14.5.1 NMAC, General Provisions.

(3) Section 102.3 Application of references. Delete this section of the IEBC and see 14.5.1 NMAC, General Provisions.

(4) Section 102.4 Referenced codes. Delete this section of the IEBC and substitute the following. All references in the IEBC to the international building code shall be deemed references to 14.7.2 NMAC, the [2006] 2009 New Mexico commercial building code (NMCBC). All references to the international residential code shall be deemed references to 14.7.3 NMAC, the [2006] 2009 New Mexico residential building code (NMRBC). All references to the international plumbing code shall be deemed references to 14.8.2 [2006] 2009 NMAC, the [2006] 2009 NMPC. All references to the international mechanical code shall be deemed references to 14.9.2, [2006] 2009 NMAC, the [2006] 2009 NMMC. All references to the international electrical code shall be deemed references to 14.10.4 NMAC the [2005] 2008 NMEC. All references to the international energy conservation code shall be deemed references to 14.7.6 NMAC, the [2006] 2009 New Mexico energy conservation code (NMECC). All references to the international fuel gas code are deemed references to the NMMC or the LP gas standards.

(5) Section 102.5 Partial invalidity. Delete this section of the IEBC and see 14.5.1 NMAC, General Provisions.

C. Section 103 - Department of building safety. Delete this section of the IEBC and see 14.5.1 NMAC.

D. Section 104 - Duties and powers of the code official. Delete this

section of the IEBC and see 14.5.1 NMAC, General Provisions.

E. Section 105 - Permits.

Delete this section of the IEBC and see 14.5.2 NMAC, Permits.

F. Section 106 - Construction documents. Delete this section of the IEBC and see 14.5.2 NMAC, Permits.

G. Section 107 - Temporary structures and uses. Delete this section of the IEBC and see 14.5.2 NMAC, Permits.

H. Section 108 - Fees. Delete this section of the IEBC and see 14.5.5 NMAC, Fees.

I. Section 109 - Inspections. Delete this section of the IEBC and see 14.5.3 NMAC, Inspections.

J. Section 110 - Certificate of occupancy. Delete this section of the IEBC and see 14.5.3.13 NMAC, Inspections.

K. Section 111 - Service utilities. Delete this section of the IEBC and see 14.5.2 NMAC, Permits; 14.5.1, General Provisions and NMSA 1978, section 60-13-42.

L. Section 112 - Board of appeals. Delete this section of the IEBC and see 14.5.1 NMAC, General Provisions.

M. Section 113 - Violations. Delete this section of the IEBC and see 14.5.1 NMAC, General Provisions.

N. Section 114 - Stop work order. Delete this section of the IEBC and see 14.5.3 NMAC, Inspections.

O. Section 115 - Unsafe buildings and equipment. Delete this section of the IEBC and see 14.5.1 NMAC, General Provisions.

P. Section 116 - Emergency measures. Delete this section of the IEBC and see 14.5.1 NMAC, General Provisions.

Q. Section 117 - Demolition. Delete this section of the IEBC and see 14.5.1 NMAC, General Provisions. [14.7.7.9 NMAC - Rp, 14.7.7.9, NMAC, 1-1-08; A, 01-28-11]

14.7.7.11 CHAPTER 3 PRESCRIPTIVE COMPLIANCE METHOD:

See this chapter of the IEBC except delete the text of section 307.5 and replace with the following: **Energy.** Buildings undergoing a change in occupancy that would result in an increase in demand for either fossil fuel or electrical energy shall comply with the international energy conservation code. Mixed-use buildings undergoing a change in occupancy to a portion of the building shall either comply with the international energy conservation code or undergo an energy audit for the portion of the building undergoing the change in occupancy and submit plans for physical improvements based on the

audit results for the portion of the building affected by the change in occupancy.

[14.7.7.11 NMAC - Rp, 14.7.7.11, NMAC, 1-1-08; A, 01-28-11]

**NEW MEXICO
REGULATION AND
LICENSING DEPARTMENT
CONSTRUCTION INDUSTRIES
DIVISION**

This is an amendment to 14.7.8 NMAC, the part name and Section 2, effective 01-28-11.

PART 8 [2006]2009 NEW MEXICO HISTORIC EARTHEN BUILDINGS

14.7.8.2 SCOPE: This rule applies to all historic earthen buildings contracting work performed in New Mexico on or after January [1, 2008] 28, 2011 that is subject to the jurisdiction of CID, unless performed pursuant to a permit for which an application was received by CID before that date.

[14.7.8.2 NMAC - Rp, 14.7.8.2 NMAC, 1-1-08; A, 01-28-11]

**NEW MEXICO
REGULATION AND
LICENSING DEPARTMENT
CONSTRUCTION INDUSTRIES
DIVISION**

This is an amendment to 14.10.4 NMAC Sections 11, 14 and the addition of a new section (15), effective 1-28-2011.

14.10.4.11 CHAPTER 1 General.

A. Article 100 -

Definitions. See this article of the NEC.

B. Article 110 -

Requirements for Electrical Installations.

See this article of the NEC except as provided below.

(1) Section 110.2 Approval. See this section of the NEC and add the following: [such]

(a) product listing and labeling - electrical wiring, equipment or material approval shall be based on listing and labeling by a nationally recognized testing laboratory [listed] recognized by the federal occupational safety and health administration;

(b) field evaluation - electrical wiring, equipment or material that is not listed and labeled, but for which a (UL) safety standard exists may be approved upon certification by a nationally recognized testing laboratory [that has been approved by the electrical bureau] recognized by

the federal occupational safety and health administration or by a field evaluation body accredited by the international accreditation service, inc.

(c) engineer certification - electrical wiring, equipment or material for which a (UL) safety standard does not exist may be approved upon certification by an electrical engineer licensed to practice in New Mexico; such a certification will not be valid unless based on a verification of the manufacturer's safety and performance test data for the product.

(2) Section 110.21. Marking. See this section of the NEC and add: all equipment used on circuits over 300 volts between conductors shall have a warning sign either on or adjacent to the equipment. Warning signs shall be made in accordance with ANSI Z535 environmental and safety signs. The language shall read:

(a) for voltages over 300 volts but less than 600 volts: "480 VOLTS". (Label dimensions shall be 1" x 4"); and

(b) for voltages over 600 volts and there are exposed parts: "DANGER - HIGH VOLTAGE - KEEP OUT".

(3) Section 110.26 Spaces about electrical equipment.

(a) 110.26 (A) Working space. See this section of the NEC and add: Disconnects that do not provide over-current, overload, short circuit, or ground fault protection are not required to maintain the dimensions of 110.26(A)(1), (A)(2) and (A)(3) where adequate space is not readily available and the disconnect is permanently labeled "INADEQUATE WORKING SPACE-DO NOT WORK ON WHILE ENERGIZED".

(b) 110.26 (E) Headroom. See this section of the NEC and add: Exception No. 2: In underground water well pump enclosures, service equipment or panel boards that do not exceed 200 amperes, operating at 250 volts or less and only feeding equipment associated with the water well enclosure, shall be permitted in spaces where the headroom is less than six and one half feet (6 1/2 ft.) but greater than five feet (5 ft.) provided the enclosure is supplied with a removable lid, that when removed would allow a minimum of six and one half feet (6 1/2 ft.) headroom.

C. Article 210. Branch circuits. See this article of the NEC except as provided below.

(1) Section 210.11.

(a) 210.11 (A) Number of branch circuits. See this section of the NEC and add: In dwelling occupancies, circuits for general purpose receptacles shall be limited to a maximum of ten (10) current consuming outlets. Single and duplex receptacle outlets are considered to be one current consuming outlet. Exception: Circuits serving only lighting loads may be calculated per article

220 of the national electrical code.

(b) 210.11 (B) Load evenly proportioned among branch circuits. See this article of the NEC.

(c) 210.11 (C) Dwelling units. See this section of the NEC except at provided below.

(i) Small appliance branch circuits. See this section of the NEC and add: not more than four (4) current consuming outlets shall be connected to these circuits. Single and duplex receptacle outlets are considered to be one current consuming outlet. Exception: small appliance circuits that supply only dining area receptacles may serve not more than six (6) receptacle outlets.

(ii) Laundry branch circuits. Delete the text of this section of the NEC and substitute: in addition to the number of branch circuits required by other parts of this section, at least one additional 20-ampere branch circuit shall be provided to supply the laundry receptacle outlet. Such circuits shall have no other outlets.

(2) Section 210.19 Conductors - Minimum ampacity and size. See this section of the NEC and add the following to subsection (A) Branch circuits not more than 600 volts. (1) General: see this section of the NEC and add: conductors for branch circuits shall be sized to prevent excessive voltage drop. Conductors of 15 ampere 120V branch circuits supplying general-purpose receptacle outlets shall be not less than 12 AWG.

(3) Section 210.52 Dwelling unit receptacle outlets.

(a) 210.52 (A) General provisions. (2) Wall space. See this section of the NEC and add: exception: free-standing cabinets designed to be used as an eating or drinking bar where stools or chairs are pulled up to a counter top which extends at least one (1) foot from the front of the cabinet, shall not be considered as wall space.

(b) 210.52 (G) Basement and garages. See this section of the NEC and add: receptacle outlets must be installed a minimum of eighteen (18) inches above finished floor, in attached or detached garages.

(4) Section 210.70 Lighting outlets required.

(a) 210.70 (A) (2) Dwelling units - Additional locations. See this section of the NEC and add a new subsection as follows: (d) on single family dwellings at least one wall switch, located within five (5) feet from each entrance or exit or automatic lighting control such as a motion detector shall be installed to control exterior illumination.

(b) 210.70 (A) (3) Dwelling units - Storage or equipment spaces. See this section of the NEC and add: at least one (1) switched lighting outlet shall be installed

in all accessible attics and crawl spaces adjacent to the usual point of entry.

(c) 210.70 (C) Other than dwelling units. See this section of the NEC and add: at least one (1) switched lighting outlet shall be installed in all accessible attics and crawl spaces adjacent to the usual point of entry.

D. Article 215. Feeders. Section 215.1. Scope. See this section of the NEC and add: approved wiring methods for feeders: nonmetallic-sheathed cable types NM, NMC and NMS (Article 334) , and service entrance cable type SER (Article 338), shall be permitted to be used for feeders in dwelling units providing that the cables shall not pass through or under any other dwelling unit(s). Underground feeder and branch circuit cable type UF cable (Article 340) shall be permitted to be used underground for any occupancy, and indoors only in accordance with nonmetallic-sheathed cable (Article 334) providing that the cable shall not pass through or under any other dwelling unit(s).

E. Article 225. Outside branch circuits and feeders. See this article of the NEC except as follows.

(1) Section 225.19 Clearance from buildings for conductors of not over 600 volts nominal-above roofs. (A) Above roofs. See this section of the NEC but delete exception no. 2 in its entirety.

(2) Section 225.32 Location. See this section of the NEC except as follows.

(a) Add the following provision: the disconnecting means shall be installed at a readily accessible location. Where the disconnecting means is located outside the building or structure served, the disconnecting means enclosure shall be installed within ten (10) feet from the building or structure and visible, or on the exterior wall of the building or structure served. Where the disconnecting means is installed inside the building or structure served, the disconnecting means enclosure shall be located within forty eight (48) inches from where the feeder conductor raceway enters the building or structure.

(b) Delete the text of exception no. 1 and substitute: for industrial installations under single management, where documented safe switching procedures are established and maintained for disconnection, the disconnecting means shall be permitted to be located elsewhere on the premises.

F. Article 230. Services. See this article of the NEC except as provided below.

(1) Section 230.24 Clearances. (A) Above roofs. Delete exception no. 2 in its entirety.

(2) Section 230.28. Service masts as supports. See this section of the NEC and add: where a service mast is used

for the support of service drop conductors, it shall be a minimum two inch (2") rigid metal conduit, intermediate metal conduit or comply with local utility requirements.

(3) Section 230.31 Size and rating. (A) General. See this section of the NEC and add: where the underground service lateral is customer owned, the service lateral conductors shall be sized to prevent excessive voltage drop. The maximum voltage drop on the service lateral conductors shall not exceed five percent (5%). For the purpose of this calculation, the ampacity shall be based on the calculated demand load of the building or structure served. Customer owned includes all non-utility owned or operated service lateral conductors.

(4) Section 230.43. Wiring methods for 600 volts, nominal, or less. See this section of the NEC but delete subsection (1) open wiring on insulators, and subsection (6), Electrical nonmetallic tubing (ENT).

(5) Section 230.54 Overhead service locations. See this section of the NEC and add a new section as follows: (H) overhead service support shall comply with the serving utility requirements or be at least six inch by six inch (6" x 6") pressure-treated timber or equivalent round poles (minimum 6" diameter crown) installed to a depth not less than four (4) feet below finish grade.

(6) Section 230.70 Service equipment - disconnecting means.

(a) 230.70 General. (A) Location. See this section of the NEC and add: the disconnecting means for each occupant of a multiple occupancy building shall be grouped at a common location.

(b) 230.70 General. (A) Location. (1) Readily accessible location. Delete the text of this section of the NEC and substitute: the service disconnecting means shall be installed at a readily accessible location. Where the disconnecting means is located outside the building or structure, the disconnecting means enclosure shall be located immediately adjacent to the meter enclosure. Where the disconnecting means enclosure is located outside the building or structure and within ten (10) feet from the building or structure, it shall not be considered a separate structure. Where the meter enclosure is located on the exterior wall of the building or structure, the service disconnecting means enclosure shall be installed at a readily accessible location and within forty eight (48) inches from the meter enclosure. Where the disconnecting means is located inside the building, the disconnecting means enclosure shall be installed at a readily accessible location within forty eight (48) inches from where the service conductor raceway enters the building or structure. Exception: bushing current transformer meter installations that

are associated with the utility transformer are not required to be located in close proximity to the disconnecting means enclosure.

(7) Section 230.72 Grouping of service disconnects. (A) General. See this section of the NEC and add: all building or structure disconnects of each service shall be grouped at one location and shall be separated by the least practical distance, not to exceed an overall distance of twenty (20) feet.

G. Article 250 - Grounding and bonding. See this article of the NEC except as provided below.

(1) Section 250.50 Grounding electrode system. See this section of the NEC and add: on new construction a concrete encased electrode shall be considered available and installed in compliance with NEC 250.52(A) (3). If a concrete encased electrode is not present, then at least 20 feet of No. 2 bare copper in direct contact with the earth at a depth below the earth's surface of not less than thirty (30) inches shall be installed in a continuous trench that is at least twenty (20) feet in length, augmented with a minimum of two (2), eight (8) foot grounds rods spaced a minimum of six (6) feet apart.

(2) Section 250.52 (A) Grounding electrodes. (5) Rod and pipe electrodes. See this section of the NEC but delete subsection (a) in its entirety.

(3) Section 250.52 Grounding electrodes. (B) (1) Not permitted for use as grounding electrodes. Delete the text of this section of the NEC and substitute: Gas piping shall not be used as a grounding conductor or electrode. This does not preclude the bonding of metallic piping to a grounding system.

[~~(3)~~] (4) Section 250.53 Grounding electrode system installation. (C) Bonding jumper. See this section of the NEC and add: Grounding electrode bonding jumpers shall be protected from physical damage. When a bonding jumper conductor is buried to provide physical protection, a minimum cover of 24 inches shall be provided in accordance with NEC Table 300.5 column 1 all locations not specified below.

[~~(4)~~](5) Section 250.56 Resistance of rod, pipe and plate electrodes. Delete the text of this section of the NEC and substitute: a single electrode consisting of a rod or plate shall be augmented by one additional electrode of any of the types specified by 250.52 (A) (2) through (A) (7). Where multiple rod or plate electrodes are installed to meet the requirements of this section, they shall be not less than six (6) feet apart. Exception: A single electrode consisting of a rod or plate may be used on temporary construction services rated 200 amperes or less.

[~~(5)~~] (6) Section 250.66 Size of

alternating-current grounding electrode conductor. (B) Connections to concrete-encased electrodes. See this section of the NEC and add: the grounding electrode conductor shall not be smaller than #4 AWG copper.

(7) Section 250.104. Bonding of piping systems and exposed structural steel. (B) Other metal piping. See this section of the NEC and add: CSST gas piping systems shall be bonded to the electrical service grounding electrode system at the point where the gas service enters the building. The bonding jumper shall not be smaller than (6) AWG copper wire.

(8) Section 250.106. Lightning protection systems. See this section of the NEC and add: Where a lightning protection system is installed, the bonding of the gas piping system shall be in accordance with NFPA 780, standard for installation of lightning protection systems.

[~~(6)~~] (9) Section 250.118. Types of equipment grounding conductors. See this section of the NEC and add the following new subsection: (15) an equipment grounding conductor shall be installed in all branch circuit and feeder raceways on or above a roof. The equipment grounding conductor shall be sized in accordance with table 250.122.

H. Article 300. Wiring Methods. See this article of the NEC except as provided below.

(1) Section 300.11 Securing and supporting. See this section of the NEC except as provided below.

(a) 300.11(A) Secured in place. See this section of the NEC and add: independent support wires shall be limited to support of flexible wiring methods from the last means of support or junction box for connections within an accessible ceiling to luminaire(s) or equipment served.

(b) 300.11 (A) (1). Fire rated assemblies. Delete the text of this section of the NEC and substitute: the ceiling support system shall be permitted to support listed junction boxes and/or support brackets that have been tested as part of a fire-rated assembly.

(c) 300.11 (A) (2). Non-fire rated assemblies. Delete the text of the exception and substitute: the ceiling support system shall be permitted to support listed junction boxes and/or support brackets where installed in accordance with the ceiling system manufacturer's instructions.

(2) Section 300.14. Length of free conductors at outlets, junctions and switch points. Delete the text of this section of the NEC and substitute: at least six (6) inches of free conductor, measured from the point in the box where it emerges from its raceway or cable sheath, shall be left at each outlet, junction, and switch point for splices or the connection of luminaire (fixtures) or

devices. Where the opening of an outlet, junction, or switch point is less than eight (8) inches in any dimension, each conductor shall be long enough to extend at least six (6) inches outside of the opening.

I. Article 310. Conductors for general wiring. See this article of the NEC and add the following provision to section 310.2 (B). Conductor material: the use of aluminum current carrying conductors shall be of the AA-8000 series or equivalent and shall be limited to size 8 AWG or larger. Exception: the equipment-grounding conductor shall be limited to size 10 AWG or larger if in a listed cable assembly.

J. Article 314. Outlet, device, pull, and junction boxes; conduit bodies; fittings; and handhole enclosures. See this article of the NEC except delete the exception from subsection 314.27(a) outlet boxes-boxes at luminaire (lighting fixture) outlets.

K. Article 334. Nonmetallic-Sheathed Cable: Types NM, NMC and NMS.

(1) Section 334.10 Uses permitted. See this section of the NEC but delete subsection (3) in its entirety.

(2) Section 334.12 Uses not permitted. (A) Types NM, NMC, and NMS. See this section of the NEC and add the following subsection: (11) type NM, NMC, or NMS shall not be installed in buildings, or structures such as stores, professional offices, motels, hotels, and other occupancies classified as commercial or industrial. Exception: apartment houses classified as R-2.

L. Article 340. Underground feeder and branch circuit cable: type UF. See this article of the NEC except as provided below.

(1) Section 340.10 Installation - Uses permitted. See this section of the NEC and add the following new subsections:

(a) (8) type UF cable shall be permitted to be imbedded in adobe construction;

(b) (9) type UF cable, or an approved electrical raceway shall be installed on straw bale residential construction.

(2) Section 340.12 Installation - Uses not permitted. See this section of the NEC and add the following new subsection: (12) Type UF cable shall not be installed in buildings or structures such as stores, professional offices, motels, hotels, or other occupancies classified as commercial or industrial.

M. Article 352 Rigid Polyvinyl Chloride Conduit: Type PVC. See this article of the NEC and add the following to section 352.10 uses permitted. (F) Exposed: PVC conduit, type schedule 40 shall not be used where the raceway is exposed and under eight (8) feet from

finished floor or grade.

N. Article 358 Electrical Metallic Tubing: Type EMT. See this article of the NEC and add the following section to 358.12 uses not permitted: (7) electrical metallic tubing shall not be permitted to be installed underground or in concrete slabs or walls which are in contact with the earth.

O. Article 394 Concealed knob and tube wiring. See this article of the NEC and add the following to section 394.12 uses not permitted: concealed knob and tube wiring shall not be permitted to be installed except by special written permission from the electrical bureau.

P. Article 422. Appliances. See this article of the NEC and add the following to section 422.19. evaporative cooling units: where an evaporative cooler is installed, a listed raceway shall be installed during rough-in from the control point to the evaporative cooler location. The raceway shall contain an equipment-grounding conductor from the control point outlet box to the junction box at the unit. The equipment grounding conductor shall be sized in accordance with table 250.122.

Q. Article 550. Mobile Homes, Manufactured Homes and Mobile Home Parks. See this article of the NEC except as provided below.

(1) Section 550.32 Service equipment. (A) Mobile home service equipment. Delete the text of this section of the NEC and substitute the following: the mobile home service equipment shall be located adjacent to the mobile home and not mounted in or on the mobile home. The service equipment shall be located in sight from and not more than one hundred (100) feet from the exterior wall of the mobile home it serves. The service equipment shall be permitted to be located elsewhere on the premises, provided that a disconnecting means marked "suitable for use as service equipment" is located in sight from and not more than thirty (30) feet from the exterior wall of the mobile home it serves. Grounding at the disconnecting means shall be in accordance with 250.32.

(2) Section 550.32 Service equipment. See this section of the NEC and add the following new subsections.

(a) (H) Required receptacle. A 125 volt 15 or 20 amp receptacle outlet shall be installed with ground fault circuit interruption protection at each remote mobile home or manufactured home service equipment, or the local external disconnecting means permitted in 550.32 (A).

(b) (I) Overhead services. Overhead service support shall comply with the serving utility requirements or be at least six inch by six inch (6" x 6") pressure-treated

timber or equivalent round poles (minimum 6" diameter crown) installed to a depth not less than four (4) feet below finish grade.

R. Article 800. Communications Circuits. See this article of the NEC and add the following to Section 800.154: applications of listed communications wires and cables and communication raceways: (H) dwelling unit communications circuits. Dwelling unit communications cable assemblies shall be a minimum of 4-pair No. 24 AWG conductors. Each 4 pair cable shall serve not more than three telephone outlets. Conductors shall terminate in a listed box or on a terminal block near the electrical service or location of telephone service. Any exterior wall penetration shall be installed in a listed raceway.

[14.10.4.11 NMAC - Rp, 14.10.4.10 NMAC, 7-1-08; A, 1-28-11]

14.10.4.14 RESIDENTIAL ENERGY CONSERVATION AND EFFICIENCY. See this chapter of the 2009 New Mexico energy conservation code and include the following.

[A. Scope. This article sets forth minimum requirements for the design of new buildings and structures or portions thereof and additions to existing buildings that provide facilities or shelter for public assembly, educational, business, mercantile, institutional, storage and residential occupancies designed primarily for human occupancy, by regulating their illuminating systems and equipment for effective use of energy.]

A. 404.1 Lighting equipment (mandatory). A minimum of 75 percent of the lamps in permanently installed lighting fixtures shall be high-efficacy lamps or 50 percent of the permanently installed luminaires (lighting fixtures) shall be *energy star* qualified.

[B. Exempt buildings. For exemptions see the New Mexico energy conservation code.]

[C. Lighting power budget.]

[(1) The interior lighting power is the upper limit of the power to be available to provide the lighting needs in accordance with the criteria and calculation procedures specified herein, and shall include the load of lamps and ballasts.]

[(2) The interior lighting power shall not exceed the unit power density permitted by the New Mexico energy conservation code.]

[(3) In lieu of the unit power density method, the interior lighting power may be calculated in accordance with the electrical power and lighting chapter of the New Mexico energy conservation code.]

[D. energy efficiency requirements:]

[(1) On new construction in one and two family dwelling units, a listed, non-flexible 11/4 inch electrical raceway shall be installed during rough-in from an accessible location in the garage or designated solar photovoltaic equipment location to the roof for photovoltaic wiring. The conduit shall be sealed with a listed fitting or box at each end.]

[(2) On new construction, additions or renovations to type B office occupancies, motion detecting switching shall be installed in any conference room for control of general illumination. Exception: accent or other room lighting controlled by dimmers, or lighting systems controlled by building energy management or automatic systems.]

[(3) On new construction, additions or renovations to one and two family dwelling units, fluorescent luminaires or compact fluorescent lamps (CFL) shall be installed in all laundry rooms, closets with luminaires, and attached or detached garages with electric power.]

[(4) In existing buildings where building wall and/or ceiling covering is replaced or disturbed replace 50% of the total luminaires (light fixtures), or lamps in those luminaires, with luminaires or lamps that qualify as ENERGY STAR. This requirement shall be limited to the area being altered, repaired or renovated.]

[(5) Where penetrating the building thermal envelope, recessed luminaires (light fixtures) shall be rated for insulation contact (IC) and shall be rated airtight.]

B. 404.2 lighting equipment (mandatory). **[(6) On one and two family dwelling unit(s), in addition to a wall switch, motion sensors, daylight sensors, and/or] timers shall be installed on at least 33% of the outdoor luminaires (light fixtures).**

C. 404.3 Photovoltaic raceway. On new construction in one and two family dwelling units a listed non-flexible 3/4 inch minimum metallic electrical raceway shall be installed during rough-in from an accessible point in the garage or indoor designated solar photovoltaic equipment location to: **1) the roof for roof mounted photovoltaic equipment; or 2) an outside wall for remote mounted photovoltaic equipment. The conduit shall be sealed with a listed fitting or box at each end.**

[14.10.4.14 NMAC - N, 7-1-08; A, 1-28-11]

14.10.4.15 COMMERCIAL ENERGY CONSERVATION AND EFFICIENCY. See this chapter of the 2009 New Mexico energy conservation code and include the following.

A. 505.1 General (mandatory). See this section of the IECC and add the following paragraph. Lighting

within dwelling units shall have 75 percent or more of the permanently installed interior light fixtures fitted with high-efficacy lamps or a minimum of 75 percent of the permanently installed lighting fixtures shall contain only high efficacy lamps. **Exception:** Delete the text of the exception and replace with the following: Low-voltage lighting.

B. 505.2 Lighting controls (mandatory). See this section of the IEBC except as provided below.

(1) 505.2.2 Additional controls. See this section of this code except as provided below.

(a) 505.2.2.1 Light reduction controls. See this section of the IECC except on Exception #4 remove the text in parenthesis without replacement and add exception #6 Daylight spaces complying with Section 505.2.2.2.3 Automatic daylighting controls.

(b) 505.2.2.2. Automatic lighting shutoff and 505.2.2.3 Daylight zone control. Delete these two sections of the IECC and replace with the following: **505.2.2.2 Automatic lighting controls.** All commercial buildings shall be equipped with automatic control devices to shut off lighting in compliance with one of the following automatic control technologies: 1. Section 505.2.2.2.1 Occupancy sensors; 2. Section 505.2.2.2.2 Time clock controls; 3. Section 505.2.2.3 Automatic daylighting controls.

(i) 505.2.2.2.1 Occupancy sensors. Occupancy sensors shall be installed in all classrooms, conference/meeting rooms, employee lunch and break rooms, private offices, restrooms, storage rooms and janitorial closets, and other spaces 300 sf. or less enclosed by ceiling height partitions. These automatic control devices shall be installed to automatically turn off lights within 30 minutes of all occupants leaving the space, except spaces with multi-scene control.

(ii) 505.2.2.2.2 Time clock controls. In areas not controlled by occupancy sensors, automatic time switch control devices shall be used. It shall incorporate an override switching device that: **1)** Is readily accessible; **2)** Is located so that a person using the device can see the lights or the area controlled by that switch, or so that the area being lit is annunciated; **3)** Is manually operated; **4)** Allows the lighting to remain on for no more than 2 hours when an override is initiated; **5)** Controls an area not exceeding 5,000 square feet (465 m²); **exceptions:** **a)** In malls and arcades, auditoriums, single-tenant retail spaces, industrial facilities and arenas, where captive-key override is utilized, override time may exceed 2 hours; **b)** In malls and arcades, auditoriums, single-tenant retail spaces, industrial facilities and arenas, the area controlled may not exceed 20,000 square feet (1860 m²).

(c) 505.2.2.3 Automatic daylighting controls. Delete the text of this section and replace with the following: Automatic controls installed in daylight zones shall control lights in the daylit areas separately from the non-day-lit areas. Controls for calibration adjustments to the lighting control device shall be readily accessible to authorized personnel. Each daylight control zone shall not exceed 2,500 square feet. Automatic daylighting controls must incorporate an automatic shut-off ability based on time or occupancy in addition to lighting power reduction controls. Controls will automatically reduce lighting power in response to available daylight by either one of the following method: **1) Continuous dimming** using dimming ballasts and daylight-sensing automatic controls that are capable of reducing the power of general lighting in the daylit zone continuously to less than 35% of rated power at maximum light output; **2) Stepped dimming** using multi-level switching and daylight-sensing controls that are capable of reducing lighting power automatically. The system should provide a minimum of two control channels per zone and be installed in a manner such that at least one control step shall reduce power of general lighting in the daylit zone by 30% to 50% of rated power and another control step that reduces lighting power by 65% to 100%. Stepped dimming control is not allowed in continuously occupied areas with ceiling heights of 14 feet or lower; **exception:** daylight spaces enclosed by walls or ceiling height partitions and containing 2 or fewer luminaire are not required to have a separate switch for general area lighting.

(2) 505.2.3 Delete the text and title of this section of the IECC and replace with the following. **Specific application controls.** Specific application controls shall be provided for the following: **1)** Display/Accent Lighting-display or accent lighting shall have a separate control device; **2)** Case Lighting-lighting in cases used for display purposes shall have a separate control device; **3)** Hotel and Motel Guest Room Lighting-hotel and motel guest rooms and guest suites shall have a master control device at the main room entry that controls all permanently installed luminaires and switched receptacles; **4)** Task Lighting-supplemental task lighting, including permanently installed under-shelf or under-cabinet lighting, shall have a control device integral to the luminaires or be controlled by a wall-mounted control device provided the control device is readily accessible and located so that the occupant can see the controlled lighting; **5)** Non-visual Lighting-lighting for non-visual applications, such as plant growth and food warming, shall have a separate control device; **6)** Demonstration Lighting-lighting equipment that is for sale or for demonstrations in lighting education shall have a separate control device. **Exception:** Where LED lighting is used no additional control is required for items 1, 2, or 4.

(3) 505.2.4 Functional testing. Controls for automatic lighting systems shall be tested prior to and as a condition for issuance of an approval under Section 104.8. Testing shall ensure that control hardware and software are calibrated, adjusted, programmed, and in proper working condition in accordance with the construction documents and manufacturer's installation instructions. The contractor shall be responsible for completing, or having completed, the functional testing and shall provide documentation to the *code official* certifying that the installed lighting controls meet the provisions of Section 505. When *occupant sensors*, time switches, programmable schedule controls, *photo sensors* or *day-lighting controls* are installed, at a minimum, the following procedures shall be performed: **1)** Confirm that the placement, sensitivity and time-out adjustments for *occupant sensors* yield acceptable performance, i.e. lights turn off only after space is vacated and do not turn on unless space is occupied; **2)** Confirm that the time switches and programmable schedule controls are programmed to turn the lights off; **3)** Confirm that photosensor controls reduce electric light based on the amount of usable daylight in the space as specified.

C. 505.3 Tandem wiring (mandatory) and 505.4 Exit signs (mandatory). See these sections of the IECC.

D. 505.5 Interior lighting power requirements (prescriptive). See this section of the IECC except as provided below:

(1) 505.5.2 Interior lighting power. See this section of the IECC and add the following: for the space-by space method, the interior lighting power allowances is determined by multiplying the floor area of each space times the value for the space-by-space type in table 505.5.2 that most closely represents the proposed use of the space, and then summing the lighting power allowances for all spaces. Trade-offs among spaces are permitted.

(2) Table 505.5.2 Delete the text of this table and replace with the following.

Table 505.5.2		
Lighting Power Density		
	Whole Building	Space by Space
Building Area Type ^a	(W/ft²)	
Active Storage		0.8
Atrium - First Three Floors		0.6
Atrium - Each Additional Floor		0.2
Automotive Facility	0.9	
Classroom/lecture/training		1.3
Conference/Meeting/Multipurpose		1.1
Corridor/Transition		0.5
Electrical/Mechanical		1.1
Food Preparation		1.2
Inactive Storage		0.2
Lobby		1.1
Restroom		0.8
Stairway		0.6
Convention Center	1.2	
Exhibit Space		1.3
Audience/Seating Area		0.9
COURTHOUSE	1.2	
Audience/Seating Area		0.9
Courtroom		1.9
Confinement Cells		0.9
Judges Chambers		1.3
Dressing/Locker/Fitting Room		0.6
Dining: Bar Lounge/Leisure	1.3	
Lounge/Leisure Dining		1.4
Dining: Cafeteria/Fast Food	1.4	
Dining: Family	1.6	
Dining		1.4
Kitchen		1.2
Dormitory	1	
Living Quarters		1.1
Bedroom		0.5
Study Hall		1.4
Exercise Center	1	
Dressing/Locker/Fitting Room		0.6
Audience/Seating Area		0.3
Exercise Area		0.9
Exercise Area/Gymnasium		0.9
Retail: Supermarket	1.3	
Gymnasium	1.1	
Dressing/Locker/Fitting Room		0.6
Audience/Seating Area		0.4
Playing Area		1.4
Exercise Area		0.9
Healthcare Clinic	1	
Corridors w/patient waiting, exam		1
Exam/Treatment		1.5
Emergency		2.7

<u>Public & Staff Lounge</u>		<u>0.8</u>
<u>Hospital/Medical supplies</u>		<u>1.4</u>
<u>Hospital - Nursery</u>		<u>0.6</u>
<u>Nurse station</u>		<u>1</u>
<u>Physical therapy</u>		<u>0.9</u>
<u>Patient Room</u>		<u>0.7</u>
<u>Pharmacy</u>		<u>1.2</u>
<u>Hospital/Radiology</u>		<u>0.4</u>
<u>Operating Room</u>		<u>2.2</u>
<u>Recovery</u>		<u>0.8</u>
<u>Active storage</u>		<u>0.9</u>
<u>Laundry-Washing</u>		<u>0.6</u>
<u>Hotel</u>	<u>1</u>	
<u>Dining Area</u>		<u>1.3</u>
<u>Guest quarters</u>		<u>1.1</u>
<u>Reception/Waiting</u>		<u>2.5</u>
<u>Lobby</u>		<u>1.1</u>
<u>Library</u>	<u>1.3</u>	
<u>Library-Audio Visual</u>		<u>0.7</u>
<u>Stacks</u>		<u>1.7</u>
<u>Card File & Cataloguing</u>		<u>1.1</u>
<u>Reading Area</u>		<u>1.2</u>
<u>Manufacturing Facility</u>	<u>1.3</u>	
<u>Motel</u>	<u>1</u>	
<u>Dining Area</u>		<u>1.2</u>
<u>Guest quarters</u>		<u>1.1</u>
<u>Reception/Waiting</u>		<u>2.1</u>
<u>Motion Picture Theater</u>	<u>1.2</u>	
<u>Audience/Seating Area</u>		<u>1.2</u>
<u>Lobby</u>		<u>1</u>
<u>Multi-Family</u>	<u>0.7</u>	
<u>Museum</u>	<u>1.1</u>	
<u>Active Storage</u>		<u>0.8</u>
<u>General exhibition</u>		<u>1</u>
<u>Restoration</u>		<u>1.7</u>
<u>Office</u>	<u>0.9</u>	-
<u>Enclosed</u>		<u>1</u>
<u>Open Plan</u>		<u>1</u>
<u>Penitentiary</u>	<u>1.0</u>	
<u>Parking Garage</u>	<u>0.3</u>	
<u>Performing Arts Theater</u>	<u>1.6</u>	
<u>Audience/Seating Area</u>		<u>2.6</u>
<u>Lobby</u>		<u>3.3</u>
<u>Dressing/Locker/Fitting Room</u>		<u>1.1</u>
<u>Police Stations</u>	<u>1</u>	
<u>Fire Stations</u>	<u>0.8</u>	
<u>Fire Station Engine Room</u>		<u>0.8</u>
<u>Sleeping Quarters</u>		<u>0.3</u>
<u>Audience/Seating Area</u>		<u>0.8</u>
<u>Police Station Laboratory</u>		<u>1.4</u>
<u>Post Offices/SF</u>	<u>1.1</u>	
<u>Sorting Area</u>		<u>1.2</u>
<u>Lobby</u>		<u>1</u>

Religious Buildings	1.3	
Lobby		0.6
Worship/Pulpit/Choir		2.4
Retail	1.3	
Department Store Sales Area		1.3
Specialty Store Sales Area		1.8
Fine Merchandise Sales Area		2.9
Supermarket Sales Area		1.3
Personal Services Sales Area		1.3
Mass Merchandising Sales Area		1.3
Mall Concourse		1.7
School/University	1.2	
Classroom		1.3
Audience		0.7
Dining		1.1
Office		1.1
Corridor		0.5
Storage		0.5
Laboratory		1.1
Retail: Specialty^b	1.6	
Town Hall	1.1	
Transportation	1	
Dining Area		2.1
Baggage Area		1
Airport - Concourse		0.6
Terminal - Ticket Counter		1.5
Reception/Waiting		0.5
Sports Arena	1.1	
Warehouse	0.6	
Fine Material		1.4
Medium/Bulky Material		0.6
Workshop	1.4	
<p>For SI: 1 foot = 304.8 mm, 1 watt per square foot = W/0.0929 m².</p> <p>a. In cases where both a general building area type and a more specific building area type are listed, the more specific building area type shall apply.</p> <p>b. Where lighting equipment is specified to be installed to highlight specific merchandise in addition to lighting equipment specified for general lighting and is switched or dimmed on circuits different from the circuits for general lighting, the smaller of the actual wattage of the lighting equipment installed specifically for merchandise, or additional lighting power as determined below shall be added to the interior lighting power determined in accordance with this line item. Calculate the additional lighting power as follows: Additional Interior Lighting Power Allowance = (Retail Area 1 X 0.6 4W/ft²) + (Retail Area 2 X 0.6 W/ft²) + (Retail Area 3 X 1.4 0.9 W/ft²) + (Retail Area 4 X 2.5 1.5 W/ft²).</p> <p>where:</p> <p>Retail Area 1 = The floor area for all products not listed in Retail Area 2, 3 or 4;</p> <p>Retail Area 2 = The floor area used for the sale of vehicles, sporting goods and small electronics.</p> <p>Retail Area 3 = The floor area used for the sale of furniture, clothing, cosmetics and artwork.</p> <p>Retail Area 4 = The floor area used for the sale of jewelry, crystal and china.</p> <p>Exception: Other merchandise categories are permitted to be included in Retail Areas 2 through 4 above, provided that justification documenting the need for additional lighting power based on visual inspection, contrast, or other critical display is <i>approved</i> by the authority having jurisdiction.</p>		

E. 505.6 Exterior lighting (mandatory) and 505.7 Electrical energy consumption (mandatory). See these sections of the IECC.

F. 506.3 Efficient lighting system. Whole building lighting power density (watts/sf) shall meet the requirements of table 506.3. and automatic daylighting control requirements in section 506.3.2. **NOTE: The provision of section 506.3 is deferred until January 1, 2013.**

(1) 506.3.1 Reduced lighting power density - The total interior lighting power (watts) is the sum of all interior lighting powers for all areas in the building. The interior lighting power is the floor area for the building times the value from table 506.3. **NOTE: The provision of section 506.3.1 is deferred until January 1, 2013.**

Building type ^a	Reduced whole building (Watts/Ft²)
Automotive Facility	0.79
Convention Center	1.16
Courthouse	1.08
Dining: Bar Lounge/Leisure	1.19
Dining: Cafeteria/Fast Food	1.34
Dining: Family	1.50
Dormitory	0.90
Exercise Center	0.92
Fire Stations	0.74
Gymnasium	1.07
Healthcare Clinic	0.89
Hotel	0.90
Library	1.00
Manufacturing Facility	1.24
Motel	0.90
Motion Picture Theater	1.18
Museum	1.04
Office	0.80
Performing Arts Theater	1.46
Police Stations	0.89
Post Office	0.98
Religious Buildings	1.18
Retail	1.30
Retail: Specialty	1.40
Retail: Supermarket	1.30
School/University	1.01
Town Hall	0.94
Transportation	0.85
Warehouse ^b	0.60
WORKSHOP	1.20

For SI: 1 foot = 304.8 mm, 1 watt per square foot = W/0.0929 m².

a. In cases where both a general building area type and a more specific building area type are listed, the more specific building area type shall apply.

b. At least one half of the floor area shall be in the daylight zone. Automatic day-lighting controls shall be installed in day-lit zones and shall meet the requirements of Section 505.2.2.3.

(2) 506.3.2 Automatic day-lighting controls. Automatic day-lighting controls shall be installed in all daylight zones and shall meet the requirements of Section 505.2.2.3. **Note: The provision of section 506.3.2 is deferred until January 1, 2013.**

G. 506.4 On-site supply of renewable energy. The building or surrounding property shall supply 3% or more of the building energy use associated with systems and equipment covered by this code through on-site renewable energy. On-site power generation using nonrenewable sources does not meet this requirement. The code official shall be provided with an energy analysis as described in Section 507 that documents that on-site renewable energy production is capable of providing at least 3% of the total estimated annual purchased energy for the building functions regulated by this code, or a calculation demonstrating that on-site renewable energy production has a nominal (maximum) rating of at least 1.75 BTUs or at least 0.50 watts per square foot of conditioned floor area. N Note: The provision of section 506.4 is deferred until January 1, 2013.

[E.] H. Night Sky Protection Act. Outdoor lighting shall comply with the Night Sky Protection Act.
[14.10.4.15 NMAC - N, 1-28-11]

NEW MEXICO DEPARTMENT OF WORKFORCE SOLUTIONS

This is an amendment to 11.3.500 NMAC, Section 12, effective February 14, 2011.

11.3.500.12 PRESENTATION OF FURTHER APPEALS:

A. An interested party aggrieved by a decision of the appeal tribunal is entitled to appeal to the cabinet secretary. A written communication clearly demonstrating a desire to appeal a determination to the cabinet secretary shall be filed with the department. The information submitted with the appeal shall include a clear statement of the relevant facts and a clear statement of the party's basis for appeal.

B. Secretary decision: The secretary shall review the application and shall, within fifteen days after receipt of the application for appeal, either affirm the decision of the hearing officer, remand the matter to the adjudicatory body for an additional hearing or new decision, remand to the claims section or tax section for further investigation and determination, or refer the decision to the board of review for further review and decision on the merits of the appeal. Issues of timeliness shall be decided by the secretary, who may refer the decision to the board of review.

(1) Decision in writing: Following the conclusion of a review on an appeal, the cabinet secretary shall issue his decision. The decision shall be in writing, shall include findings of fact and conclusions of law, and

shall be signed by cabinet secretary.

(2) Findings of fact shall be based exclusively on the record and matters officially noted.

(3) Publication of decision: Copies of any decision issued by the secretary shall be promptly transmitted to all interested parties to the appeal.

C. If the secretary takes no action within fifteen days of receipt of the application for appeal and review, the decision will be promptly scheduled for review by the board of review as though it had been referred by the secretary.

D. All appeals from a decision of the appeal tribunal filed more than fifteen days from the date of the appeal tribunal's decision shall be referred to the secretary, who may refer the decision to the board of review. In addition to the information required by Subsection A of 11.3.500.12 NMAC, all late appeals shall contain a concise statement setting forth the reasons for the late appeal. The secretary, or the board of review if the case has been referred to the board, may extend the time for filing any appeal from a decision of the appeal tribunal only upon showing of good cause.

E. Notice of review before the board of review: Notice of the scheduling of any appeal by the board of review shall be mailed to all interested parties at least ten calendar days before the date of review by the board. Such notice shall include the same information as specified in Subsection D of 11.3.500.9 NMAC.

F. Applications for leave to participate or intervene in an appeal: An interested party, if aggrieved by a decision of the appeal tribunal, but not a party to the proceeding before the appeal tribunal, may apply for leave to participate or intervene in an appeal before the board of review. The party applying for leave to participate or intervene in an appeal before the board of review shall file with the board of review an application for leave to join an appeal setting forth his interest in the matter appealed. The board of review shall have the discretionary power to approve or reject any such application.

[11.3.500.12 NMAC - N, 01-01-2003, A, 02-14-2011]

End of Adopted Rules Section

Submittal Deadlines and Publication Dates 2011

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