CITY OF BLOOMINGTON

COUNCIL MEETING AGENDA

109 E. OLIVE

MONDAY, FEBRUARY 24, 2014 7:00 P.M.

1. **Call to order**
2. **Pledge of Allegiance to the Flag**
3. **Remain Standing for a Moment of Silent Prayer**
4. **Roll Call of Attendance**
5. **Recognition/Appointments**
   - **A. Appointment of Ward 5 Alderman. (Recommend that the Appointment be approved.)**
   - **B. Oath of Office – Ward 5 Alderman**
6. **Consent Agenda**
   - **A. Council Proceedings of February 10, 2014. (Recommend that the reading of the minutes of the previous Council Proceedings of February 10, 2014 be dispensed with and the minutes approved as printed.)**
   - **B. Bills and Payroll. (Recommend that the Bills and Payroll be allowed and the orders drawn on the Treasurer for the various amounts as funds are available.)**
   - **C. Appointment to the Bloomington – Normal Economic Development Council Board. (Recommend that the Appointment be approved.)**
   - **D. Analysis of Bids for the Bloomington Fire Department Vehicle Fuel Exhaust Extrication Systems. (Recommend that the bids be rejected and the project be rebid in Fiscal Year (FY) 2015.)**
   - **E. Analysis of Bids for New Freezer / Refrigerator for Miller Park Zoo. (Recommend that the bid for a new freezer / refrigerator be awarded to US Mechanical Services, in the amount of $32,195, and the Procurement Manager be authorized to issue a Purchase Order for same.)**

F. **Purchase of Replacement Desktop, Notebook and Workstation Computers. (Recommend that the purchase of one hundred twenty-nine (129) Hewlett Packard ProDesk 600 G1 Small Form Factor Personal Computers, twelve (12) Hewlett Packard ProBook 650 G1 Notebook Personal Computers and nineteen (19) Hewlett Packard Z230 Tower Workstation Computers, using the formal Western States Contracting Alliance contract for a total of $110,636 be approved, and the Procurement Manager be authorized to issue a purchase order for same.)**

G. **Contract Amendment with Microsurfacing Contractors, LLC for 2013 Washington Street Micro-Surfacing Contract. (Recommend that the Amendment to the Contract for 2013 Washington Street Micro-Surfacing, with Microsurfacing Contractors, LLC, in the amount of $3,543.30, be approved.)**

H. **Supplemental Motor Fuel Tax Resolution for Airport Rd. (Rt. 9 to Gill St.) MFT Section 97-00315-00-RP. (Recommend that the supplemental resolution in the amount of $171,886.25 be adopted.)**

I. **Supplemental Motor Fuel Tax Resolution for Downtown Intersection Improvements MFT Section 02-00328-00-TL. (Recommend that the supplemental resolution in the amount of $9,700.55 be adopted.)**

J. **Adoption of the 2012 editions of the International Building, Residential, Fire, Mechanical, Fuel Gas and Energy Codes; as well as the adoption of the 2014 edition of the National Electric Code. (Recommend that the International Codes and National Electric Code be adopted and the Ordinance passed.)**

K. **Suspension of Ordinances to Allow Consumption of Alcohol at Miller Park Pavilion on March 8, 2014. (Recommend that the Ordinance be passed.)**

L. **Composition of the Citizen's Beautification Committee. (Recommend that the Text Amendment be approved and the Ordinance be passed.)**

M. **Community Garden Land Lease Agreement Renewal. (Recommend that the Land Lease Renewal Agreement with Sunrise Co. LLC, in the amount of $1.00 per year, be approved and the Mayor and City Clerk be authorized to execute the necessary documents.)**

7. Regular Agenda

A. **Joint Bloomington-Normal RFP and Agreement for Solid Waste Disposal (landfill) Services. (Recommend that the RFP for Solid Waste Disposal Services be awarded to Allied Waste Services (Republic) and the Mayor and City Clerk be authorized to execute the necessary documents.) (15 minutes)**

B. **City Manager Proposed FY 2014/2015 Budget Presentation (45 minutes)**

8. City Manager's Discussion

9. Mayor's Discussion

10. City Aldermen's Discussion

11. **Executive Session – cite section**
12. **Adjournment**
13. **Notes**

Item 5A.

Appointment of Ward 5 Alderman

Will be provided via addendum

FOR COUNCIL: February 24, 2014

SUBJECT: Council Proceedings of February 10, 2014

RECOMMENDATION/MOTION: That the reading of the minutes of the previous Council Proceedings of February 10, 2014 be dispensed with and the minutes approved as printed.

STRATEGIC PLAN LINK: Goal 1. Financially sound City providing quality basic services.

STRATEGIC PLAN SIGNIFICANCE: Objective 1d. City services delivered in the most cost-effective, efficient manner.

BACKGROUND: The Council Proceedings of February 10, 2014 have been reviewed and certified as correct and complete by the City Clerk.

In compliance with the Open Meetings Act, Council Proceedings must be approved within thirty (30) days after the meeting or at the Council's second subsequent regular meeting whichever is later.

In accordance with the Open Meetings Act, Council Proceedings are made available for public inspection and posted to the City's web site within ten (10) days after Council approval.

COMMUNITY GROUPS/INTERESTED PERSONS CONTACTED: Not applicable.

FINANCIAL IMPACT: Not applicable.

Respectfully submitted for Council consideration.

Prepared by: Tracey Covert, City Clerk

Recommended by:

David A. Hales
City Manager

Attachments: Attachment 1. Draft Council Proceedings for February 10, 2014

Motion: _____ Seconded by: _____

	Aye	Nay	Other		Aye	Nay	Other
Alderman Black				Alderman Mwilambwe			
Alderman Fazzini				Alderman Sage			
Alderman Fruin				Alderman Schmidt			
Alderman Lower				Alderman Stearns			
				Mayor Renner			

COUNCIL PROCEEDINGS
PUBLISHED BY THE AUTHORITY OF THE CITY COUNCIL
OF BLOOMINGTON, ILLINOIS

The Council convened in regular Session in the Council Chambers, City Hall Building, at 7:02 p.m., Monday, February 10, 2014.

The Meeting was opened by Pledging Allegiance to the Flag followed by moment of silent prayer.

The Meeting was called to order by the Mayor who directed the City Clerk to call the roll and the following members answered present:

Aldermen: Judy Stearns, Mboka Mwilambwe, Kevin Lower, David Sage, Robert Fazzini, Scott Black, Karen Schmidt, Jim Fruin and Mayor Tari Renner.

City Manager David Hales, City Clerk Tracey Covert, and Asst. Corporate Counsel Rosalee Dodson were also present.

PUBLIC COMMENT: Mayor Renner opened the Public Comment section of the meeting. He added that there would not be a response from the City under the Public Comment portion of the meeting.

Charles Baue, 601 Lutz Rd., addressed the Council. Mr. Baue read from the September 12, 2005 Council Proceedings regarding the petition to construct Luther Oaks, (Senior Living Community). He called attention to the need to improve Lutz Rd. The Planning Commission's August 24, 2005 minutes noted that David Sage, Planning Commission member, commented that the only access to the facility would be via Lutz Rd. Mr. Sage questioned proceeding knowing that it would be years before this road would be improved. The petitioner confirmed their intention to proceed but hoped Lutz Rd. would receive attention in the near future. The Commission approved the petition and suggested road improvements be addressed in the next five (5) year budget cycle.

Alton Franklin, 508 Patterson Dr., addressed the Council. He believed that the Council had not learned from past mistakes. He cited the US Cellular Coliseum with an annual expenditure over $2 million. Government should not be involved in business and/or meddle in the local economy. Taxpayers paid for misjudgments. He opposed a Downtown hotel. If it was a good idea, then private companies would be willing to build one. There was no benefit to the citizens. There was a $14 million funding gap. The City should address pensions first.

The following was presented:

SUBJECT: Proclamation of February 10, 2014 as Alex Wellman Day

RECOMMENDATION: That the proclamation be made a matter of record.

BACKGROUND: The proclamation will be presented:

Declaring February 10, 2014 to be Alex Wellman Day.

COMMUNITY GROUPS/INTERESTED PERSONS CONTACTED: Not applicable.

FINANCIAL IMPACT: Not applicable.

Respectfully submitted for Council consideration.

Prepared by: Tracey Covert, City Clerk

Recommended by:

David A. Hales
City Manager

Mayor Renner read and presented the Proclamation to Alex Wellman. Mr. Wellman was accompanied by his parents, Madalyn Brook, his coach and Lena Chouilhury, Central IL Figure Skating Club's President. Ms. Chouilhury stated that Mr. Wellman started his skating career by participating in the programs offered by the Parks, Recreation & Cultural Arts Department at the Pepsi Ice Center. She thanked Council for their support of this program.

Motion by Alderman Fazzini, seconded by Alderman Mwilambwe that the Proclamation be made a matter of record.

The Mayor directed the clerk to call the roll which resulted in the following:

Ayes: Aldermen Stearns, Mwilambwe, Schmidt, Lower, Fazzini, Sage, Fruin and Black.

Nays: None.

Motion carried.

The following was presented:

SUBJECT: Presentation of Sunshine Award by Illinois Policy Institute

RECOMMENDATION/MOTION: That the Award be accepted.

STRATEGIC PLAN LINK: Goal 1. Financially sound City providing quality basic services.

STRATEGIC PLAN SIGNIFICANCE: Objective 1c. Engaged residents that are well informed and involved in an open governance process.

BACKGROUND: In an effort to improve the City's transparency, staff has worked with the Illinois Policy Institute (IPI) to improve the City's website.

On October 17, 2013 the City's overall score was 67.2. David Hales, City Manager and Katie Buydos, Executive Assistant, set the goal of reaching 80 points by April 30, 2014. Craig McBeath, Webmaster, and Ms. Buydos worked together with several other departments to gather the information needed to improve the City's score.

A transparency portal was added to the City's website with links to all the information that the Illinois Policy Institute has mandated that every City have easily available to its residents.

On January 13, 2014 the City reached 77.2 points and by January 31, 2014 reached 88.7 points. The new score surpassed the goal of 80 by 8.7 points.

The City reached 88.7 points by the IPI's deadline for the Sunshine Award which is given to communities annually for holding a score of 80 or more. Of the top twenty-five (25) municipalities rated by the IPI, thirteen (13) are receiving the Sunshine Award this year including one (1) other Central Illinois community: Peoria (92.2). The award is being presented by Brian Costin, IPI's Director of Government Reform.

COMMUNITY GROUPS/INTERESTED PERSONS CONTACTED: Not applicable.

FINANCIAL IMPACT: None.

Respectfully submitted for Council consideration.

Prepared by: Kathryn Buydos, Executive Asst.

Recommended by:

David A. Hales
City Manager

Mayor Renner introduced this item. He introduced Brian Costin, Illinois Policy Institute's (IPI) Director of Government Reform.

Mr. Costin stated that the IPI was a 501(3)c non-profit organization. Part of their mission was to assist local governments become more transparent. The Local Transparency Project was started in 2010. It featured a ten (10) point checklist of goals to adopt. The IPI has evaluated over 300 web sites. He cited several highlights on the checklist. He stated that the Sunshine Award was reserved for governments that have excelled. He had attended Illinois State University and was pleased to return to the community. The City was one (1) of fifty-three (53) out of over 7,000 local governments in the state to qualify for this award. The City had the highest score outside of the Chicago metro area. The program helped to fight government corruption, restore the public's trust and increase public participation. He recognized Mayor Renner, David Hales, City Manager, Tracey Covert, City Clerk and Katie Buydos, Executive Asst., and others for their efforts. He presented the award to Mayor Renner.

David Hales, City Manager, addressed the Council. He added Ms. Buydos worked with City staff including Craig McBeath, Webmaster and Ms. Covert, along with staff from the Human Resources and Finance Departments to improve the City's score. It was a team effort. He asked Mr. Costin to comment on a bill that had been presented to state's legislators.

Mr. Costin stated that proposed bill, (HB3312), would have required local governments over a certain size to maintain a web site and include all items from the checklist. Currently, the IPI called for five (5) years of information to be posted. He noted that a new bill would be introduced with new requirements. He expressed his hope that the bill may pass this year.

Mayor Renner thanked Mr. Costin for the award.

The following was presented:

SUBJECT: Council Proceedings of January 27, 2014, Special Session Minutes from July 22, August 12, September 23, October 28, November 12, December 9 and December 16, 2013, and Work Session Minutes from January 13, 2014

RECOMMENDATION/MOTION: That the reading of the minutes of the previous Council Proceedings of January 27, 2014, Special Session Minutes from July 22, August 12, September 23, October 28, November 12, December 9 and December 16, 2013, and Work Session Minutes from January 13, 2014 be dispensed with and the minutes approved as printed.

STRATEGIC PLAN LINK: Goal 1. Financially sound City providing quality basic services.

STRATEGIC PLAN SIGNIFICANCE: Objective 1d. City services delivered in the most cost-effective, efficient manner.

BACKGROUND: The Council Proceedings of January 27, 2014, Special Session Minutes from July 22, August 12, September 23, October 28, November 12, December 9 and December 16,

2013, and Work Session Minutes from January 13, 2014 have been reviewed and certified as correct and complete by the City Clerk.

In compliance with the Open Meetings Act, Council Proceedings must be approved within thirty (30) days after the meeting or at the Council's second subsequent regular meeting whichever is later.

In accordance with the Open Meetings Act, Council Proceedings are made available for public inspection and posted to the City's web site within ten (10) days after Council approval.

COMMUNITY GROUPS/INTERESTED PERSONS CONTACTED: Not applicable.

FINANCIAL IMPACT: Not applicable.

Respectfully submitted for Council consideration.

Prepared by: Tracey Covert, City Clerk

Recommended by:

David A. Hales
City Manager

Motion by Alderman Fazzini, seconded by Alderman Mwilambwe that the reading of the minutes of the previous Council Proceedings of January 27, 2014, Special Session Minutes from July 22, August 12, September 23, October 28, November 12, December 9 and December 16, 2013, and Work Session Minutes from January 13, 2014 be dispensed with and the minutes approved as printed.

The Mayor directed the clerk to call the roll which resulted in the following:

Ayes: Aldermen Stearns, Mwilambwe, Schmidt, Lower, Fazzini, Sage, Fruin and Black.

Nays: None.

Motion carried.

The following was presented:

SUBJECT: Bills and Payroll

RECOMMENDATION/MOTION: That the bills and payroll be allowed and orders drawn on the Treasurer for the various amounts as funds are available.

STRATEGIC PLAN LINK: Goal 1. Financially sound City providing quality basic services.

STRATEGIC PLAN SIGNIFICANCE: Objective 1d. City services delivered in the most cost-effective, efficient manner.

BACKGROUND: The list of bills and payrolls will be posted on the City's website on Thursday, February 6, 2014.

COMMUNITY GROUPS/INTERESTED PERSONS CONTACTED: Not applicable.

FINANCIAL IMPACT: Total disbursements information will be provided via addendum.

Respectfully submitted for Council consideration.

Prepared by: Tracey Covert, City Clerk

Financial & budgetary review by: Patti-Lynn Silva, Director of Finance

Recommended by:

David A. Hales
City Manager

Motion by Alderman Fazzini, seconded by Alderman Mwilambwe that the Bills and Payroll be allowed and the orders drawn on the Treasurer for the various amounts as funds are available.

The Mayor directed the clerk to call the roll which resulted in the following:

Ayes: Aldermen Stearns, Mwilambwe, Schmidt, Lower, Fazzini, Sage, Fruin and Black.

Nays: None.

Motion carried.

The following was presented:

SUBJECT: Appointment to Public Building Commission

RECOMMENDATION/MOTION: That the Appointment be approved and the Resolution adopted.

STRATEGIC PLAN LINK: Goal 3. Strong neighborhoods.

STRATEGIC PLAN SIGNIFICANCE: Objective 3e. Strong partnership with residents and neighborhood associations.

BACKGROUND: I ask your concurrence in the appointment of Thomas Good of 1314 Crown Ct., 61704 to the Public Building Commission. Mr. Good will be serving out the remainder of the term vacated by Robert W. Rush, Jr. His term expiration date is September 30, 2015.

COMMUNITY GROUPS/INTERESTED PERSONS CONTACTED: Mayor contacts all recommended appointments.

FINANCIAL IMPACT: None.

Respectfully submitted for Council consideration.

Prepared by: Kathryn Buydos, Executive Asst.

Recommended by:

Tari Renner
Mayor

RESOLUTION NO. 2014 - 04

RESOLUTION FOR APPOINTMENT OF THOMAS GOOD AS A COMMISSIONER OF THE PUBLIC BUILDING COMMISSION OF MCLEAN COUNTY

WHEREAS, the term of Thomas Good as this City's appointee to the Public Building Commission of McLean County, Illinois expires on September 30, 2015 and it is serving the remainder of Robert W. Rush, Jr.'s term.

WHEREAS, the Mayor of the City of Bloomington in accordance with the provisions of Chapter 50 of the Illinois Compiled Statutes Act 20/5 has the responsibility to fill the expiration of a five (5) year term by appointment or reappointment, with the advice and consent of the City Council.

BE IT THEREFORE RESOLVED, that the City Council of the City of Bloomington, now in regular session deems it appropriate to give its advice and consent to the appointment of Thomas Good as a commissioner of the Public Building Commission of McLean County, Illinois serving the remainder of a five (5) year term scheduled to expire on September 30, 2015 or until his successor shall have been qualified and appointed.

BE IT FURTHER RESOLVED, that the City Clerk shall forward a certified copy of this Resolution of Appointment of Thomas Good to the Public Building Commission of McLean County, Illinois.

Adopted by the City Council of the City of Bloomington this 10th day of February, 2014.

APPROVED:

Tari Renner
Mayor

ATTEST:

Tracey Covert
City Clerk

Motion by Alderman Fazzini, seconded by Alderman Mwilambwe that the Appointment be approved and the Resolution be adopted.

The Mayor directed the clerk to call the roll which resulted in the following:

Ayes: Aldermen Stearns, Mwilambwe, Schmidt, Lower, Fazzini, Sage, Fruin and Black.

Nays: None.

Motion carried.

The following was presented:

SUBJECT: Purchase of Thermo Scientific FirstDefender RMX Spectrometer

RECOMMENDATION/MOTION: That the purchase of one FirstDefender RMX Spectrometer from Thermo Scientific Portable Analytical Instruments Inc., including a five (5) year warranty and training, be approved in the amount of $71,800, the Procurement Manager be authorized to issue a Purchase Order, and the Resolution adopted.

STRATEGIC PLAN LINK: Goal 1. Financially sound City providing quality basic services.

STRATEGIC PLAN SIGNIFICANCE: Objective 1d. Deliver hazardous material services in the most cost effective and efficient manner and to upgrade equipment for the hazardous materials team to provide vital services to the community.

BACKGROUND: The Fire Department has the sole hazardous materials team within forty (40) miles of Bloomington/Normal. The team began in 2002 when Mutual Aid Box Alarm System (MABAS) was looking for teams in the downstate area for Hazardous Materials and Technical Rescue (TRT). To prevent duplication of efforts and to eliminate burdening one department,

Normal agreed to take the TRT and the City took the hazardous materials team. Almost all of the start-up equipment was provided by MABAS through State ITTF grants. This included all of the suits, monitoring equipment, weather stations and much more. The total cost per team was around $500,000. Since that time, MABAS has provided the funds to maintain the equipment. MABAS has not replaced any of the more expensive equipment due to lack of funding.

The FirstDefender RMX is a critical piece of equipment that allows for identification of unknown hazardous materials. The technology that exists in this device is superior to the existing equipment in our inventory. The team is utilizing the ***HazMat ID*** at this time. This unit requires direct contact with the substance for identification which can add additional risk to personnel during sampling. The ***HazMat ID*** is also over ten (10) years old and was state of the art when it was purchased by MABAS. The current unit uses FTIR technology. The FirstDefender uses FTIR and Raman technology that complement each other to cover a wider spectrum of substances.

Another advantage to the First Defender is that it is hand held and much easier to use in the field. The ***HazMat ID*** is a much larger device that requires initial set up. This makes it difficult to use effectively in the field. After evaluating different types of hand held units, the FirstDefender was far superior for the purpose of identifying unknown substances. It also has the advantage of being able to read the sample through a glass vial to prevent contamination to the equipment and minimize contact by personnel.

The Hazardous Materials team has often responded to unknown substance calls including several white powder threats. These responses will continue to be a challenge for our team and for our community with the continued threat of both domestic and international terrorism. The unit can also be utilized in conjunction with Law Enforcement efforts in the event of suspected meth lab activities to identify unstable substances and minimizing contact with potential evidence.

The expected useful life of this unit is ten (10) years, but may be more. The software can be upgraded from any computer to extend the life of the unit. The FirstDefender RMX is a necessary piece of equipment that will allow our Hazardous Materials team to function effectively with unknown hazardous substances to provide safe and effective mitigation operations for personnel and for rapid and effective response to the community.

COMMUNITY GROUPS/INTERESTED PERSONS CONTACTED: Not applicable.

FINANCIAL IMPACT: Staff is requesting to waive the formal bid process. After research and evaluation of other units, the Thermo Scientific FirstDefender RMX has the best operational features for use by our hazardous materials team. This is a highly specialized piece of equipment and there are few vendors that produce equipment for this purpose. Along with the equipment purchase, there is a five (5) year service agreement. Ahura Scientific, which sells the unit, was acquired by Thermo Fisher Scientific in 2009 and is the only vendor and servicer of the unit. The funds for the unit will come from Budget Line Item 79990 Other Expenses.

Respectfully submitted for Council consideration.

Prepared by: Lester Siron, Deputy Chief of Operations

Reviewed by: Mike Kimmerling, Fire Chief

Financial & budgetary review by: Jon C. Johnston, Procurement Manager

Recommended by:

David A. Hales
City Manager

RESOLUTION NO. 2014 - 05

A RESOLUTION WAIVING THE FORMAL BIDDING PROCESS AND AUTHORIZING THE PURCHASE OF ONE FIRSTDEFENDER RMX SPECTROMETER FOR THE BLOOMINGTON FIRE DEPARTMENT FROM THERMO SCIENTIFIC PORTABLE ANALYTICAL INSTRUMENTS INC., A SOLE SOURCE PROVIDER, AT A PURCHASE PRICE OF $71,800

Be It Resolved by the City Council of the City of Bloomington, Illinois,

1. That the bidding process be waived and the Purchasing Agent be authorized to Purchase one FirstDefender RMX Spectrometer from Thermo Scientific Portable Analytical Instruments Inc., a sole source provider, at a Purchase Price of $71,800.

ADOPTED this 10th day of February, 2014.

APPROVED this 11th day of February, 2014.

APPROVED:

Tari Renner
Mayor

ATTEST:

Tracey Covert
City Clerk

Motion by Alderman Fazzini, seconded by Alderman Mwilambwe that the purchase of one FirstDefender RMX Spectrometer from Thermo Scientific Portable Analytical

Instruments Inc., including a five (5) year warranty and training, be approved in the amount of $71,800, the Procurement Manager be authorized to issue a Purchase Order, and the Resolution adopted.

The Mayor directed the clerk to call the roll which resulted in the following:

Ayes: Aldermen Stearns, Mwilambwe, Schmidt, Lower, Fazzini, Sage, Fruin and Black.

Nays: None.

Motion carried.

The following was presented:

SUBJECT: Budget Amendment Necessary to Order Additional Black Wheeled Refuse Carts

RECOMMENDATION/MOTION: That Fiscal Year (FY) 2014 Budget Amendment be approved and the Ordinance passed.

STRATEGIC PLAN LINK: Goal 1. Financially sound City providing quality basic services.

STRATEGIC PLAN SIGNIFICANCE: Objective 1d. City services delivered in the most cost effective, efficient manner.

BACKGROUND: On September 9, 2013, the City Council passed an ordinance authorizing staff to purchase sixty-five (65) and ninety-five (95) gallon refuse carts, in an amount up to $950,000. On August 13, 2012, Council approved Rehrig Pacific as the cart vendor. The term of the contract with Rehrig was for one (1) year at the bid price with four (4) annual renewal options. Price increases are possible due to increase in cost of materials, transportation and other factors. The City may negotiate each renewal and seek another vendor if mutual agreement cannot be reached. Further contract extensions are possible by mutual consent. Overall staff has been pleased with the Rehrig product based on experience since recycling collection was automated.

The Council action on September 9, 2013, and related budget amendment was for an estimated 19,000 carts. As the program is being implemented and Council approved an additional cart size of thirty-five (35) gallon, additional carts needed to be ordered that exceed the $950,000 budgeted amount. A total of 24,537 carts are needed at this time. There are also some additional costs due to increased materials costs, delivery charges, and additional lids to allow recycle carts to be converted to refuse carts. It is proposed that the additional cart costs be paid from capital lease proceeds.

The attached budget amendment includes the necessary funds to cover the additional costs of the refuse carts described above. The budget amendment also incorporates savings in previous

capital lease purchases to cover some of the costs, as well as includes adjustments for some additional costs not previously budgeted for the recycle cart program.

COMMUNITY GROUPS/INTERESTED PERSONS CONTACTED: See Council proceedings dated August 13, 2012, regarding the selection of Rehrig Pacific Company as vendor to provide sixty-five (65) and ninety-five (95) gallon black wheeled recycling and refuse carts with blue lids.

FINANCIAL IMPACT: The total increased cost to implement the refuse cart program as outlined by Council is $286,217.45. Utilizing savings in the already approved capital lease program creates a net impact of $88,059.75. Therefore, a budget amendment is necessary for $88,059.75 which is not included in the FY 2014 budget. This budget amendment also includes adjustments for some additional costs related to the recycle cart program expended but not previously budgeted (i.e. delivery charges and some additional carts for citizens). The current budget for the Capital Lease Fund can be found on page 110 in the FY 2014 Budget Book titled Other Funds & Capital Improvement Program. Future year payments on the capital leases are included in the Solid Waste Fund budget. Please see Exhibit 1 for general ledger account numbers.

Respectfully submitted for Council consideration.

Prepared by:	Paulette Hurd, Chief Accountant
Reviewed by:	Jim Karch, Director of Public Works
Financial & budgetary review by:	Patti-Lynn Silva, Director of Finance
Legal review by:	Rosalee Dodson, Asst. Corporation Counsel

Recommended by:

David A. Hales
City Manager

ORDINANCE NO. 2014 – 06

AN ORDINANCE AMENDING THE BUDGET ORDINANCE FOR THE FISCAL YEAR ENDING APRIL 30, 2013

WHEREAS, on April 8, 2013 by Ordinance Number 2013 - 18, the City of Bloomington passed a Budget and Appropriation Ordinance for the Fiscal Year Ending April 30, 2014, which Ordinance was approved by Mayor Stephen F. Stockton on April 9, 2013; and

WHEREASE, a budget amendment is needed as detailed below;

NOW, THEREFORE BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BLOOMINGTON, ILLINOIS:

Section One: Ordinance Number 2013 - 18 (the Budget and Appropriation Ordinance for the Fiscal Year Ending April 30, 2014) is further hereby amended by inserting the following line items and amounts presented in Exhibit #1 in the appropriate place in said Ordinances.

Section Two: Except as provided for herein, Ordinance Number 2013 - 18 shall remain in full force and effect, provided, that any budgeted or appropriated amounts which are changed by reason of the amendments made in Section One of this Ordinance shall be amended in Ordinance Number 2013 - 18.

Section Three: This Ordinance shall be in full force and effect upon its passage and approval.

PASSED the 10th day of February, 2014.

APPROVED the 11th day of February, 2014.

APPROVED:

Tari Renner
Mayor

ATTEST:

Tracey Covert
City Clerk

EXHIBIT #1

Account	Fund	Organization	Account Name	Revision
40110110-72140	Capital Lease	FY 2012 Capital Lease	Capital Outlay Equipment Other	$30,548.70
40110120-72140	Capital Lease	FY 2013 Capital Lease	Capital Outlay Equipment Other	$64,000.00
40110130-72120	Capital Lease	FY 2014 Capital Lease	Capital Office & Computer Equipment	($200,000.00)
40110130-72130	Capital Lease	FY 2014 Capital Lease	Capital Outlay Licensed Vehicles	($20,937.00)
40110130-72140	Capital Lease	FY 2014 Capital Lease	Capital Outlay Equipment Other	($32,496.00)
40110130-72140	Capital Lease	FY 2014 Capital Lease	Capital Outlay Equipment Other	$24,726.60
40110130-72140	Capital Lease	FY 2014 Capital Lease	Capital Outlay Equipment Other	$222,217.45
			Overall Impact on City Budget	$88,059.75

Motion by Alderman Fazzini, seconded by Alderman Mwilambwe that Fiscal Year (FY) 2014 Budget Amendment be approved and the Ordinance passed.

The Mayor directed the clerk to call the roll which resulted in the following:

Ayes: Aldermen Stearns, Mwilambwe, Schmidt, Lower, Fazzini, Sage, Fruin and Black.

Nays: None.

Motion carried.

The following was presented:

SUBJECT: Application of Ralben, Inc., d/b/a Bonkers, located at 1507 S. Main St., requesting a TAPS liquor license which would allow the sale of all types of alcohol by the glass for consumption on the premises and the sale of all types of packaged alcohol for consumption off the premises seven (7) days a week

RECOMMENDATION/MOTION: That an TAPS liquor license for Ralben, Inc., d/b/a Bonkers, located at 1507 S. Main St., be created, contingent upon compliance with all applicable health and safety codes.

STRATEGIC PLAN LINK: Goal 4. Grow the local economy.

STRATEGIC PLAN SIGNIFICANCE: Objective 4a. Retention and growth of current local business.

BACKGROUND: The Bloomington Liquor Commissioner Tari Renner called the Liquor Hearing to consider the application of Ralben, Inc., d/b/a Bonkers located at 1507 S. Main St., requesting a TAPS liquor license which would allow the sale of all types of alcohol by the glass for consumption on the premises and the sale of all types of packaged alcohol for consumption off the premises seven (7) days a week. Present at the hearing were Liquor Commissioners Tari Renner, Geoffrey Tompkins and Jim Jordan; George Boyle, Asst. Corporation Counsel, Clay Wheeler, Asst. Police Chief, and Tracey Covert, City Clerk; and Bill Bentley, owner/operator, and Applicant representative.

Commissioner absent: Stephen Stockton.

Commissioner Renner questioned the purpose of this application. He noted that this application involved a 100% change in stockholder. Bill Bentley, owner/operator and Applicant representative, addressed the Commission. He read from a prepared statement. Bonkers was a neighborhood bar with established clientele. Patti Quinn-Jones, current owner/operator and license holder, would manage the business for an additional year. His intention was to maintain the status quo. He cited the other surrounding properties which he owned and/or managed. Bonkers would be an investment property/business.

Commissioner Jordan questioned if there were any contingencies which would require Ms. Quinn-Jones to remain for one (1) year.

Mr. Bentley responded affirmatively. There was a contract between the parties.

Commissioner Jordan questioned if there were any past issues at Bonkers.

George Boyle, Asst. Corporation Counsel, responded negatively.

Motion by Commissioner Tompkins, seconded by Commissioner Jordan that the application by Ralben, Inc., d/b/a Bonkers located at 1507 S. Main St., requesting a TAPS liquor license, which allows the sale of all types of alcohol by the glass for consumption on the premises and the sale of all types of packaged alcohol for consumption off the premises seven (7) days a week be approved contingent upon compliance with life safety codes.

Motion carried, (unanimously).

COMMUNITY GROUPS/INTERESTED PERSONS CONTACTED: Public notice was published in the Pantagraph on January 6, 2014 in accordance with City Code. In accordance with City Code, approximately six (6) courtesy copies of the Public Notice were mailed. In addition, the Agenda for the January 14, 2014 Meeting of the Liquor Commission was placed on the City's web site. There also is a list serve feature for the Liquor Commission.

FINANCIAL IMPACT: None. Request is for a change of ownership. Annual fee for a TAPS liquor license is $2,210.

Respectfully submitted for Council consideration.

Recommended by:

Tari Renner
Mayor

Motion by Alderman Fazzini, seconded by Alderman Mwilambwe that a TAPS liquor license for Ralben, Inc., d/b/a Bonkers, located at 1507 S. Main St., be created, contingent upon compliance with all applicable health and safety codes.

The Mayor directed the clerk to call the roll which resulted in the following:

Ayes: Aldermen Stearns, Mwilambwe, Schmidt, Lower, Fazzini, Sage, Fruin and Black.

Nays: None.

Motion carried.

The following was presented:

SUBJECT: Approval of the Stone River Group for Professional Services to Obtain Electricity and Natural Gas Pricing for a Three (3) Year Period

RECOMMENDATION/MOTION: That a Professional Service Agreement with the Stone River Group, Lincoln, IL, for Professional Energy Services be approved and the Mayor and City Clerk be authorized to execute the necessary documents.

STRATEGIC PLAN LINK: Goal 1. Financially sound City providing quality basic services.

STRATEGIC PLAN SIGNIFICANCE: Objective 1d. City services delivered in the most cost-effective, efficient manner.

BACKGROUND: This request is for all City natural gas accounts and electricity accounts that have kilowatt-hour (kWh) usage above the municipal aggregation maximum of 15,000 kWh per year. The municipal aggregation program does not cover large electricity users. Examples of large City user accounts include:

Water Treatment Plant	Center for Performing Arts	City Hall
Water Pumping Stations	Creativity Center	Fire Stations
Police Department	Public Library	

The City has been using Integrys Energy to purchase our energy for the past several years. Currently, the City is paying $.05116 per kwh, non-summer rates from Ameren and $.43 per

therm from Nicor Gas. The municipal aggregate rate from Homefield Energy is $.04539 per kwh. In FY 2013, the City paid $2.8 million for electricity and $164,618 for natural gas.

In evaluating the needs of the City, staff found many cities and towns use brokers to purchase their needed power while others, like the City of Peoria, does not use a broker but purchases direct from the market using their own staff. In the first quarter of 2012, the Town of Normal undertook an evaluation process of several electricity consulting companies including Integrys, Direct Energy, MidAmerican Energy and Ameren. At the conclusion of that process, Normal's Council chose the Stone River Group as their exclusive energy broker. City staff has reviewed the process and assessment of Normal and agreed that Stone River Group is well equipped to provide this service.

Other municipalities that Stone River Group has provided this service for include:

Normal	Chillicothe
Lexington	Petersburg
Pawnee	Mt. Zion

Because Stone River has successfully obtained pricing for other cities and towns within the Ameren and NICOR territory, this gives them the best opportunity to maximize cost savings. In addition, the Stone River Group has a strong relationship with sixteen (16) large national electric and natural gas suppliers and has been through this process a number of times. These relationships, as well as the ability to combine several entities in their portfolio of clients, allows Stone River to leverage the buying power of the groups. Their commission rates, paid by the suppliers, are competitive in the market.

In looking at current market conditions, Stone River has been seeing a steady rise in the price of gas and the City will likely see those increases in our next few billing cycles. Electrical power has recently seen downward pressures but has become somewhat volatile. Both situations warrant the use of a broker to monitor the prices and providing fixed amounts at the most advantageous point.

The Stone River Group will be responsible for:

- Determining all accounts that have a usage above 15,000 kWh per year and provide account numbers for natural gas.
- Coordinating the bid process and executing that process with multiple electricity and natural gas suppliers.
- Providing a projected cost savings based on the Ameren price versus the supplier, using last year's kWh data and NICOR's cost per therm.
- Insuring the account transition flow between the new electricity and natural gas supplier and the respective utility works smoothly.

- Providing access to electricity and natural gas usage reports per account.

- Assist staff with any changes to the list of accounts in this program.

The Stone River Group will be available for any questions that may arise during the process and will work with staff in the future.

COMMUNITY GROUPS/INTERESTED PERSONS CONTACTED: Staff has relied heavily of the work done by Normal related to their selection process and decision to use Stone River Group for their energy purchase agreements.

FINANCIAL IMPACT: Because the City has such a large use base, we should continue to see very competitive rates by allowing our energy needs be bid on the open market. Similar to municipal aggregation, The Stone River Group will be paid .0015 per KWh of the electric rate and .02 per therm for natural gas. These fees will be paid by the retail electric provider and/or natural gas supplier.

Respectfully submitted for Council consideration.

Prepared by: Mark R. Huber, Director - PACE

Reviewed by: Barbara J. Adkins, Deputy City Manager

Financial & budgetary review by: Chris Tomerlin, Budget Analyst

Legal review by: Jeff Jurgens, Interim Corporate Counsel

Recommended by:

David A. Hales
City Manager

(LETTER OF UNDERSTANDING ON FILE IN CITY CLERK'S OFFICE)

Mayor Renner introduced this item.

Alderman Stearns requested background information regarding this item. She understood that this company was recently chosen by the Town of Normal. She questioned Normal's cost savings.

David Hales, City Manager, addressed the Council. He noted that the City's costs had been lower after the municipal aggregation. He noted the material provided to the Council regarding this item.

Mark Huber, PACE Director, addressed the Council. He introduced Don Frontone, Stone River Group's President. Mr. Frontone addressed the Council. He had worked with Normal for three (3) years. Normal had saved approximately $260,000 the first term and $140,000 last one. He worked with sixteen (16) companies and twenty (20) cities.

Alderman Stearns questioned if rates were locked for a specific time period. Mr. Frontone responded that one (1) year rates were currently higher than three (3) year rates. This was unusual. He would not solicit bids until the current cold snap breaks. Alderman Stearns commented that commodities were volatile. She questioned Stone River's fee. Mr. Frontone noted that there was a flat fee which was disclosed in the agreement.

Alderman Black noted as a County Board member, a similar process was undertaken and actual savings were greater than projected.

Motion by Alderman Black, seconded by Alderman Fazzini that a professional service agreement with the Stone River Group, Lincoln, IL, for professional energy services be approved, and Mayor and City Clerk be authorized to execute the necessary documents.

The Mayor directed the clerk to call the roll which resulted in the following:

Ayes: Aldermen Stearns, Mwilambwe, Schmidt, Lower, Fazzini, Sage, Fruin and Black.

Nays: None.

Motion carried.

The following was presented:

SUBJECT: Presentation of Police Department 2013 Annual Report

RECOMMENDATION/MOTION: That the Police Department 2013 Annual report be placed on file.

STRATEGIC PLAN LINK: Goal 1. Financially sound City providing quality basic services, and Goal 3. Strong neighborhoods.

STRATEGIC PLAN SIGNIFICANCE: Provision of public safety, safeguarding of lives and property, and reduce fear and the fear of crime. Conduct policing in the most efficient and cost effective manners through ongoing public partnerships, use of new technologies, increased public communications and internal data analysis.

BACKGROUND: In support of the City's Strategic Plan, formally presented and unanimously adopted by the Council on January 25, 2010, and the Police Department's 2012 - 2015 Strategic

Plan, the Police Department maintains a progressive problem solving stance while engaging citizens and neighborhoods in partnerships.

Specific items to be covered pertain to:

1. A progress report related to projects undertaken as part of the 2012 - 2015 Strategic Plan.
2. A summary of all Part I index crimes for 2013 to include statistical comparisons for crimes in our jurisdiction for the four (4) years prior to 2013.
3. A detailed report showing a comparison of all Part I and Part II crimes as reported in calendar years 2012 and 2013. This report also contains breakdowns of 29 crime categories to include sub-crime categories.
4. A summary and discussion of 2014 crime priorities.
5. A summary and discussion of 2014 internal departmental priorities.

COMMUNITY GROUPS/INTERESTED PERSONS CONTACTED: Residents of Bloomington-Normal Area, McLean County State's Attorney, local law enforcement officials. Monthly Focus Meeting attendees were consulted throughout the year and provided a basis for the included materials.

FINANCIAL IMPACT: Not applicable.

Respectfully submitted for Council consideration.

Prepared by: Brendan O. Heffner, Chief of Police

Recommended by:

David A. Hales
City Manager

Mayor Renner introduced this item by recognizing Brendan Heffner, Chief of Police.

Brendan Heffner, Police Chief, addressed the Council. His PowerPoint presentation had been updated. The Police Department's (PD) 2012 - 2015 Strategic Plan had been updated to include new initiatives. The Plan had five (5) broad goals and sixty-nine (69) projects. As of January 1, 2014, all projects were either completed and/or underway. Four (4) projects completed in 2014 included: 1.) formed an Internal Technology Committee; 2.) launch social media platforms; 3.) expanded the Downtown Camera System to the Dispatch Center; and 4.) finalized the police range study and began repairs.

Chief Heffner stated that the 2013 Crime Statistics consisted of information compiled by the FBI (Federal Bureau of Investigation) from reports submitted by the PD. The total Uniform Crime Report (UCR) statistics for calendar year 2013 were 8.2% higher

than 2012. There were two (2) homicides in 2013 compared to one (1) in 2012. Suspects were arrested in both cases.

There was a thirty-eight percent (38%) increase in Criminal Sexual Assaults in 2013 versus 2012. A second detective was added to investigate cases. These were under reported crimes. New cases are sometimes discovered during investigations.

Alderman Fruin pointed out that percentages could be misleading when there were a limited number of incidents. He added that the five (5) year average was primarily flat.

Chief Heffner addressed Robberies in 2013 which were up thirty-one percent (31%) over 2012. The City was well below the ten (10) year average. He noted a spike in Robberies during 2013. Several suspects were arrested in August 2013 and the trend decreased after those arrests.

Alderman Fruin believed it would be useful to know the percentage of cases when a suspect was arrested versus no arrest.

Alderman Black questioned state and federal trends. Chief Heffner offered to gather data for a future report.

Chief Heffner cited a one percent (1%) increase in Aggravated Assault/Battery which was related to robberies. Residential and Commercial Burglaries were up thirteen percent (13%) from 2012. Many retail thefts are considered burglary if the suspect had the intent to steal. This resulted in the higher number of incidents. The number of burglaries in 2013 was the second lowest of the past five (5) years.

Thefts were up three percent (3%) over 2012. This included crimes such as retail theft, purse snatching, burglary from motor vehicle and theft over $500. There were ninety (90) cases of burglaries from motor vehicles in December 2013. Suspects had been apprehended.

Motor vehicle thefts had increased twenty percent (20%) over 2012. In December 2013, citizens left vehicles running unoccupied and unlocked. Suspects who had the intent to burglarize a vehicle after finding keys inside, stole the vehicle.

There were eight (8) arson cases reported in 2013, a decrease of thirty-three (33%) compared to 2012.

Driving Under the Influence (DUI) arrests totaled 246 in 2013, the most since 2002. DUI enforcement was Goal 2. Strategy 3 in the 2012 - 2015 Strategic Plan. Officers received additional training as these can be cumbersome arrests. Additional officers had also been assigned to the Downtown.

Alderman Fazzini questioned penalties for DUI and at what point an individual was sent to jail. Chief Heffner stated ordinarily the first arrest resulted in driver's license

suspension. A second offense could result in jail time but multiple arrests were common prior to incarceration. Alderman Fazzini suggested that the laws be made stricter. Chief Heffner believed that the laws were strong enough. It was up to the courts.

Alderman Black requested that next year's report breakdown the number of first time and repeat offenders. Chief Heffner acknowledged that it would take time to obtain this data.

In 2013, digital forensic cases were up significantly. This data represented cases where processing of evidence involved digital devices. This was due to increased use of technology use by criminals. The PD was part of a task force with three (3) officers assigned. Each device takes approximately eighty (80) hours to analyze.

Mr. Hales commented that the City was fortunate to have three (3) full time officers in the Cyber Crimes Unit. He questioned if other jurisdictions utilized City resources and their ability to assist with financing. Chief Heffner responded affirmatively. The Unit does assist multiple jurisdictions.

There was a marked decrease in gang motivated incidents. Chief Heffner cited successful prosecution of cases resulting in the arrest of eight (8) gang members from two (2) gangs involved in multiple shootings. There had been an increase to street level enforcement in troubled areas during the summer 2013.

Alderman Stearns questioned if crime maps were available. Maps were available on the PD's web site. Mr. Hales added that in the past, the PD had focused on areas with aggressive patrols. He recommended that a before and after map be prepared which would show the results of increased patrols.

Alderman Fazzini noted a crime area on Todd Dr. where multiple officers had been assigned with great success. Clay Wheeler, Asst. Police Chief, affirmed Alderman Fazzini's comments. Alderman Fazzini liked the communication that resulted from Police Chief's bimonthly meetings.

Chief Heffner detailed crime priorities for 2014. They included: street level violent crimes; illegal gun possession; intervention in west side youth issues; gang crimes; robbery; narcotics; sex offender violations and burglary. He addressed the topic of conceal carry. The PD had reviewed 300 applications and objected to twelve (12). He hoped to change the perception of the police on the City's west side.

Mr. Hales noted that west side issues included resident's perception and neighborhood safety. A meeting will be held with west side residents in April 2014 to help develop an action plan. It was an ongoing challenge. This initiative included crime, fear of crime, etc. This would be a focus area.

Alderman Mwilambwe stated that other cities have police officers living in troubled areas with housing provided by the cities. Chief Heffner acknowledged that there were officers currently residing in problem areas. A program was offered by the City.

Mayor Renner cited a past practice of cities purchasing homes and providing them to police officers. Mr. Hales agreed that the City could offer housing incentives.

Chief Heffner stated that gang problems would be a priority. Gang members were arrested and returned to the street. Narcotics were an issue. Heroin was everywhere and currently was less expensive than cocaine. The City did not have a methamphetamine issue.

Sex offender violations were a priority. The PD had an officer appointed to the state board.

Mr. Hales questioned domestic violence (DV) incidents. It impacted families and also was a high risk for officers. Chief Heffner said the numbers were up. It was an under reported crime. DV resulted in officer injuries. An additional detective was added to the DV unit last year. PD staff worked closely with local agencies.

Chief Heffner highlighted 2014 priorities. They included: Lexipol Policy project completion; rehabilitation of the indoor range; continued emphasis on DUI suppression; increased social media use; Office of Professional Standards; communications; evaluation of the hiring process and enhanced recruitment efforts.

Alderman Schmidt addressed the indoor range and the LeRoy Gun Club (LGC) which had expressed interest in collaboration. Asst. Chief Wheeler informed the Council that that the roof was currently out for bid. The LGC was interested in purchasing part of the range property.

Alderman Schmidt thanked the PD for an outstanding job.

Alderman Black agreed with the need to improve communication and develop a partnership with the public. He questioned criminals posting photographs online with stolen merchandise. Chief Heffner noted that the PD was using this information successfully.

Alderman Fazzini noted that over the past year when Police Patrol Officers were sworn in, many of them have college degrees, military experience and/or other policing experience. He questioned how many officers have these qualifications. He believed that the public should have this information.

Asst. Chief Wheeler believed that this was a testament to the community. The City offered competitive salaries and benefits.

Alderman Fruin commented on problems shifting between neighborhoods. He wanted the public to become involved in sharing information. He also supported cost sharing for work completed for outside agencies that benefitted the region. Chief Heffner agreed that the PD needed the public's help. Problems were caused by people who were visiting an area. The residents needed to be responsible. Cost sharing might be an option but small departments did not have the budget.

Alderman Mwilambwe congratulated Chief Heffner on his first six (6) months of successful service. He believed that the agenda was ambitious. He appreciated new initiatives, including minority recruitment and team spirit.

Alderman Lower thanked the Chief for his assistance and leadership. He commented on retired officers who had voiced concerns. He wanted better communication with the officers on the street.

CITY MANAGER DISCUSSION: David Hales, City Manager, looked for more opportunities in the coming year. Police and fire represented forty percent (40%) of the General Fund budget. He recognized staff movement from reactive to proactive. Communication was key. There needed to be creative/innovative leadership. Statistics represented the City. Future statistics would include performance management comparative data and best practices for crime prevention. The range was critical and needed significant expenditures for repairs. Council needed to adopt a long term policy position regarding the range. Current cost sharing did not cover maintenance. There needed to be improved financial collaboration.

MAYOR DISCUSSION: Mayor Renner thanked Mark Huber, PACE Director, for twenty-nine (29) years of service. A reception would be held on Thursday, February 20, 2014 from 2:00 - 4:00 p.m. at the Government Center.

He addressed the process to fill Ward 5 vacancy due to the resignation of Alderman McDade. He cited outreach regarding the procedure for the process. He had been given a lot of advice. There were three (3) years and three (3) months remaining on Alderman McDade's term. According to state statute, this position would appear on the 2015 municipal election ballot. This was a diverse ward. He needed to appoint someone quickly due to the budget cycle. He presented the following process: 1.) applications would be accepted until February 14, 2014 at 4:00 p.m. and 2.) feedback from Council on candidates due by Wednesday, February 19, 2014. He planned to allow media access to applications and to schedule interviews promptly. He also planned to include his recommendation in the Council packet for the February 24, 2014 meeting. If approved, the candidate would take the oath as the first order of business on February 24th.

ALDERMAN DISCUSSION: Alderman Stearns had several questions for Chief Heffner and would submit them by via email. She confirmed that Mayor Renner wanted Council feedback on Aldermanic candidates. She also questioned if Aldermen's comments would be made available to the public.

She also requested a proclamation for Quinn's Shell.

Alderman Black questioned if Aldermanic application materials should be placed on the City's web site. He suggested that Council meeting videos be posted on the web and indexed by agenda item. He requested that the live stream of the meeting be placed on the televisions located in the Council chambers. Scott Sprouls, Director of Information Services, addressed the Council. He would investigate same.

Motion by Alderman Stearns, seconded by Alderman Schmidt, that the meeting be adjourned. Time: 8:47 p.m.

Motion carried.

Tracey Covert
City Clerk

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FOR COUNCIL: February 24, 2014

SUBJECT: Bills and Payroll

RECOMMENDATION/MOTION: That the bills and payroll be allowed and orders drawn on the Treasurer for the various amounts as funds are available.

STRATEGIC PLAN LINK: Goal 1. Financially sound City providing quality basic services.

STRATEGIC PLAN SIGNIFICANCE: Objective 1d. City services delivered in the most cost-effective, efficient manner.

BACKGROUND: The list of bills and payrolls will be posted on the City's website on February 20, 2014.

COMMUNITY GROUPS/INTERESTED PERSONS CONTACTED: Not applicable.

FINANCIAL IMPACT: Total disbursements information will be provided via addendum.

Respectfully submitted for Council consideration.

Prepared by: Tracey Covert, City Clerk

Financial & budgetary review by: Patti-Lynn Silva, Director of Finance

Recommended by:

David A. Hales
City Manager

Motion:

Motion: _____ Seconded by: _____

	Aye	Nay	Other		Aye	Nay	Other
Alderman Black				Alderman Mwilambwe			
Alderman Fazzini				Alderman Sage			
Alderman Fruin				Alderman Schmidt			
Alderman Lower				Alderman Stearns			
				Mayor Renner			

FOR COUNCIL: February 24, 2014

SUBJECT: Appointment to the Bloomington – Normal Economic Development Council Board

RECOMMENDATION/MOTION: That the Appointment be approved.

STRATEGIC PLAN LINK: Goal 3. Grow the local economy.

STRATEGIC PLAN SIGNIFICANCE: Objective 3e. Strong working relationship among the City, businesses, economic development organizations.

BACKGROUND: I ask your concurrence in the appointment of Jim Fruin of 3001 Thornwood, Bloomington, 61704 to the Bloomington-Normal Economic Development Council Board. His expiration date is December 31, 2014.

COMMUNITY GROUPS/INTERESTED PERSONS CONTACTED: Mayor contacts all recommended appointments.

FINANCIAL IMPACT: None.

Respectfully submitted for Council consideration.

Prepared by: Kathryn Buydos, Executive Asst.

Recommended by:

Tari Renner
Mayor

Motion: _____ Seconded by: _____

	Aye	Nay	Other		Aye	Nay	Other
Alderman Black				Alderman Mwilambwe			
Alderman Fazzini				Alderman Sage			
Alderman Fruin				Alderman Schmidt			
Alderman Lower				Alderman Stearns			
				Mayor Renner			

FOR COUNCIL: February 24, 2014

SUBJECT: Analysis of Bids for the Bloomington Fire Department Vehicle Fuel Exhaust Extrication Systems

RECOMMENDATION/MOTION: That the bids be rejected and the project be rebid in Fiscal Year (FY) 2015

STRATEGIC PLAN LINK: Goal 1. Financially sound City providing quality basic services.

STRATEGIC PLAN SIGNIFICANCE: Objective 1a. Budget with adequate resources to support defined services and levels of services.

BACKGROUND: On November 26, 2013, at 2:00 P.M., bids were publicly opened and read for the Bloomington Fire Department Vehicle Fuel Exhaust Extrication Systems project. The bids were as follows:

Company	Location	Base Bid	Alternate Bid
Ward Diesel Filter	Elmira, NY	Incomplete package	
Midwest Air Products	Elmwood Park, IL	$167,695	$201,195
Clean Air Concepts	Indianapolis, IN		
Option 1		$123,431	$146,129
Option 2		$133,258	$161,168
Hasting Air Energy	New Berlin, WI	$170,244	$205,611

The Base Bid included Stations #1, 2 and 3 and the Alternate Bid included stations #1, 2, 3 and 4. The budget for the design and installation of vehicle fuel exhaust extraction systems project is $88,000.

COMMUNITY GROUPS/INTERESTED PERSONS CONTACTED: The Bid Letting was advertised in The Pantagraph on October 25, 2013. Ward Diesel Filter, Midwest Air Pro, Clear Air Concepts and Hastings Air Energy were notified of the bid letting.

FINANCIAL IMPACT: The lowest apparent, responsible, responsive bid was $123,431. This is $35,431.00 above the FY 2014 budgeted amount of $88,000 in the Capital Improvement Fund (40100100 - 72140). This can be located in the FY 2014 budget book titled “Other Funds & Capital Improvement Program” on pages 106 & 310. The Fire Department is proposing the vehicle exhaust system in the FY 2015 Capital Improvement budget for $160,000.

Respectfully submitted for Council consideration,

Prepared by:	D/C Eric Vaughn, Administration Jon C. Johnston, Procurement Manager
Reviewed by:	Michael S. Kimmerling, Fire Chief
Financial & budgetary review by:	Carla A. Murillo, Budget Manager Chris Tomerlin, Budget Analyst
Legal review by:	Rosalee Dodson, Asst. Corporation Counsel

Recommended by:

David A. Hales
City Manager

Attachments: Attachment 1. Record of Bid Opening for Bid #2014-31.

Motion: _____ Seconded by: _____

	Aye	Nay	Other		Aye	Nay	Other
Alderman Black				Alderman Mwilambwe			
Alderman Fazzini				Alderman Sage			
Alderman Fruin				Alderman Schmidt			
Alderman Lower				Alderman Stearns			
				Mayor Renner			

CITY OF BLOOMINGTON

CITY CLERK
109 EAST OLIVE STREET
BLOOMINGTON, IL 61702-3157
309.434.2240 tel
309.434.2802 fax

RECORD OF BID OPENING FOR:

BID # 2014-31

VEHICLE EXHAUST EXTRACTION SYSTEMS FOR THE CITY OF BLOOMINGTON FIRE STATIONS

DATE: November 26, 2013 **TIME: 2:00 p.m.**

Bidder's Name	City, State	Mandatory City Documents	Bid Signed	Addendum #1	Base Bid Amount	Alternate Bid Amount
Ward Diesel Filter	incomplete Submission					
Midwest Air Tech	Oak Park IL	✓	✓	✓	(3) $167,695	(4) $201,195
Clean Air Concepts		✓	✓	✓	option 1 (3) $103,431.	(4) option 1 $144,129
					option 2 (3) $133,258	(4) option 2 $161,168.
Hastings Air Energy		✓	✓	✓	(3) $170,244	(4) $205,011

1st Alt Bid (3) $151,098 (4) $177,970

WITNESSES:

*Disclaimer: This is a Bid tabulation for record of the Bid opening. Bids have not been reviewed and have not been presented to council. This does not represent any Award. Prices or options/alternates will not be included on the tabulation.

FOR COUNCIL: February 24, 2014

SUBJECT: Analysis of Bids for New Freezer / Refrigerator for Miller Park Zoo

RECOMMENDATION/MOTION: That the bid for a new freezer / refrigerator be awarded to US Mechanical Services, in the amount of $32,195, and the Procurement Manager be authorized to issue a Purchase Order for same.

STRATEGIC PLAN LINK: Goal 2. Upgrade City infrastructure and facilities, and Goal 5. Great place – livable, sustainable City.

STRATEGIC PLAN SIGNIFICANCE: Objective 2d. Well-designed, well maintained City facilities emphasizing productivity and customer service, and 5d. Appropriate leisure and recreational opportunities responding to the needs of the residents.

BACKGROUND: The new freezer / refrigerator will be utilized by Zoo staff for animal food cold storage. The current freezer is 13' x 7' and was purchased in 1995. It has had a number of repairs over the last few years. The current unit is 50' away from the kitchen where the majority of diets are prepared. This freezer is the only walk-in freezer the Zoo maintains. Staff must pay close attention, as we are not able to have full orders of fish or meat at the same time. It takes staff time to monitor as it is a balancing act.

The new unit will have a 4' x 11' refrigerator and a 16' x 11' freezer. This unit should provide the necessary chilled space to allow the Zoo to order larger quantities of animal food at a time and save on staff time unloading and freight costs. The additional refrigerated and larger freezer spaces should provide enough room as the Zoo's exhibits and animal collection change over time.

The new unit will be attached to the kitchen and allow the staff to be more efficient with their time since they do not have to walk to the old unit.

On Tuesday, February 4, 2014, at 2:00 pm, bids were publicly opened and read for the new freezer / refrigerator for the Miller Park Zoo.

The bids received were as follows:

Name	City / State	Mandatory City Documents and Signed	Add. #1	Combined Unit Cost	Alt. A	Alt. B	Alt. C	TOTAL BID All Alts.
Polar King	Fort Wayne, IN			No Bid				No Bid
Serv- U	Champaign, IL	Yes	Yes	$30,980	N/A	$780	N/A	N/A
Henson Robinson Co.	Springfield, IL	Yes	Yes	$38,123	N/A	$715	$5,225	$44,063
*US Mechanical Services	Bloomington, IL	Yes	Yes	$30,445	N/A	$750	$1,000	$32,195
Geneva Scientific	Fontana, WI	Yes	Yes	$38,299	N/A	N/A	N/A	N/A
Culinary Depot	Monsey, NY	Yes	No	$22,335	N/A	N/A	N/A	N/A

* - Recommended bid

Alternative A - 5” and 6” insulated walls
Alternative B - 2’ x 2’ access door in the back of the freezer to assist loading and unloading
Alternative C - Demolition of wall cut to accommodate the new kitchen doorway which, when complete, compliments area around the doorway.

When considering the base bid plus Alternatives B and C, which staff recommends needing, US Mechanical Services provided the lowest, best, complete bid package of $32,195. Culinary Depot did provide a lower base bid but it did not include a required Addendum which makes their bid non-compliant. Their base bid did not provide necessary specific details on the model of refrigerator / freezer they were bidding. Culinary Depot also did not provide any alternative bids and therefore their bid is not consistent with other bids received. Culinary Depot included no local references. Staff estimates that to fully investigate the Culinary Depot bid that costs could easily exceed the possible cost savings.

US Mechanical Services will provide a combination walk in cooler / freezer manufacturer, U.S. Coolers.

Cooler condensing unit: BOHN model: MOH010X63CFM
Cooler evaporator coil: BOHN model: SME090BEE
Freezer condensing unit: BOHN model: MOZ045L63CF
Freezer evaporator coil: BOHN model: LET090BEK

COMMUNITY GROUPS/INTERESTED PERSONS CONTACTED: Public notice of the bid was placed in The Pantagraph and on City's website on January 15, 2014 and five (5) bids were opened on February 4, 2014.

FINANCIAL IMPACT: Funds for this purchase were approved in the FY 2014 budget under Miller Park Zoo - Capital Outlay Equipment Other than Office (10014136 - 72140). Stakeholders can locate this in the FY 2014 Budget Book titled "Budget Overview & General Fund" on page 236.

Respectfully submitted for Council consideration.

Prepared by: Jay Tetzloff, Zoo Superintendent

Reviewed by: John R. Kennedy, Director of Parks, Rec & Cultural Arts

Reviewed by: Barbara J. Adkins, Deputy City Manager

Financial & budgetary review by: Chris Tomerlin, Budget Analyst
Carla A. Murillo, Budget Manager

Recommended by:

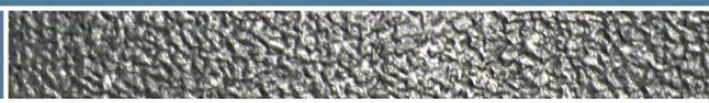
David A. Hales
City Manager

Attachments: Attachment 1. US Cooler brochure
Attachment 2. Unit diagram

Motion: _____ Seconded by: _____

	Aye	Nay	Other		Aye	Nay	Other
Alderman Black				Alderman Mwilambwe			
Alderman Fazzini				Alderman Sage			
Alderman Fruin				Alderman Schmidt			
Alderman Lower				Alderman Stearns			
				Mayor Renner			

EMPOWERING YOU



U.S. COOLER

WALK-IN COOLERS AND FREEZERS

U.S. Cooler manufactures all sizes of walk-in coolers and freezers for the Food Service, Restaurant, Grocery Store, Institutional and Convenience Store Markets. These walk-ins are supported with a complete line of engineered refrigeration systems, glass doors, parts and accessories.

WHAT MAKES US DIFFERENT

U.S. Cooler continues to invest in the latest technology for both product materials and production facilities in order to provide our clients with the most efficient, cost-effective cooling systems in the market today. In addition to state of the art production facilities with automated systems and a variety of online services, we also have the manufacturing capability of providing two unique insulation options: extruded polystyrene and foamed-in-place polyurethane. With U.S. Cooler, you choose your insulation options and receive U.S. Cooler's exceptional quality and service.

IT'S YOUR CHOICE

U.S. Cooler empowers you to decide the specifications and design of your walk-in cooler or freezer. Our unique manufacturing capabilities not only allows you to choose the material and color of metal finish, but also allows you to select the insulation material that you desire.

U.S. Cooler uses two different manufacturing techniques while most other walk-in manufacturers only offer one. By only offereing one manufacturing process, the choice becomes theirs; not yours. U.S. Cooler beleives the choice should be yours.

U.S. Cooler empowers you to create your own walk-in cooler or freezer. From the insulation to the size of your walk-in, it's your choice. ›

U.S. Cooler manufactures walk-in coolers and freezers with extruded polystyrene, foamed-in-place polyurethane, and expanded polystyrene insulation. From choosing the insulation, the metal, and the size and shape of your walk-in; the choice is yours.

APPLICATIONS

RESTAURANTS

U.S. Cooler recognizes the need for quick delivery and custom designs for restaurant applications. With a wealth of experience in providing cold-storage to single restaurants and restaurant chains, U.S. Cooler knows what is important to restaurant owners and operators.

CONVENIENCE STORES

We have extensive experience designing walk-ins for convenience store applications. With custom designed angled boxes, glass doors, display shelving and much more, U.S. Cooler is the place to go to purchase a walk-in for your convenience store application.

GROCERY STO

U.S. Cooler has pr
for large grocery st
familiar with the n
these orders. With
accessories availab
provide for your
whatever the applic

CUSTOMER SERVICE

Though technology is vital to U.S. Cooler's innovative philosophy, we have not lost our personal touch. While most companies use computerized phone voices that direct you to a list of options that you are not interested in, U.S. Cooler does not. Instead, there is a real person to answer your call and direct you to a professional, knowledgeable, staff member.

U.S. Cooler's sales and customer service representatives have years of experience with our company, walk-in design, production, sales and service. Our professional, highly trained staff assures our customers' quality customer service that other companies lack. We believe in and support our product, therefore offering exceptional post-sale customer service.

U.S. Cooler prides itself on having real people answer the phone and direct you quickly to someone who can help you. ›

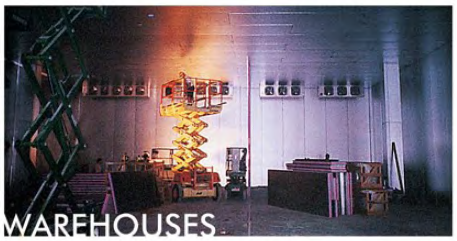
From the initial quote request through product delivery, there is a U.S. Cooler company representative ready and willing to help with your every walk-in cooler or freezer need.

Time is money and U.S. Cooler recognizes that. We work to ensure quick delivery to all customers, regardless of their application. We also provide a variety of online services to help save you time and get information at the click of a mouse. You can view in-plant pictures of your product, create a drawing, submit quotes, check order status, and receive sizing recommendations, all by just visiting our web site at www.uscooler.com.

To promote a quality product, U.S. Cooler pre-assembles each walk-in in our plant, for a thorough inspection before shipment. We know that you count on us, and we take every step possible to make sure that we fulfill your expectations.

ORES

oduced many walk-ins tore chains, so we are eeds that accompany n a full line of walk-in ple, U.S. Cooler can grocery store needs, cation.



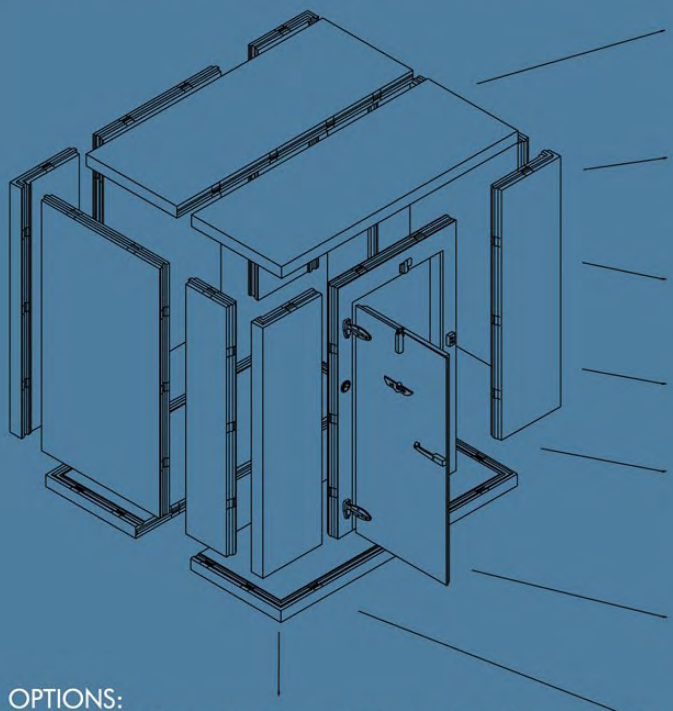
WAREHOUSES

Our light-weight, easy-to-assemble, cold storage warehouse applications have internal and external supports to ensure maximum strength and stability. We also provide sliding doors and large walk through doors to accommodate personnel and equipment.

REFRIGERATION

U.S. Cooler specifically designs and engineers the refrigeration systems after analyzing over 100 design and application factors. This helps ensure that, whatever the cold storage application, you can be sure that your cooler or freezer will maintain consistent temperatures.

GENERAL SPECIFICATIONS



CONSTRUCTION:
Modular panels are connected with cam lock connectors. All walls, ceilings and floor panels use no wood unless otherwise noted. All walk-ins are EISA compliant.

INSULATION:
4" extruded polystyrene or 4" foamed-in-place polyurethane

SKIN:
26 ga. galvanized, galvalume, painted or 24 ga. stainless steel

FLOORS:
22 ga. stainless steel

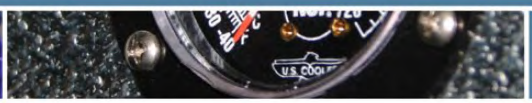
DOORS:
Self closing, flush mount with magnetic gasket; chrome latches and hinges; safety release handle. Automatic self closer, vapor proof light and thermometer.

REFRIGERATION:
All sizes, remote, side mount, top mount, indoor, outdoor

WARRANTY:
10 year panels, 1 year parts.

OPTIONS:
Rain roof, shelving, glass doors, lighting, strip curtains, viewing windows, alarms and more can be purchased through our sales department.

Specifications subject to change without notice. Item drawn may not be exactly as shipped.

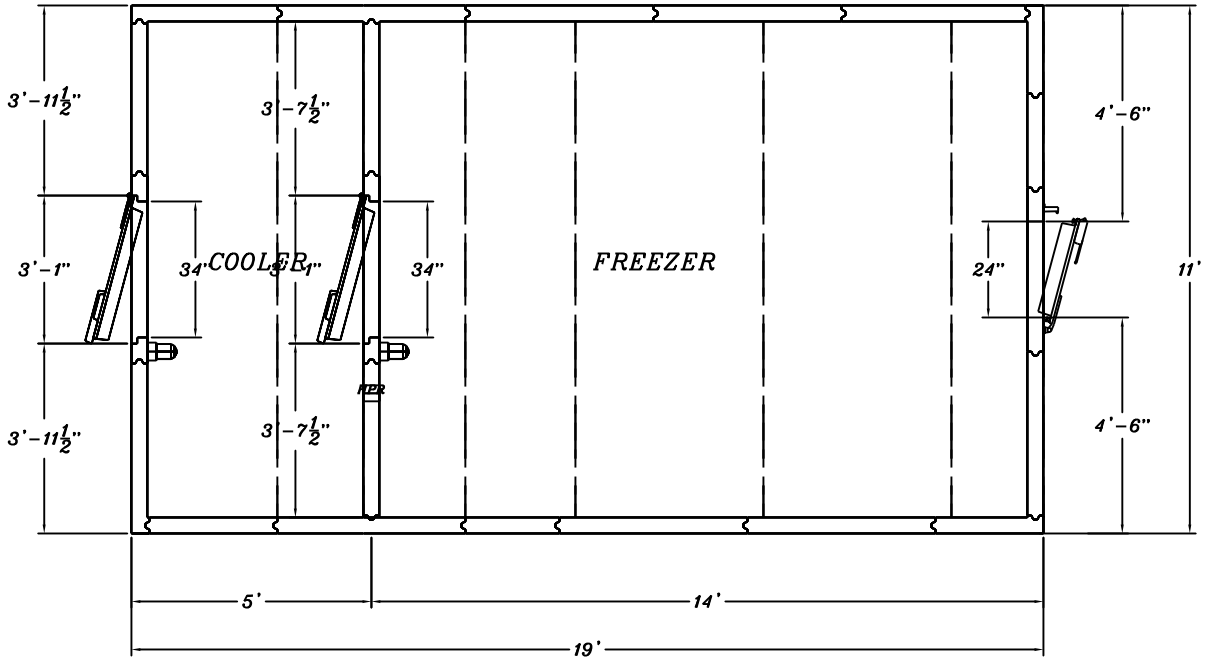


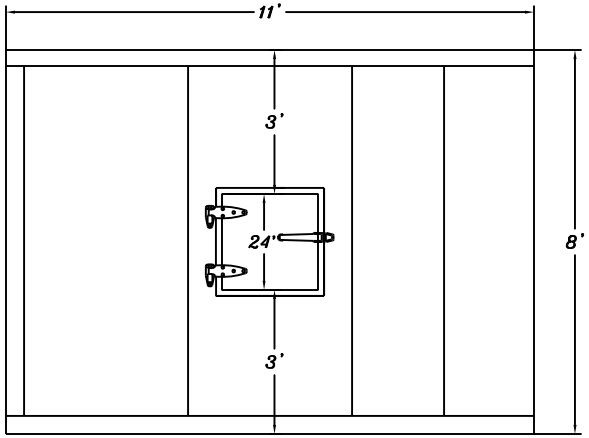
U.S. COOLER

401 Delaware, Quincy, Illinois 62301
800.521.2665 Fax 217.228.2424
www.uscooler.com

A DIVISION OF
CRAIG INDUSTRIES

ENERGY INDEPENDENCE AND SECURITY ACT COMPLIANT
NSF
CLASSIFIED UL





REACH-IN DOOR ELEVATION

FREEZER: 14'-0" x 11'-0" x 8'-0"
COOLER: 5'-0" x 11'-0" x 8'-0"
COMBO: 19'-0" x 11'-0" x 8'-0"
1/4" = 1'

Legend

Ceiling _ _ _ _ _ _

Floor _____ _____

QUOTE DRAWING

Sign below for acceptance

X_____

CONFIDENTIAL-PROPRIETARY

PANEL CONFIGURATION SUBJECT TO U.S. COOLER FINAL APPROVAL.
A FACSIMILE OF THE SIGNED ORIGINAL OF THIS DRAWING SHALL HAVE THE SAME FORCE AND EFFECT AS THE ORIGINAL AND SHALL, UPON RECEIPT BY U.S. COOLER CO. INC. BE BINDING ON BOTH PARTIES.

U.S. COOLER
401 DELAWARE ST. * QUINCY, IL 62301
TEL 217-228-2421 • 800-521-2665 • FAX 217-228-2424

CUSTOMER	U S Mechanical Services
JOB#	P.O.#
DATE 11/08/2012	DRAWN SR
DWG. REF 268369-1	APV.

FOR COUNCIL: February 24, 2014

SUBJECT: Purchase of Replacement Desktop, Notebook and Workstation Computers

RECOMMENDATION/MOTION: That the purchase of one hundred twenty-nine (129) Hewlett Packard ProDesk 600 G1 Small Form Factor Personal Computers, twelve (12) Hewlett Packard ProBook 650 G1 Notebook Personal Computers and nineteen (19) Hewlett Packard Z230 Tower Workstation Computers, using the formal Western States Contracting Alliance contract for a total of $110,636 be approved, and the Procurement Manager be authorized to issue a purchase order for same.

STRATEGIC PLAN LINK: Goal 1. Financially sound City providing quality basic services.

STRATEGIC PLAN SIGNIFICANCE: Objective 4. City services delivered in the most cost-effective, efficient manner. Scheduled replacement of aging computing technology is critical in maintaining, securing and efficiently managing the City's information technology and the data that it protects.

BACKGROUND: Staff is requesting Council approval to replace aging desktop, notebook (laptop) and high performance workstation computers. The oldest of the computers being replaced were originally purchased in FY 2004 while the newest were purchased in FY 2008, making their age range between six (6) and ten (10) years old. They are under-performing, experiencing increasing hardware repair issues and are affecting staff efficiency.

Industry standard replacement cycle for these types of computers is typically four (4) to five (5) years. With this year's purchase, we will be back on a normal replacement schedule for these types of computers.

Staff intends to purchase these computers through the Hewlett Packard Western States Contract Alliance contract, WSCA/NASPO (B27164), which is a previously competitively bid contract.

Further detail about the specifications and pricing of these computers can be found in the table below and the attached proposal and specification sheet information.

Qty	Description	Unit Price	Extended Price
129	HP ProDesk 600 G1 Small Form Factor	$580	$74,820
12	HP ProBook 650 G1 Notebook	$920	$11,040
19	HP Z230 Tower Workstation	$1,304	$24,776
		Total Cost	**$110,636**

Also attached is a spreadsheet showing the machines being replaced and their originally scheduled replacement date. The replacement date is scheduled four (4) years from the date of purchase by default.

COMMUNITY GROUPS/INTERESTED PERSONS CONTACTED: Not applicable.

FINANCIAL IMPACT: Funds for this purchase were approved in the FY 2014 budget under Information Services – Office Supplies (10011610-71010). Stakeholders can locate this in the FY 2014 Budget Book titled "Budget Overview & General Fund" on page 186.

Respectfully submitted for Council consideration.

Prepared by: Scott Sprouls, Information Services Director

Reviewed by: Barbara J. Adkins, Deputy City Manager

Financial & budgetary review by: Carla A. Murillo, Budget Manager

Legal review by: Jeff Jurgens, Corporate Council

Recommended by:

David A. Hales
City Manager

Attachments: Attachment 1. Price Quotation
Attachment 2. PC data sheets
Attachment 3. List of City machine replacements

Motion: _____ Seconded by: _____

	Aye	Nay	Other		Aye	Nay	Other
Alderman Black				Alderman Mwilambwe			
Alderman Fazzini				Alderman Sage			
Alderman Fruin				Alderman Schmidt			
Alderman Lower				Alderman Stearns			
				Mayor Renner			

PRICE QUOTATION

Quote Number: 9251871-5

Quote Date : February 14, 2014
Revised Date : February 14, 2014
Expires: March 16, 2014
Provided by: **Ronald Anderson**

Scott Sprouls
CITY OF BLOOMINGTON

Contract: WSCA/NASPO (B27164)

Product availability and product discontinuation is subject to change without notice. The prices in this quotation are valid for 30 days from quote date above. Please include the quote number and contract from this quote on the corresponding purchase order. HP PROPRIETARY INFORMATION FOR CUSTOMER USE ONLY. DO NOT SHARE.

Item	Part No.	Description	Qty.	Unit Price	Extended
	Group: A				
1.		**-Configurable- HP ProDesk 600 G1 Small Form Factor Desktop PC - C8T89AV** *Pre-Approved Pricing*	129	$580.00	$74,820.00
	C8T89AV	Product - HP ProDesk 600 G1 Small Form Factor Desktop PC			
	C7T41AV#ABA	Operating systems - Windows 7 Home Premium 64-bit			
		Chipset - Intel® Q85 Express Chipset			
	C8T81AV	Chassis configuration - HP ProDesk 600 SFF STD Chassis			
	D8B66AV	Processor - Intel Core i5-4570 3.2G 6M HD 4600 CPU			
	C8T51AV	Memory - 4GB DDR3-1600 DIMM (1x4GB) RAM			
	C8T57AV	Hard drives - 500GB 7200 RPM 3.5 HDD			
	C8U15AV	Optical drive - SuperMulti DVDRW Optical Drive			
		Graphics - No Item Selected			
		Integrated Network - Intel® I217LM Gigabit Network Connection			
	E0N05AV#ABA	Keyboard - HP USB Standard Keyboard			
	C8N39AV	Mouse - HP USB Mouse			
	XL531AV	Stand - HP SFF Chassis Tower Stand			
	C8N61AV	Packaging - Single Unit (SFF) Packaging			
	C8T44AV#ABA	Warranty - 3/3/3 SFF Warranty			
	C8T86AV#ABA	Country kit - HP ProDesk 600 Country Kit (Includes a Quick Setup & Getting Started manual in English and a country-specific power cord)			
		SUB TOTAL :			**$74,820.00**
	Group: B				
2.		**Configurable - HP ProBook 650 G1 Notebook PC** **Discrete Graphics** **HP Mobile Broadband** **D9S34AV** *Pre-Approved Pricing*	12	$920.00	$11,040.00
	D9S34AV	Product - HP ProBook 650 G1 Notebook PC, with Mobile Intel® QM87 chipset, Radeon™ HD 8750M (1GB) Graphics for inclusion of Wireless WAN Module			
	E0X26AV#ABA	Operating system - Windows 7 Home Premium 32			
	VM939AV	OS Label - Genuine Windows 7 Logo			

Note: For detailed warranty information, please link to "URL" for more information www.hp.com/go/specificwarrantyinfo.
Sales taxes added where applicable. Freight is FOB Destination.

PRICE QUOTATION

Quote Number: 9251871-5

Quote Date : February 14, 2014
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Expires: March 16, 2014
Provided by: **Ronald Anderson**

Scott Sprouls
CITY OF BLOOMINGTON

Contract: WSCA/NASPO (B27164)

Product availability and product discontinuation is subject to change without notice. The prices in this quotation are valid for 30 days from quote date above. Please include the quote number and contract from this quote on the corresponding purchase order. HP PROPRIETARY INFORMATION FOR CUSTOMER USE ONLY. DO NOT SHARE.

Item	Part No.	Description	Qty.	Unit Price	Extended
	E5T59AV	Processor - Intel® Core™ i5-4330M (2.80 GHz w/Turbo, 3 MB L3 Cache) Processor with HD Graphic 4600			
	D5U71AV	Processor label - Intel Core i5 vPro Label			
	XU979AV	ENERGY STAR® label - Estar Label - If any (MSOS) is selected, then MISC eStar label (XU979AV) must be selected			
		Chipset - Mobile Intel® QM87 chipset			
	E5T73AV	Intel® vPro Technology - Intel® vProTM Technology Enabled (w/MSOS or FreeDos - not available with Linux)			
	D9S50AV	Display - 15.6 inch LED FHD SVA Anti-Glare (1920x1080) for Wireless WAN and Webcam			
	D3B22AV	Integrated camera - Integrated HD Webcam			
	D3B18AV	Memory - 4 GB 1600 MHz DDR3 SDRAM (1D)			
	D9S41AV	Internal Storage - 320 GB 5400 rpm SATA hard drive			
	E5T75AV	Flash Cache - No Flash Cache			
	D9S67AV	Upgrade Bay - DVD±RW SuperMulti DL Drive			
	E5V25AV#ABA	Keyboard - DualPoint Keyboard			
	D9S76AV	Wireless LAN - Intel 7260ac 802.11 a/b/g/n/ac (2x2) + Bluetooth 4.0			
	D9S56AV	Modem - No Modem			
	D9S63AV	HP Mobile Broadband - No HP Mobile Broadband			
	D9S58AV	Security - No Integrated Fingerprint Reader			
	E5T56AV	AC Adapter - 90 Watt Smart nPFC AC Adapter			
	F4F81AV#ABA	Power Cord - Power Cord - 1.0 Meters			
	E0X22AV#ABA	Country Kit - Destination Country Kit Localization - NA English			
	D9S30AV	Battery - 6-cell (55 WHr) Lithium-Ion Battery Long Life - if 3 yr warranty is selected you MUST select 3 year Battery Warranty Card			
	E5T78AV#ABA	Warranty - 3/3/0 Warranty			
	B3M72AV	Misc Warranty Documentation - Warranty 3 YR Battery Documentation- - Required if (BATT3yr) and(WARR3yrUS) is selected			
		Note: - Additional accessories added from categories below will ship and invoice separately.			
				SUB TOTAL :	**$11,040.00**

Group: C

Note: For detailed warranty information, please link to "URL" for more information www.hp.com/go/specificwarrantyinfo.
Sales taxes added where applicable. Freight is FOB Destination.

PRICE QUOTATION

Quote Number: 9251871-5

Quote Date : February 14, 2014
Revised Date : February 14, 2014
Expires: March 16, 2014
Provided by: **Ronald Anderson**

Scott Sprouls
CITY OF BLOOMINGTON

Contract: WSCA/NASPO (B27164)

Product availability and product discontinuation is subject to change without notice. The prices in this quotation are valid for 30 days from quote date above. Please include the quote number and contract from this quote on the corresponding purchase order. HP PROPRIETARY INFORMATION FOR CUSTOMER USE ONLY. DO NOT SHARE.

Item	Part No.	Description	Qty.	Unit Price	Extended
3.		**D1P34AV -Configurable- HP Z230 Windows Tower Workstation** *Pre-Approved Pricing*	19	$1,304.00	$24,776.00
	D1P34AV	Product - HP Z230 Windows Tower Workstation			
	D5K48AV#ABA	Operating systems - Windows® 7 Home Premium Edition 64bit (Protect Tools Not Supported)			
	D5G61AV	Processor - Intel® Xeon E3-1230v3 3.3 GHz (up to 3.7GHz) 8MB 80W GT0 4C HT CPU			
	D5G46AV	Chassis configuration - HP Z230 Tower 400W 92% efficient Chassis			
	D1P36AV#ABA	Country kit - HP Z230 Workstation Country Kit			
	D5H74AV	Graphics - NVIDIA Quadro K2000 2GB DL-DVI(I)+DP+DP 1st No cables included Graphics			
	D5G57AV	Memory - 16GB DDR3-1600 ECC (2x8GB) Unbuffered RAM			
	D5G66AV	1st hard drive - 500GB 7200 RPM SATA 1st Hard Drive			
	D1P64AV	Optical drive - Slim SuperMulti DVDRW SATA Optical Drive			
	XU923AV	Keyboard - Not Included Keyboard			
	XU933AV	Mouse - Not Included Mouse			
	D5H26AV	Packaging - HP Single Unit (Tower) Packaging			
	D1P45AV#ABA	Warranty - HP 5-5-5 Tower Warranty			
		SUB TOTAL :			**$24,776.00**

TOTAL PRICE : $110,636.00

To ensure the accurate and timely processing of your order, please include quote # 9251871-5 on your Purchase Order.

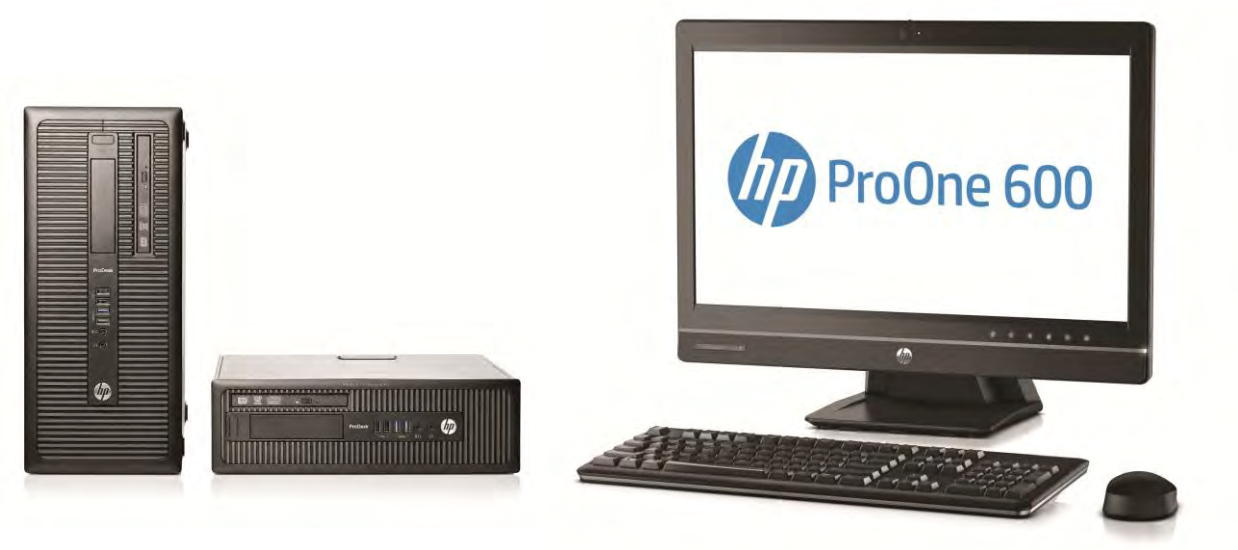
Comments:

Note: For detailed warranty information, please link to "URL" for more information www.hp.com/go/specificwarrantyinfo.
Sales taxes added where applicable. Freight is FOB Destination.

HP ProDesk 600 G1 and ProOne 600 G1 family data sheet

HP ProDesk 600 G1 and ProOne 600 G1 Business PCs

HP recommends Windows.



For more information visit
hp.com

June 2013

Productivity and manageability in one.

Give busy workers the edge they need to stay ahead. This PC's optional solid-state hybrid drive[1] responds to the speed of work and opens applications right away. Powerful security business-class and management software frees up IT staff time.

Small form factor

HP ProDesk 600 G1 Business PCs

Less waiting around

Speedy and responsive to keep pace with your multitasking. Quickly open new files and switch applications with less wait time, thanks to a solid-state hybrid drive.[1]

Power through your day with greater speed and performance. Get the latest in processing technology with your choice of 4th generation Intel® Core™ processors.[2]

Easily share your internet connection with your devices and help colleagues get online fast with HP Wireless Hotspot.[3]

Keep everything in sight

Watch your inbox while working on other tasks. There's plenty of screen room for all of your work with support for multiple displays.[4]

Make the most of virtual conferencing. Bring work to life through rich sound and video with DTS Sound+ and an HD webcam.[5,6]

Tower

Keep your most important devices easily connected. Access and transfer data fast with two front USB 3.0 ports.

Share presentations, videos, and other content—no cables needed. WiDi Intel® Wireless Display lets you connect your ProDesk to projectors and other WiDi-ready devices.[7]

Put in more face time. You're ready for web chats and conferences with Skype™ pre-configured on your HP ProDesk 600 G1. It's almost as good as being there.[5,6]

Hassle-free security and management

HP Client Security software suit helps you quickly and easily encrypt your hard drive, permanently delete unwanted or discarded data[8], restrict unauthorized access, and more.[9]

Stay up and running. HP BIOS Protection[10] offers enhanced protection against virus attacks and other security threats, and is designed to help prevent data loss and reduce downtime.
You can help safeguard your data with easy backup and recovery, using HP Recovery Manager.[11]

Securely store all of your passwords and speed up access to your favorite password protected applications with HP Password Manager.[12]

Get right to the updates you need and spend less time managing updates with HP Support Assistant.

Plan with confidence

Get more out of your investment. The HP ProDesk 600 G1 is designed for a long lifecycle, with platform stability up to 30 months.

HP ProDesk PCs are rigorously tested to help ensure reliability. During the HP Total Test Process, our PCs experience 115,000 hours of performance trials to help get you through your business day.

Add a little style to the workplace. HP business PCs feature a new industrial design with rounded edges and other features to help the system look newer for longer.

Design, productivity and security, all-in-one.

Tackle your to-do list with more efficiency and less clutter, using this all-in-one PC. Count on built-in security features and manageability to free up time for your IT team.

HP ProOne 600 G1 All-in-One Business PC

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Keep everything in sight

Watch your inbox while working on other tasks. There's plenty of screen room for all of your work with optional support for up to four external displays.[4]

Make the most of virtual conferencing. Bring work to life through immersive surround sound with deep, rich bass and crystal clear dialog using DTS Studio+ and an optional HD Webcam.[5,6]

Hassle-free security

HP Client Security suite helps you quickly and easily encrypt your hard drive, permanently delete unwanted or discarded data, restrict unauthorized access, and more.[9]

No more remembering passwords. HP Password Manager[12] lets you quickly log in to various online accounts. Now your passwords can be longer and more secure.

Do more by reclaiming your workspace

Stay organized and free up more room for work. This space-saving all-in-one has several stand options, and easily mounts on the wall.[13]

The hub of your mobile world

Speed up charging with a fast charging USB port. The nearly 2.8x stronger charging current helps compatible devices charge faster than standard USB 3.0 ports.[14]

Easily share your internet connection with your devices and help colleagues get online fast with HP Wireless Hotspot.[3]

Maintain tighter control over device security. Use the optional integrated near-field communications (NFC) capabilities to support custom applications such as advanced user authentication.[15]

Fast-track your performance

Quickly open new files and switch applications with less wait time thanks to solid-state drives and solid-state hybrid drive options.[1] Get the latest processing technology with a choice of 4th generation Intel® Core™ processors.[2]

Make better use of your workspace. HP ePrint makes wireless printing simple--no need for drivers.[17]

Get the team together. This Microsoft Lync qualified all-in-one is designed for productive virtual meetings with team members near and far.[6,17]

Plan with confidence

Get more out of your investment. The HP ProOne 600 G1 is designed for a long lifecycle, with platform stability up to 30 months.

HP ProOne PCs are rigorously tested to help ensure reliability. During the HP Total Test Process, our PCs experience 115,000 hours of performance trials to help get you through your business day.

Spend less time managing updates with HP Support Assistant. You can also safeguard your data with easy backup and recovery, using HP Recovery Manager.[11]

HP ProDesk 600 G1 and ProOne 600 G1 Family

Series	ProDesk	ProDesk	ProOne
Model	**Small Form Factor**	**Tower**	**All-in-One**
Operating systems	Pre-installed (availability varies by region): Windows 8 Pro (64-bit)* Windows 8 (64-bit)* Windows 7 Ultimate (64-bit)** Windows 7 Professional (32-bit)** Windows 7 Professional (64-bit)** Windows 7 Professional (32-bit) (available through downgrade rights from Windows 8 Pro)*** Windows 7 Professional (64-bit) (available through downgrade rights from Windows 8 Pro)*** Windows 7 Home Premium (32-bit)** Windows 7 Home Premium (64-bit)** Windows 7 Home Basic (32-bit)**, ‡ FreeDOS 2.0 Novell SUSE Linux Enterprise Desktop 11		
Processors[2]	Intel® 4th Generation Core™ i5, i7 Processors - Intel® Stable Image Platform Program (SIPP) supported		
Chipset	Intel® 8 Series (Q85)	Intel® 8 Series (Q85)	Intel® 8 Series (Q85)
Display	Displays sold separately	Displays sold separately	21.5" diagonal IPS widescreen WLED backlit anti-glare LCD; maximum resolution of 1920 x 1080
Webcam and microphone	Webcam sold separately	Webcam sold separately	Optional integrated 2 MP webcam and dual microphone array
Memory[18]	1600 MHz DDR3 SDRAM; (4) DIMM slots enabling up to 32GB, dual channel memory support[19]	1600 MHz DDR3 SDRAM; (4) DIMM slots enabling up to 32GB, dual channel memory support[19]	1600 MHz DDR3 SDRAM; (2) SODIMM slots enabling up to 16GB, dual channel memory support[19]
Internal storage[21]	Up to 500GB SATA hard drive; up to 500GB self-encrypting solid state drive; up to 160GB solid state drive		Up to 1TB solid state hybrid drive[1]; up to 2TB SATA hard drive; 500GB SATA self-encrypting drive; 256GB self-encrypting solid state drive; up to 160GB solid state drive
Removable storage	Slim DVD-ROM drive[21], Slim SuperMulti DVD drive[21], Slim BDXL Blu-ray Writer drive [21,22]		SD Media Card Reader, Slim DVD-ROM drive[21], Slim SuperMulti DVD drive[21], Slim BDXL Blu-ray Writer drive [21,22]
Expansion slots	(2) PCI Express x1 (v2.0) (1) PCI Express x 16 (v2.0 – wired as x4) (1)PCI Express x16 (v3.0)	(2) PCI Express x1 (v2.0) (1) PCI Express x 16 (v2.0 – wired as x4) (1)PCI Express x16 (v3.0) (1) Optional PCI (v2.3)	(1)MiniPCIe half-length (used by wireless LAN module) (1) MXM 3.0 Type A – 35W (1) mSATA
Graphics	Integrated Intel® HD Graphics; Discrete AMD Radeon HD 8350, 8490[23], NVIDIA NVS 310, 315, graphics optional	Integrated Intel® HD Graphics; Discrete AMD Radeon HD 8350, 8490[23], NVIDIA NVS 310, 315, or NVIDIA GeForce GT630 graphics optional	Integrated Intel® HD Graphics; Discrete AMD® Radeon HD 7650A 2GB DDR3 MXM graphics optional
Audio	DTS Studio Sound, Realtek ALC 221 Audio (all ports stereo), microphone and headphone jacks, stereo audio line out and integrated speaker		DTS Sound+, DTS Studio Sound (optional), Realtek ALC 3228 Audio – 16 & 24-bit PCM, microphone and headphone jacks, stereo audio line out and high performance integrated stereo speakers
Communications	Integrated Intel® I217LM Gigabit Network Connection; optional wireless LAN card available		Integrated Intel® I217LM Gigabit Network Connection; optional wireless LAN cards and Near Field Communication (NFC) available[15]
Ports and connectors	**Front:** (2)USB 2.0 ports, (2) USB 3.0 ports, microphone, headphone, **Rear:** (4) USB 2.0 ports, (2) USB 3.0 ports, stereo audio out, line in, RJ-45 Ethernet, PS/2 mouse and keyboard, VGA, (2) DisplayPort with multi-stream[4], power connector, RS-232 serial port	**Front:** (2)USB 2.0 ports, (2) USB 3.0 ports, microphone, headphone, **Rear:** (4) USB 2.0 ports, (2) USB 3.0 ports, stereo audio out, line in, RJ-45 Ethernet, PS/2 mouse and keyboard, VGA, (2) DisplayPort with multi-stream[4], power connector, RS-232 serial port	**Side:** (2) USB 3.0 ports (including 1 fast charging), microphone, headphone, SD media card reader (optional) **Rear:** (2) USB 3.0 ports, (2) USB 2.0 ports, stereo audio out, RJ-45 Ethernet, PS/2 mouse and keyboard, DisplayPort with multi-stream[13], power connector, RS-232 serial port
Input devices	PS/2 keyboard, USB keyboard, Wireless Keyboard and Mouse, USB CCID SmartCard keyboard, USB PS/2 Washable keyboard, PS/2 mouse, USB Optical mouse, USB 1000dpi Laser mouse, USB PS/2 Washable Scroll mouse		
Power	Internal 240W Power Supply, Active PFC, up to 94% efficient[25]	Internal 320W Power Supply, Active PFC, up to 94% efficient[25]	Internal 180W Power Supply, Active PFC, up to 91% efficient
Security	TPM 1.2, SATA port disable, Drive lock, serial/parallel/USB port enable/disable, removable media write/boot control, power-on password, setup password, Solenoid Hood Lock/Sensor, support for chassis padlocks and cable lock devices	TPM 1.2, SATA port disable, Drive lock, serial/parallel/USB port enable/disable, removable media write/boot control, power-on password, setup password, HP Chassis (1 bay) Security Kit, Solenoid Hood Lock/Sensor, support for chassis padlocks and cable lock devices	USB port disable, lockable access panel with intrusion lock, lockable I/O security cover, security screw, security lock slot, Wall/Arm/Cart Mountable via VESA bracket[10], Common Criteria Certified TPM 1.2, Noble Locking Plate support, support for 3M Privacy Screen, HP Keyed Cable Lock (optional)
Software (Windows OS only)	HP business PCs are shipped with a variety of software titles including HP Client Security, CyberLink Media Suite, HP ePrint Driver[16], HP PageLift, HP Support Assistant[9], PDF Complete, and Skype[6]. Buy Office.		
Warranty and services	3/3/3-year limited warranty, including telephone support 24/7; terms and conditions may vary by country and region; other HP Care Pack Services available.[25]		

Please see the product QuickSpecs document for additional detailed specifications and information. See www.hp.com/go/businessdesktopPCs for more information about HP Business Desktop PCs.

*Not all features are available in all editions of Windows 8. Systems may require upgraded and/or separately purchased hardware, drivers and/or software to take full advantage of Windows 8 functionality. See http://www.microsoft.com.
**Not all features are available in all editions of Windows 7. This system may require upgraded and/or separately purchased hardware to take full advantage of Windows® 7 functionality. See http://www.microsoft.com/windows/windows-7/ for details.
***This system is preinstalled with Windows 7 Pro software and also comes with a license and media for Windows 8 Pro software. You may only use one version of the Windows software at a time. Switching between versions will require you to uninstall one version and install the other version. You must back up all data (files, photos, etc.) before uninstalling and installing operating systems to avoid loss of your data. Optional accessories sold separately.
‡ Planned to be available August 2013

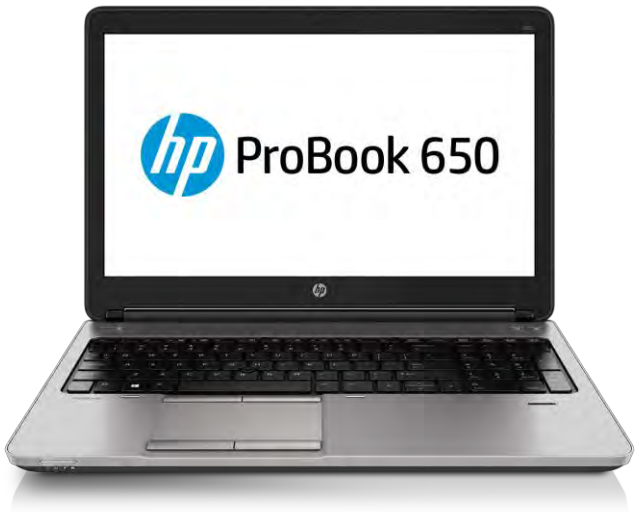
1. Solid State Hybrid Drives planned to be available October 2013.
2. Multi-Core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. 64-bit computing on Intel® architecture requires a computer system with a processor, chipset, BIOS, operating system, device drivers, and applications enabled for Intel® 64 architecture. Processors will not operate (including 32-bit operation) without an Intel® 64 architecture-enabled BIOS. Performance will vary depending on your hardware and software configurations. Intel's numbering is not a measurement of higher performance.
3. The wireless hotspot application requires an active internet connection, a separately purchased data plan and separately purchased wireless NIC card. While HP wireless hotspot is active, on-device applications will continue to work and will use the same data plan as the wireless hotspot. Wireless hotspot data usage may incur additional charges. Check with your internet service provider for plan details. Requires Windows.
4. Support for external displays as a standard feature through integrated processor-based graphics is dependent upon the particular PC platform/form factor; the actual number of displays supported will vary. An optional discrete graphics solution will be required for the support of additional displays. Additional cables required. DisplayPort with multi-stream through integrated graphics is planned to be available in fall 2013 as an integrated feature and as a web update in late summer 2013.
5. Internet access required.
6. Webcam and internet access required for video conferencing, and not included.
7. Integrated Intel Wi-Di feature is available on select configurations only and requires a separately purchased wireless NIC card, and a separately purchased projector, TV or computer monitor with an integrated or external Wi-Di receiver. External Wi-Di receivers connect to the projector, TV or computer monitor via a standard HDMI cable, also sold separately.
8. For the use cases outlined in the DOD 5220.22-M Supplement. Does not support Solid State Drives (SSDs). Requires Disk Sanitizer, External Edition for Business Desktops from hp.com. Initial setup required. Web history deleted only in Internet Explorer and Firefox browsers and must be user enabled.
9. Requires Windows.
10. HP Tools partition with an HP BIOS required for automatic recovery. Business Desktops do not support the HP BIOS Protection auto-recovery feature.
11. Requires Windows 7.
12. Requires Internet Explorer (IE 8 or IE 9). Not all websites and applications may be supported.
13. Mounting hardware sold separately.
14. 2.8x compared to USB 3.0. 5x compared to USB 2.0. Charging times will vary by device depending on compatibility with fast charging port.
15. Near Field Communication (NFC) is planned to be available in August 2013. NFC is an optional feature. NFC authentication software solution is sold separately.
16. Requires an Internet connection to HP web-enabled printer and HP ePrint account registration (for a list of eligible printers, supported documents and image types and other HP ePrint details, see www.hpconnected.com). Mobile devices require Internet connection and email capability. May require wireless access point. Separately purchased data plans or usage fees may apply. Print times and connection speeds may vary. Some HP LaserJet printers may require firmware upgrades.
17. Microsoft Lync software sold separately.
18. Maximum memory capacities assume Windows 64-bit operating systems or Linux. With Windows 32-bit operating systems, memory above 3 GB may not all be available due to system resource requirements.
19. Dual Channel is only supported when the system is configured with DDR3 symmetric memory.
20. For hard drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 16GB (for Windows 7) and up to 36GB (for Windows 8) of system disk is reserved for system recovery software.
21. Duplication of copyrighted material is strictly prohibited. Actual speeds may vary. Double Layer media compatibility will widely vary with some home DVD players and DVD-ROM drives. Note that DVD-RAM cannot read or write to 2.6GB Single Sided/5.2 Double Sided-Version 1.0 Media.
22. Blu-Ray drive XL contains new technologies; certain disc, digital connection, compatibility and performance issues may arise, and do not constitute defects in the product. Flawless playback on all systems is not guaranteed. In order for some Blu-ray titles to play, they may require an HDCP path and HDCP display. HD-DVD movies cannot be played on this BDXL Drive.
23. AMD Radeon HD 8490 planned to be available in August 2013.
24. 94% efficient power supply is standard on platinum PC configurations; not available in all regions.
25. Service levels and response times for HP Care Pack Services may vary depending on your geographic location. Service starts from date of hardware purchase. Restrictions and limitations apply. See www.hp.com/go/cpc for details.

Data sheet

HP ProBook 650 Notebook PC

An all new thin and light notebook packed with productivity and security features.

HP recommends Windows.



Take on tasks in the office or on the road with a durable HP ProBook 650. This ProBook is thin, light and packed with productivity features to make work faster and easier. Plus, reliable security solutions keep your data out of the wrong hands.

For more information visit
www.hp.com

HP recommends Windows.

HP ProBook 650 Notebook PC

Thinner, tougher taskmaster.
Get the technology you trust from HP, with cutting-edge style that looks and feels the way you want.

Join forces with the latest generation technology and legacy features your business demands on a new thinner HP ProBook for in the office or on the go.

Protect existing IT investments with support for existing legacy features such as an optical drive, optional serial ports, VGA and RJ45 connectors.

Enjoy a desktop experience on your ProBook with various docking options10 including HP 120W Advanced Docking Station and HP 90W Docking Station.

Design your ideal ProBook.
Take advantage of the wide range of features and configurable options on the new HP ProBook 600 Series.

Configure a ProBook made for your business thanks to flexible architecture configurations including the latest Intel®4th generation processors.[14]

Experience great visual performance with full-HD display options, AMD 1GDDR5 discrete graphics and native DisplayPort 1.2.[21]

Bridge distances on the HP ProBook 600 series, optimized for communication with Microsoft Lync,[10] premium audio/video and full-HD display.[22]

Stay in touch from the office or on the road with powerful connectivity options including 4G WWAN,[10,15,23] HP Wireless Hotspot[11] and Bluetooth®4.0.

Convenient Control.
Protect data, devices and identities with HP Client Security[25] and use HP Trust Circles[20] to make sure only assigned contacts can access critical files.

Keep sensitive information in safe hands. HP Trust Circles[20] protects your data by ensuring that only approved contacts can access critical files.

Stay up and running.
HP BIOS Protection[26] offers enhanced protection against virus attacks to the BIOS and other security threats, and is designed to help prevent data loss and reduce downtime.

Enjoy easy and simple integration into your IT environment with HP Client Management Solutions[27] such as optional LANDesk[28] and Intel vPro[29] technology.

Maintain a productive system environment with stable and consistent images, managed lifecycle transitions and Global Series support you can rely on.

HP recommends Windows.

Hardware Specifications	
Product Name	HP ProBook 650 G1 Notebook PC
Operating systems	Preinstalled: Windows 8 Pro 64[1] Windows 7 Professional 64 (available through downgrade rights from Windows 8 Pro 64)[2] Windows 8 64[1] Windows 7 Professional 32[3] Windows 7 Professional 64[3] Windows 7 Home Premium 32[3] Windows 7 Home Premium 64[3] SUSE Linux FreeDOS
Processor	Intel®Core™7 processor; Intel®Core™5 processor; Intel®Core™3 processor[14]
Chipset	Mobile Intel®HM87; Mobile Intel®QM87
Memory	DDR3 SDRAM, 1600 MHz, two slots supporting dual-channel memory, 2 / 4 / 8 GB SODIMMs, up to 16 GB total[4]
Internal Storage	1 TB 5400RPM 9.5mm SATA HDD[5] 320/500 GB 5400 rpm HDD[5] 500 GB 5400 rpm FIPS HDD[5] 320/500/750 GB 7200 rpm HDD[5] 500 GB 7200 rpm SED (Self Encrypting Drive)[5] SATA 6 Gb/s 128/180 GB SSD, [6]256 GB SED SSD[5]
Removable Storage	Fixed 9.5 mm SATA optical drive: Blu-ray ROM DVD+/-RW SuperMulti DL; DVD+/-RW SuperMulti DL; DVD-ROM
Display	15.6" diagonal LED-backlit HD[8] anti-glare (1366 x 768) 15.6"diagonal LED-backlit FHD SVA anti-glare (1920 x 1080)
Graphics	Integrated: Intel®HD Graphics 4600 Discrete: AMD RadeonTM HD[8] 8750M (128-bit) w/1 GB GDDR5
Audio/Visual	HD Audio with DTS Studio Sound; Integrated stereo speakers; Integrated microphone (dual-microphone array with optional[10] webcam); Stereo headphone/line
Wireless Support	WLAN: Atheros 802.11b/g/n (1x1)[9] Atheros 802.11b/g/n (1x1) and Bluetooth 4.0 Combo[9] Broadcom 802.11a/b/g/n (2x2) and Bluetooth 4.0 Combo[9] Intel®Centrino Advanced N-6205 802.11a/b/g/n (2x2) [9] Intel®Centrino Advanced N-6235 802.11a/b/g/n and Bluetooth 4.0 Combo[9] Intel®Wireless N-7260 802.11a/b/g/n AC (2x2) and Bluetooth 4.0 Combo[9] WWAN: HP hs3110 HSPA+ Mobile Broadband[10,15,23] HP lt4111 LTE/EV-DO/HSPA+ Mobile Broadband[10,15,23] HP lt4112 LTE/HSPA+ Mobile Broadband[10,15,23]
Communications	Intel®I218-LM Gigabit Network Connection (10/100/1000 NIC)
Ports and Connectors	4 USB 3.0; 1 USB 3.0 charging; 1 DisplayPort; 1 VGA; 1 combo stereo headphone/mic jack;1 AC power; 1 RJ-45; 1 docking connector; 1 serial
Expansion Slots	1 Media Card Reader
Input Device and Camera	Spill-resistant keyboard with drain; Touchpad with on/off button, two-way scroll, gestures, two pick buttons; optional[10] pointstick with two additional pointstick buttons, numeric keypad 720p HD[8] webcam optional[10]
Software (Windows OS only)	Buy Office, HP 3D DriveGuard,[7] HP Connection Manager (Win 7), HP Wireless HotSpot,[11] HP Mobile Connect (EMEA only), HP PageLift (Windows 8 only), HP Recovery Manager, HP Support Assistant, HP ePrint[12]
Security	HP Client Security Suite includes: HP Credential Manage, HP Password Manager, [16]HP File Sanitizer[17] and HP Device Access Manager with Just in Time Authentication, HP Drive Encryption, [18] HP Secure Erase, [19]HP Trust Circles, [20] Microsoft Security Essentials (Win 7) & Microsoft Defender (Win 8),HP SpareKey(requires initial user setup), Absolute Data Protect,[6] TPM Embedded Security Chip 1.2, security lock slot
Dimensions (w x d x h)	14.88 x 10.12 x 0.99 in (at front) 37.8 x 25.7 x 2.53 cm (at front)
Weight	Starting at Starting at 5.10 lb / 2.32 kg Weight will vary by configuration.
Power	Primary Battery: 9-cell (33 Whr) Li-Ion; 6-cell (55 WHr) Li-Ion; 3-cell (33 WHr) Li-Ion; 6-cell (55 WHr) Long Life; HP Fast Charge (6-cell only) Integrated: HP 65W Smart AC adapter; 90W Smart AC adapter Discrete: 90W Smart AC adapter; 90W EM Smart AC adapter (required for China, India)
Expansion Solutions	Docking Station optional: [10] HP 90W Docking Station; HP 120W Advanced Docking Station
Warranty	Limited 1-year and 3-year warranty options available, depending on country, 1 year limited warranty on primary battery. Optional[10] HP Care Pack Services[13] are extended service contracts which go beyond your standard warranties. For more details visit: http://www.hp.com/go/cpc.

HP recommends Windows.

1.Not all features are available in all editions of Windows 8. Systems may require upgraded and/or separately purchased hardware, drivers and/or software to take full advantage of Windows 8 functionality. See http://www.microsoft.com for details.
2. This system is preinstalled with Windows®7 Pro software and also comes with a license and media for Windows 8 Pro software. You may only use one version of the Windows software at a time. Switching between versions will require you to uninstall one version and install the other version. You must back up all data (files, photos, etc.) before uninstalling and installing operating systems to avoid loss of your data.
3. This system may require upgraded and/or separately purchased hardware to take full advantage of Windows 7 functionality. Not all features are available in all editions of Windows 7. See http://windows.microsoft.com/en-us/windows7/products/home for details.
4. Maximum memory capacities assume Windows 64-bit operating systems or Linux. With Windows 32-bit operating systems, memory above 3 GB may not all be available due to system resource requirements.
5. For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 16GB (for Windows 7) of system and up to 36GB (for Windows 8) disk is reserved for system recovery software.
6. Absolute Data Protect agent is shipped turned off, and must be activated by customers. Service may be limited, check with Absolute for availability outside the U.S. The optional subscription service of Absolute Recovery Guarantee is a limited warranty. Certain conditions apply. For full details visit: http://www.absolute.com/company/legal/agreements/computrace-agreement. If Data Delete is utilized, the Recovery Guarantee payment is null and void. In order to use the Data Delete service, customers must first sign a Pre-Authorization Agreement and either create a PIN or purchase one or more RSA SecurID tokens from Absolute Software.
7. Some functionality of this technology, such as Intel®Active management technology and Intel Virtualization technology, requires additional 3rd party software in order to run. Availability of future "virtual appliances" applications for Intel vPro technology is dependent on 3rd party software providers. Microsoft Windows required.
8. HD content required to view HD images.
9. Wireless access point and Internet service is required and is not included. Availability of public wireless access points limited.
10. Sold separately or as an optional feature.
11. The wireless hotspot application requires an active internet connection and separately purchased data plan. While HP wireless hotspot is active, on-device applications will continue to work and will use the same data plan as the wireless hotspot. Wireless hotspot data usage may incur additional charges. Check with your service provider for plan details. Requires Windows 8.
12. Requires an Internet connection to HP web-enabled printer and HP ePrint account registration (for a list of eligible printers, supported documents and image types and other HP ePrint details, see www.hp.com/go/eprintcenter).Requires optional broadband module. Broadband use requires separately purchased service contract. Check with service provider for coverage and availability in your area. Separately purchased data plans or usage fees may apply. Print times and connection speeds may vary.
13. Service levels and response times for HP Care Packs may vary depending on your geographic location. Service starts on date of hardware purchase. Restrictions and limitations apply. For details, visit www.hp.com/go/cpc.
14. Multi-Core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. 64-bit computing on Intel®architecture requires a computer system with a processor, chipset, BIOS, operating system, device drivers, and applications enabled for Intel®64 architecture. Processors will not operate (including 32-bit operation) without an Intel®64 architecture-enabled BIOS. Performance will vary depending on your hardware and software configurations. Intel's numbering is not a measurement of higher performance.
15. WWAN use requires separately purchased service contract. Check with service provider for coverage and availability in your area. Connection speeds will vary due to location, environment, network conditions, and other factors.
16. Requires Internet Explorer. Some websites and applications may not be supported.
17. For the use cases outlined in the DOD 5220.22-M Supplement. Does not support Solid State Drives (SSDs). Initial setup required. Web history deleted only in Internet Explorer and Firefox browsers and must be user enabled.
18. Requires Windows. Data is protected prior to Drive Encryption login. Turning the PC off or into hibernate logs out of Drive Encryption and prevents data access. 2013 Desktops are planned to support drive encryption in October 2013.
19. For the methods outlined in the National Institute of Standards and Technology Special Publication 800-88.
20. HP Trust Circles Standard, when included, allows up to 5 Trust Circles with up to 5 contacts in each Trust Circle. Optional Trust Circles Professional required for unrestricted number of Trust Circles.
21. Support for external displays as a standard feature through integrated processor-based graphics is dependent upon the particular PC platform/form factor; the actual number of displays supported will vary. An optional discrete graphics solution will be required for the support of additional displays. Additional cables required. DisplayPort with multi-stream through integrated graphics is planned to be available in fall 2013 as an integrated feature and as a web update in late summer 2013.
22. Optional webcam and internet service required for video conferencing, and not included.
23. 4G LTE not available on all products, in all regions and only available on products featuring Intel processors.
24..
25. HP Client Security requires Windows.
26. HP Tools partition with HP BIOS required for automatic recovery.
27. HP Client Management Solutions requires Windows.
28. LANDesk software is sold separately. Managed devices must be connected to the management server. Requires active LANdesk maintenance service. Wipe functionality performs a "Windows 8 Reset" and requires Windows 8. Lock performs a Windows "Lock Computer."
29. Some functionality of this technology, such as Intel®Active management technology and Intel Virtualization technology, requires additional 3rd party software in order to run. Availability of future "virtual appliances" applications for Intel vPro technology is dependent on 3rd party software providers. Microsoft Windows required.

September 2013

Data sheet

HP recommends Windows.

HP Z230 Tower and SFF Workstations

Affordable performance and flexibility, re-defined.

January 2014

HP recommends Windows.

HP Z230 SFF

HP Z230 Tower

Workstations that fit your workspace

Create a totally immersive work environment for those who demand reliability and performance on a budget. Designed for heavy 24x7x365 workloads, the HP Z230 delivers next-generation processor and graphics technologies in two redesigned models. Choose between an amazingly capable Small Form Factor (SFF) for constrained spaces, and a new compact Tower that is impressively expandable.

Rock solid reliability, affordably priced

With the HP Z230 SFF and Tower Workstations, you will gain peace of mind from our extreme test and validation processes designed for always-on environments. You can control your environmental impact better than ever[1] while lowering your total cost of ownership with a 92% efficient power supply. Work smarter with software tools designed to deliver better, smarter performance—the HP Z230 Tower Workstation has earned a wide range of ISV certifications.

Totally immersive. Perfectly productive.

Engineered to impress, the redesigned HP Z230 Small Form Factor Workstation provides the capability and flexibility you demand in a 57% smaller form factor than the tower. You can realize impressive performance, unbelievable storage capacity, wide variety of I/O slots and ports and amazing flexibility while retaining the small form factor size.

The HP Z230 Tower Workstation features complete computing power in a new compact design. Don't let its compact design fool you, it is remarkably expandable to ensure you'll always have all the computing power you need. It is designed to grow along with your business so that you can scale and expand by adding more storage and connectivity when you need it. Enhance your storage capacity with six available drive bays including a 2.5-inch HD bay for high speed solid state drives. The optional ergonomic Handle in Top ODD Bay allows tool free installation of SSD Hard Drives for easy expandability.[2,3]

Boost your storage performance with RAID, solid state drives, or get the best of both worlds by combining large hard drives with an optional solid state drive as a cache device.[4] Optimize these workstations for peak performance with HP Performance Advisor that easily configures your system with the best settings designed for specific applications.[5]

The HP Z230 has power to spare—and share.

Enjoy the latest in performance and energy efficiency from Intel's next generation processor architecture. The latest Intel® Xeon® processor E3-1200 v3 family[6] and rich graphics are designed to keep up with your workload. You can choose between cost-effective integrated graphics or powerful 2D or 3D discrete graphics.[7,8] Keep your work front-and-center with support for up to six monitors[7,8] and easily connect your peripherals and devices using the four PCIe slots[9], one PCI input/output slot,* ten external USB ports and the fast charging USB port.* With HP RGS you can take your graphics intensive workstation applications wherever you go and collaborate with colleagues around the office or around the world, in real time.

HP recommends Windows.

HP Z230 Workstations

	HP Z230 Tower[10]	HP Z230 SFF[10]
Form Factor	Tower	Small Form Factor
Available Operating Systems	Windows 8.1 Pro 64 bit. Other editions available** Windows 8 Pro 64-bit and other editions available** Windows 7 Professional 32 bit. Other editions available*** HP Linux Installer Kit SUSE Linux Enterprise Desktop 11 (90 day support) Red Hat Enterprise Linux Desktop/Workstation (1 year support; no preinstalled OS)	

Available Processors[6,11]

Processor	GHz	Max Turbo GHz	Cache	Memory	Cores	Hyper-Threading	Intel® vPro™ Technology	Intel® HD Graphics
Intel® Core™ i7-4771 processor	3.5	3.9	8 MB	1600 MHz	4	Y	Y	4600
Intel Core i7-4770 processor	3.4	3.9	8 MB	1600 MHz	4	Y	Y	4600
Intel Core i5-4670 processor	3.4	3.8	6 MB	1600 MHz	4	N	Y	4600
Intel Core i5-4570 processor	3.2	3.6	6 MB	1600 MHz	4	N	Y	4600
Intel Core i3-4330 processor	3.5	-	4 MB	1600 MHz	2	Y	N	4600
Intel Core i3-4130 processor	3.4	-	3 MB	1600 MHz	2	Y	N	4400
Intel Pentium® G3220 processor	3.0	-	3 MB	1333 MHz	2	N	N	Yes
Intel Xeon® processor E3-1280 v3	3.6	4.0	8 MB	1600 MHz	4	Y	Y	No
Intel Xeon processor E3-1270 v3	3.5	3.9	8 MB	1600 MHz	4	Y	Y	No
Intel Xeon processor E3-1245 v3	3.4	3.8	8 MB	1600 MHz	4	Y	Y	P4600
Intel Xeon processor E3-1240 v3	3.4	3.8	8 MB	1600 MHz	4	Y	Y	No
Intel Xeon processor E3-1230 v3	3.3	3.7	8 MB	1600 MHz	4	Y	Y	No
Intel Xeon processor E3-1225 v3	3.2	3.6	8 MB	1600 MHz	4	N	Y	P4600

	HP Z230 Tower[10]	HP Z230 SFF[10]
Chipset	Intel® C226 chipset	
Memory[12,13]	4 DIMM slots, up to 32 GB ECC/non-ECC, DDR3 1600 MHz (ECC/non-ECC choice and actual memory speed dependent on processor capability)	
Drive Controllers[14]	Integrated SATA Controller, RAID 0,1 supported: 5 ports, 6 Gb/s	
Storage[15]	Up to (3) 3.5-inch 7200 rpm SATA drives: 500 GB, 1, 2 or 3 TB (9 TB max) Up to (3) 2.5-inch 10K rpm SATA drives: 250, 500 GB, 1 TB (3 TB max) Up to (3) 2.5-inch SATA SDD drives: 128, 256 GB (0.75 TB max) Up to (1) 2.5-inch SATA self-encrypting solid state boot drive (SED SSD): 256 GB, 256 GB max Up to (1) 2.5-inch SATA self-encrypting 7200 rpm boot drive (SED): 500 GB, 500 GB max Optional (1) 64 GB SSD Disk Cache Module can be used in conjunction with up to (2) SATA HDDs in RAID 0/RAID 1 using Intel® Smart Response Technology.	Up to (2) 3.5-inch 7200 rpm SATA drives: 500 GB, 1, 2 or 3 TB (9 TB max) Up to (2) 2.5-inch 10K rpm SATA drives: 250, 500 GB, 1 TB (3 TB max) Up to (2) 2.5-inch SATA SDD drives: 128, 256 GB (0.5 TB max) Up to (1) 2.5-inch SATA self-encrypting solid state boot drive (SED SSD): 256 GB, 256 GB max Up to (1) 2.5-inch SATA self-encrypting 7200 rpm boot drive (SED): 500 GB, 500 GB max Optional (1) 64 GB SSD Disk Cache Module can be used in conjunction with up to (2) SATA HDDs in RAID 0/RAID 1 using Intel® Smart Response Technology.
Optical Storage[16,17]	DVD-ROM, DVD+/-RW DL Super Multi, HP Blu-ray Writer, HP 14-in-1 Media Card Reader	
Drive Bays	2 internal 3.5-inch bays, 1 internal 2.5-inch bay, 1 external slim ODD bay, 2 external Half-Height 5.25-inch bays	1 internal 3.5-inch bay, 1 internal 2.5-inch bay, 1 internal/external 3.5-inch bay, 1 external Half-Height 5.25-inch bay
Expansion Slots	1 PCIe Gen3 x16, 1 PCIe Gen2 x4 slot/x16 connector, 1 PCIe Gen2 x1 slot/x4 connector, 1 PCIe Gen2 x1 slot, 1 PCI 32-bit.	1 PCIe Gen3 x16, 1 PCIe Gen2 x4 slot/x16 connector, 1 PCIe Gen2 x1 slot/x4 connector, 1 PCIe Gen2 x1 slot. All slots are Low Profile.
Available Graphics	Integrated Graphics: Intel® HD Graphics available on select processors as above Professional 2D: NVIDIA NVS 310, NVIDIA NVS 315, NVIDIA NVS 510 Entry 3D: AMD FirePro™ V3900, NVIDIA Quadro 410, NVIDIA Quadro K600 Mid-range 3D: NVIDIA Quadro K2000 High-end 3D: AMD FirePro™ W7000 (AMO† only), NVIDIA Quadro K4000	Integrated Graphics: Intel® HD Graphics available on select processors as above Professional 2D: NVIDIA NVS 310, NVIDIA NVS 315, NVIDIA NVS 510 Entry 3D: AMD FirePro™ V3900, NVIDIA Quadro 410, NVIDIA Quadro K600
Audio	High Definition Integrated Realtek ALC221 Audio and integrated speaker; optional HP Thin USB Powered Speakers	
Network	Integrated Intel I217LM PCIe GbE Controller; Optional Intel Ethernet I210-T1 PCIe as 2nd NIC	
Remote Management	Intel® vPro™ with Intel® AMT 9.0	
Ports	Front: 2 USB 3.0; 1 USB 2.0; 1 USB 2.0 Charging Data Port; 1 microphone in; 1 headphone out Rear: 2 USB 3.0; 4 USB 2.0; 1 DVI-I single link and 2 DisplayPort 1.2 (for use with Intel HD Graphics); 1 audio in; 1 audio out; 1 microphone; 1 serial (optional); 2 PS/2; RJ-45 (LoM), optional 2 IEEE 1394b ports Internal: 1 USB 3.0, 3 USB 2.0	Front: 2 USB 3.0; 2 USB 2.0; 1 microphone in; 1 headphone out Rear: 2 USB 3.0; 4 USB 2.0; 3 DisplayPort 1.2 (for use with Intel HD Graphics); 1 audio in; 1 audio out; 1 standard/1 serial (optional); 2 PS/2; RJ-45 (LoM), optional 2 IEEE 1394b ports (PCIe card) Internal: 1 USB 3.0, 3 USB 2.0
Input Devices	HP PS/2 keyboard, HP USB keyboard, HP USB CCID smart card keyboard, HP PS/2 mouse, HP USB optical mouse, HP USB 1000 dpi laser mouse, HP Optical 3-button optical mouse, USB SpaceMouse Pro, USB SpacePilot Pro	
Dimensions (H x W x D)	15.7 x 6.7 x 17.4 in (39.93 x 17.04 x 44.25 cm)	Standard desktop orientation: 3.95 x 13.3 x 15.0 in (10.5 x 33.83 x 38.15 cm)
Power Supply	400-watt 92% efficient power supply	240-watt, 92% Efficiency power supply; 240-watt Standard Efficiency Power Supply available in some countries.
Compatible Displays (screen size diagonally measured)	HP DreamColor LP2480zx Professional Display, HP ZR30w 30-inch S-IPS LCD Monitor, HP ZR2740w 27-inch LED Backlit IPS Monitor, HP ZR2440w 24-inch LED Backlit IPS Monitor, HP Z Display Z30i 30-inch IPS LED Backlit Monitor HP Z Display Z27i 27-inch IPS LED Backlit Monitor, HP Z Display Z24i 24-inch IPS LED Backlit Monitor, HP Z Display Z23i 23-inch IPS LED Backlit Monitor, HP Z Display Z22i 21.5-inch IPS LED Backlit Monitor	
Warranty[18]	Limited three-year Mon-Fri 8-5 next business day, parts, labor and 24x7 phone support, terms and conditions may vary. One-year warranty option available in selected countries.	

HP recommends Windows.

* Available on Z230 Tower only

** Not all features are available in all editions of Windows 8 and 8.1. Systems may require upgraded and/or separately purchased hardware, drivers and/or software to take full advantage of Windows 8.1 functionality. See www.microsoft.com.

*** This system may require upgraded and/or separately purchased hardware and/or a DVD drive to install the Windows 7 software and take full advantage of Windows 7 functionality. See microsoft.com/windows/windows-7/ for details.

† After-Market Option

1 When comparing previous generations of HP Workstations.

2 Sold separately both as a configure-to-order (CTO) or after-market option (AMO).

3 Does not allow 4 SSDs/SFF drives (CTO/AMO)

4 Requires a compatible Intel® Core processor, enabled chipset, Intel® Rapid Storage technology software and non-SED HDD + optional 2.5" SSD flash cache module. Intel® Smart Response Technology is only available on select HP systems. Read performance levels assume that the data to be read is in the cache. Depending on system configuration, results may vary.

5 Requires Windows 7 or Windows 8.

6 Multi-Core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. 64-bit computing on Intel® architecture requires a computer system with a processor, chipset, BIOS, operating system, device drivers, and applications enabled for Intel® 64 architecture. Processors will not operate (including 32-bit operation) without an Intel® 64 architecture-enabled BIOS. Performance will vary depending on your hardware and software configurations. Intel's numbering is not a measurement of higher performance. See intel.com/info/em64t for more information.

7 Requires both NVIDIA NVS 510 and NVS 310 graphics cards to be installed.

8 Optional feature sold separately or as an add on feature.

9 PCIe Gen 3 is a new technology; card availability may be limited.

10 Some features may not be available in all regions.

11 Intel® Hyper-Threading - The hyper-threading feature is designed to improve performance of multi-threaded software products; please contact your software provider to determine software compatibility. Not all customers or software applications will benefit from the use of hyperthreading. Go to intel.com/info/hyperthreading for more information, including which processors support HT Technology.

12 Each processor supports up to 2 channels of DDR3 memory. To realize full performance at least 1 DIMM must be inserted into each channel.

13 Intel® Xeon E3, Intel Core i3 and Intel Pentium processors can support either ECC or non-ECC memory. Intel Core i5 and i7 processors only support non-ECC memory.

14 SATA hardware RAID is not supported on Linux systems. The Linux kernel, with built-in software RAID, provides excellent functionality and performance. It is a good alternative to hardware-based RAID. Please visit h20000.www2.hp.com/bc/docs/support/SupportManual/c00060684/c00060684.pdf for RAID capabilities with Linux.

15 For hard drives, 1 GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less.

16 Actual speeds may vary. Does not permit copying of commercially available DVD movies or other copyright protected materials. Intended for creation and storage of your original material and other lawful uses. Note that DVD-RAM cannot read or write to 2.6 GB Single Sided/5.2 GB Double Sided – Version 1.0 media.

17 Blu-ray Writer - As Blu-ray is a new format containing new technologies, certain disc, digital connection, compatibility and/or performance issues may arise, and do not constitute defects in the product. Flawless playback on all systems is not guaranteed. In order for some Blu-ray titles to play, they may require a DVI or HDMI digital connection and your display may require HDCP support. HD DVD movies cannot be played on this workstation.

18 HP Care Pack Services extends service contracts beyond the standard warranties. Service starts from date of hardware purchase. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at hp.com/go/lookuptool. Additional HP Care Pack Services information by product is available at hp.com/go/cpc. Service levels and response times for HP Care Packs may vary depending on your geographic location.

Learn more hp.com/go/z230

4AA4-7343ENW, January 2014

City of Bloomington FY2014 Desktop/Notebook/Workstation Replacements

Desktops

Department	***Product Name***	***Original Replacement Date***
CITY CLERK	GC760AV HP COMPAQ DC7800	FY2011-2012
CITY CLERK	GC760AV HP COMPAQ DC7800	FY2011-2012
CULTURAL DISTRICT	ET090AV DC7700 SMALL FORM FACTOR	FY2011-2012
CULTURAL DISTRICT	ET090AV DC7700 SMALL FORM FACTOR	FY2011-2012
CULTURAL DISTRICT	GC760AV HP COMPAQ DC7800	FY2011-2012
CULTURAL DISTRICT	GC760AV HP COMPAQ DC7800	FY2011-2012
CULTURAL DISTRICT	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
CULTURAL DISTRICT	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
CULTURAL DISTRICT	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
CULTURAL DISTRICT	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
CULTURAL DISTRICT	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
CULTURAL DISTRICT	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
CULTURAL DISTRICT	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
CULTURAL DISTRICT	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
FINANCE	GC760AV HP COMPAQ DC7800	FY2011-2012
FIRE DEPARTMENT	GC760AV HP COMPAQ DC7800	FY2011-2012
FLEET MANAGEMENT	DX878AV HP DC7100 BUSINESS DESKTOP	FY2009-2010
FLEET MANAGEMENT	ET090AV DC7700 SMALL FORM FACTOR	FY2011-2012
FLEET MANAGEMENT	ET090AV DC7700 SMALL FORM FACTOR	FY2011-2012
FLEET MANAGEMENT	ET090AV DC7700 SMALL FORM FACTOR	FY2011-2012
LEGAL	GC760AV HP COMPAQ DC7800	FY2011-2012
PACE-BLDG.&SAFETY	GC760AV HP COMPAQ DC7800	FY2011-2012
PACE-BLDG.&SAFETY	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
PACE-CODE ENFORCEMENT	GC760AV HP COMPAQ DC7800	FY2011-2012
PACE-FACILITIES MANAGEMENT	GC760AV HP COMPAQ DC7800	FY2011-2012
PARKING FIXED ASSET REPLACEMENT	ET090AV DC7700 SMALL FORM FACTOR	FY2011-2012
PARKS-FORESTRY	GC760AV HP COMPAQ DC7800	FY2011-2012
PARKS-FORESTRY	GC760AV HP COMPAQ DC7800	FY2011-2012
PARKS-FORESTRY	GC760AV HP COMPAQ DC7800	FY2011-2012
PARKS-FOX CREEK GOLF COURSE	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
PARKS-FOX CREEK GOLF COURSE	GC760AV HP COMPAQ DC7800	FY2011-2012
PARKS-FOX CREEK GOLF COURSE	ET090AV DC7700 SMALL FORM FACTOR	FY2011-2012
PARKS-HIGHLAND GOLF COURSE	GC760AV HP COMPAQ DC7800	FY2011-2012
PARKS-HIGHLAND GOLF COURSE	ET090AV DC7700 SMALL FORM FACTOR	FY2011-2012
PARKS-LINCOLN LEISURE	D530 SMALL FORM FACTOR W/HYPER-THREADING	FY2007-2008
PARKS-MILLER PARK ZOO	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
PARKS-MILLER PARK ZOO	GC760AV HP COMPAQ DC7800	FY2011-2012
PARKS-MILLER PARK ZOO	GC760AV HP COMPAQ DC7800	FY2011-2012
PARKS-MILLER PARK ZOO	GC760AV HP COMPAQ DC7800	FY2011-2012
PARKS-MILLER PARK ZOO	GC760AV HP COMPAQ DC7800	FY2011-2012
PARKS-MILLER PARK ZOO	ET090AV DC7700 SMALL FORM FACTOR	FY2011-2012
PARKS-PEPSI ICE CENTER	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
PARKS-PRAIRIE VISTA GOLF COURSE	ET090AV DC7700 SMALL FORM FACTOR	FY2011-2012
POLICE	ET088AV DC7700 MIDTOWER	FY2011-2012
POLICE	GC760AV HP COMPAQ DC7800	FY2011-2012
POLICE	GC760AV HP COMPAQ DC7800	FY2011-2012
POLICE	GC760AV HP COMPAQ DC7800	FY2011-2012
POLICE	GC760AV HP COMPAQ DC7800	FY2011-2012
POLICE	GC760AV HP COMPAQ DC7800	FY2011-2012
POLICE	GC760AV HP COMPAQ DC7800	FY2011-2012
POLICE	GC760AV HP COMPAQ DC7800	FY2011-2012
POLICE	GC760AV HP COMPAQ DC7800	FY2011-2012
POLICE	GC760AV HP COMPAQ DC7800	FY2011-2012
POLICE	GC760AV HP COMPAQ DC7800	FY2011-2012
POLICE	GC760AV HP COMPAQ DC7800	FY2011-2012
POLICE	GC760AV HP COMPAQ DC7800	FY2011-2012

Desktops- Continued

Department	***Product Name***	***Original Replacement Date***
POLICE	GC760AV HP COMPAQ DC7800	FY2011-2012
POLICE	GC760AV HP COMPAQ DC7800	FY2011-2012
POLICE	GC760AV HP COMPAQ DC7800	FY2011-2012
POLICE	GC760AV HP COMPAQ DC7800	FY2011-2012
POLICE	GC760AV HP COMPAQ DC7800	FY2011-2012
POLICE	GC760AV HP COMPAQ DC7800	FY2011-2012
POLICE	GC760AV HP COMPAQ DC7800	FY2011-2012
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POLICE	GC760AV HP COMPAQ DC7800	FY2011-2012
POLICE	GC760AV HP COMPAQ DC7800	FY2011-2012
POLICE	GC760AV HP COMPAQ DC7800	FY2011-2012
POLICE	GC760AV HP COMPAQ DC7800	FY2011-2012
POLICE	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
POLICE	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
POLICE	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
POLICE	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
PUBLIC WORKS	GC760AV HP COMPAQ DC7800	FY2011-2012
PUBLIC WORKS	GC760AV HP COMPAQ DC7800	FY2011-2012
PUBLIC WORKS	GC760AV HP COMPAQ DC7800	FY2011-2012
PUBLIC WORKS	GC760AV HP COMPAQ DC7800	FY2011-2012
PUBLIC WORKS	PS988AV-PS1 HP XW4300 WORKSTATION	FY2009-2010
U.S. CELLULAR COLISEUM	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
U.S. CELLULAR COLISEUM	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
U.S. CELLULAR COLISEUM	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
U.S. CELLULAR COLISEUM	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
U.S. CELLULAR COLISEUM	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
U.S. CELLULAR COLISEUM	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
U.S. CELLULAR COLISEUM	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
WATER-ADMINISTRATION	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
WATER-ADMINISTRATION	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
WATER-ADMINISTRATION	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
WATER-ADMINISTRATION	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
WATER-ADMINISTRATION	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
WATER-ADMINISTRATION	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
WATER-ADMINISTRATION	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011
WATER-ADMINISTRATION	GC760AV HP COMPAQ DC7800	FY2011-2012
WATER-ADMINISTRATION	GC760AV HP COMPAQ DC7800	FY2011-2012
WATER-ADMINISTRATION	GC760AV HP COMPAQ DC7800	FY2011-2012
WATER-ADMINISTRATION	ET090AV DC7700 SMALL FORM FACTOR	FY2011-2012
WATER-LAKE MAINTENANCE	PU700AV DC7600 SMALL FORM FACTOR	FY2010-2011

Workstations

Department	*Product Name*	*Original Replacement Date*
PARKS-ADMINISTRATION	DU936AV XW4200 WORKSTATION	FY2009-2010
PUBLIC WORKS	DU936AV XW4200 WORKSTATION	FY2009-2010
PUBLIC WORKS	ET115AV XW4400 WORKSTATION	FY2009-2010
PUBLIC WORKS	ET115AV XW4400 WORKSTATION	FY2009-2010
PUBLIC WORKS	ET115AV XW4400 WORKSTATION	FY2009-2010
PUBLIC WORKS	ET115AV XW4400 WORKSTATION	FY2009-2010
PUBLIC WORKS	PS988AV-PS1 HP XW4300 WORKSTATION	FY2009-2010
WATER-ADMINISTRATION	DU936AV XW4200 WORKSTATION	FY2009-2010
WATER-ADMINISTRATION	PS988AV-PS1 HP XW4300 WORKSTATION	FY2009-2010
WATER-LAKE MAINTENANCE	PS988AV-PS1 HP XW4300 WORKSTATION	FY2009-2010
WATER-PURIFICATION	PS988AV-PS1 HP XW4300 WORKSTATION	FY2009-2010
WATER-PURIFICATION	PS988AV-PS1 HP XW4300 WORKSTATION	FY2009-2010
WATER-PURIFICATION	PS988AV-PS1 HP XW4300 WORKSTATION	FY2009-2010

Laptops

Department	*Product Name*	*Original Replacement Date*
Information Services	RB555UA#ABA HP COMPAQ NC8430 NOTEBOOK	FY2009-2010
POLICE	RQ557AV HP COMPAQ 8510P NOTEBOOK	FY2011-2012
POLICE	RQ557AV HP COMPAQ 8510P NOTEBOOK	FY2011-2012
PUBLIC WORKS	DU936AV XW4200 WORKSTATION	FY2009-2010
PUBLIC WORKS	ET115AV XW4400 WORKSTATION	FY2009-2010
U.S. CELLULAR COLISEUM	DX442AV NC8230 BUSINESS NOTEBOOK	FY2008-2009
WATER-ADMINISTRATION	RQ557AV HP COMPAQ 8510P NOTEBOOK	FY2011-2012
WATER-PURIFICATION	RQ557AV HP COMPAQ 8510P NOTEBOOK	FY2011-2012
WATER-PURIFICATION	RQ557AV HP COMPAQ 8510P NOTEBOOK	FY2011-2012

FOR COUNCIL: February 24, 2014

SUBJECT: Contract Amendment with Microsurfacing Contractors, LLC for 2013 Washington Street Micro-Surfacing Contract

RECOMMENDATION/MOTION: Recommend that the Amendment to the contract for 2013 Washington Street Micro-Surfacing, with Microsurfacing Contractors, LLC, in the amount of $3,543.30, be approved.

STRATEGIC PLAN LINK: Goal 2. Upgrade City infrastructure and facilities, and Goal 5. Great place – livable and sustainable City.

STRATEGIC PLAN SIGNIFICANCE: Objective 2a. Better quality roads and sidewalks, and Objective 5a. Well-planned City with necessary services and infrastructure.

BACKGROUND: At the September 23, 2013 meeting, Council approved a contract with Microsurfacing Contractors, LLC for the application of micro-surfacing and pavement markings on Washington St. from Mason to Gridley.

Micro-surfacing is an economic option utilized for pavement preservation and preventative maintenance. Crack sealing is also used on occasion prior to the application of microsurfacing. The original project scope included an amount of crack sealing necessary to seal a portion of the cracks within the project limits. As with the City's other pavement preservation methods, staff strives to determine the most efficient method of the application and evaluates results from the application. Utilizing a test area for the crack sealing allows staff to determine if future microsurfacing projects should include full crack sealing or if the sealing should be omitted from future microsurfacing projects. Once all traffic and parking was removed from Washington St. and the crack sealing application proceeded, it was determined that some additional crack sealing was necessary within two lanes. This area was chosen to provide an effective and distinguishable crack sealing area within the project limits.

A public meeting was held on August 6, 2013 to discuss and gather input regarding Washington St. lane configuration, traffic and pedestrian safety. One of the goals of this project was to improve safety for the pedestrians and motoring public through this corridor. Alternatives were discussed before, during and after the public meeting. After award of the contract, an additional improvement was determined to provide increased pedestrian safety in the corridor. This improvement was the installation of high visibility crosswalks. Staff determined and requested that Microsurfacing Contractors, LLC install high visibility crosswalks at Washington and Madison, Washington and Main, and Washington and Prairie.

With this amendment, the revised total contract cost as follows:

Original Contract	$ 99,774.75
Amendment	$ 3,543.30
Revised Total Contract Cost	$ 103,318.05

COMMUNITY GROUPS/INTERESTED PERSONS CONTACTED: A public meeting was held on August 6, 2013 to discuss and gather input regarding Washington St. lane configuration, traffic and pedestrian safety. It was determined at the public meeting to proceed with conversion of Washington St. from four through lanes to two through lanes and a center turn lane. Staff continues to review options to address pedestrian safety issues and will present for discussion and input at a public meeting scheduled for Tuesday, March 4, 2014, 5:30 p.m. to 6:30 p.m. in the Council Chambers.

FINANCIAL IMPACT: The FY 2014 Budget appropriated $3,800,000 for the overall City Pavement Program, of which $100,000 is allocated for micro-surfacing in Capital Improvement Budget-Street Construction and Improvement (40100100 - 72530). This memo addresses the micro-surfacing portion of the Pavement Program. Stakeholders may locate this line item in the FY 2014 budget book titled " Other Funds and Capital Improvement Program" on pages 106, 274 and 298. The contract amendment will appropriate an additional $3,543.30 which will total $103,318.05 for the project.

Respectfully submitted for Council consideration.

Prepared by:	Jim Karch, PE, CFM, Director of Public Works
Reviewed by:	Barbara J. Adkins, Deputy City Manager
Financial & budgetary review by:	Chris Tomerlin, Budget Analyst Carla A. Murillo, Budget Manager
Legal review by:	Jeffrey R. Jurgens, Interim Corporation Counsel

Recommended by:

David A. Hales
City Manager

Attachments: Attachment 1. Pay Estimate #1

Motion: _____ Seconded by: _____

	Aye	Nay	Other		Aye	Nay	Other
Alderman Black				Alderman Mwilambwe			
Alderman Fazzini				Alderman Sage			
Alderman Fruin				Alderman Schmidt			
Alderman Lower				Alderman Stearns			
				Mayor Renner			

CITY OF BLOOMINGTON

2013 Washington Street Micro-Surfacing

City Project 50-16-12006-13-00

Prepared By: RDY
Date: 11/25/2013
Chk'd By: KAK
Date: 11/25/2013

PAY ESTIMATE #1

ITEM NO.	ITEM	UNITS	PLAN QTY	PAY QTY	UNIT PRICE	AMOUNT
1	FIBER-MODIFIED ASPHALT CRACK SEALING	FT	5300	6315	$2.00	$12,630.00
2	PAVEMENT MARKING REMOVAL	SF	4850	4697	$1.00	$4,697.00
3	MICRO-SURFACING, SINGLE PASS, TYPE II, MIXTURE D	SY	14500	14278	$3.97	$56,683.66
4	BITUMINOUS MATERIALS (PRIME COAT)	GAL	500	500	$3.50	$1,750.00
5	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SF	640	687	$4.75	$3,263.25
6	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FT	2650	2711	$0.78	$2,114.58
7	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FT	4550	5958	$1.18	$7,030.44
8	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FT	690	692	$1.58	$1,093.36
9	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FT	165	448	$2.37	$1,061.76
10	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FT	345	332	$4.50	$1,494.00
11	SHORT TERM PAVEMENT MARKING	LS	1	1	$2,000.00	$2,000.00
12	MOBILIZATION	LS	1	1	$5,000.00	$5,000.00
13	STREET SWEEPING AND CLEANING	LS	1	1	$2,000.00	$2,000.00
14	TRAFFIC CONTROL COMPLETE	LS	1	1	$2,500.00	$2,500.00
					Subtotal	$103,318.05

Extras

Total of Extras	
Total to Date	$103,318.05
Less Retainage (5%)	$5,165.90
Subtotal	$98,152.15
Less Previous Payments	
TOTAL AMOUNT DUE THIS ESTIMATE	**$98,152.15**

FOR COUNCIL: February 24, 2014

SUBJECT: Supplemental Motor Fuel Tax Resolution for Airport Rd. (Rt. 9 to Gill St.) MFT Section 97-00315-00-RP

RECOMMENDATION/MOTION: That the supplemental resolution in the amount of $171,886.25 be adopted.

STRATEGIC PLAN LINK: Goal 1. Financially sound City providing quality basic services, and Goal 2. Upgrade city infrastructure and facilities.

STRATEGIC PLAN SIGNIFICANCE: Objective 1d. City services delivered in the most cost-effective, efficient manner, and Objective 2a. Better quality roads and sidewalks.

BACKGROUND: The Public Works Department is making an effort to reconcile older Motor Fuel Tax (MFT) projects with the Illinois Department of Transportation (IDOT). A recent IDOT audit shows a number of outstanding project needs. While none of the outstanding items are anticipated to be of major concern, multiple resolutions will be needed to finalize the outstanding audit items.

Staff workload and priorities required resources to be allocated to other priorities after completion of construction efforts. Staff workload continues to be at a level that does not allow for effort to be devoted to the final close out of the required paperwork. Clark Dietz, Inc. has been assisting staff with efforts to reduce the backlog of the open MFT projects. To date, Clark Dietz's scope of work has included correspondence with IDOT, preparation and submission of necessary IDOT paperwork, preparation of Council resolutions, and invoices to IDOT for MFT funds owed by IDOT to the City. Staff is actively partnering with IDOT in this effort. Staff deems the supplemental resolutions as routine in nature.

The above referenced project involved the replacement of approximately 5,500' of two lane pavement with ditches with a five lane concrete pavement with curb and gutter. It included traffic signals at the intersection of Rt. 9 and Airport Rd. and at the intersection of Clearwater Ave. and Airport Rd. In order to construct the project, it was necessary for NICOR to relocate an existing 12" high pressure gas main. The construction was completed in 2008. The final costs were higher than originally anticipated when the existing resolution was approved. Final payment has been made from Motor Fuel Tax (MFT) Funds as follows:

Right of Way	$55,627.50
Engineering fees (Farnsworth):	$74,117.20
Construction Costs (Stark):	$2,551,276.59
Utility Relocation (NICOR)	$490,864.96
Total	$3,171,886.25

Motor Fuel Tax Resolutions have been approved by Council as follows:

August 11, 2003	$3,000,000

COMMUNITY GROUPS/INTERESTED PERSONS CONTACTED: Illinois Department of Transportation, District 5.

FINANCIAL IMPACT: In order to reconcile the project with IDOT, a Supplemental Motor Fuel Tax Resolution in the amount of $171,886.25 is necessary. No additional funds are requested or will be expended.

Respectfully submitted for Council consideration.

Prepared by: Jim Karch, PE, CFM, Director of Public Works

Reviewed by: Barbara J. Adkins, Deputy City Manager

Financial & budgetary review by: Chris Tomerlin, Budget Analyst
Carla A. Murillo, Budget Manager

Legal review by: Jeffrey R. Jurgens, Interim Corporation Counsel

Recommended by:

David A. Hales
City Manager

Attachments: Attachment 1. Supplemental Resolution for Improvements by Municipality Under the Illinois Highway Code
Attachment 2. Outstanding MFT Projects Status

Motion: _____ Seconded by: _____

	Aye	Nay	Other		Aye	Nay	Other
Alderman Black				Alderman Mwilambwe			
Alderman Fazzini				Alderman Sage			
Alderman Fruin				Alderman Schmidt			
Alderman Lower				Alderman Stearns			
				Mayor Renner			

Illinois Department of Transportation

Supplemental Resolution for Improvement by Municipality Under the Illinois Highway Code

BE IT RESOLVED, by the **Mayor and Council** (Council or President and Board of Trustees) of the **City** (City, Town or Village) of **Bloomington** Illinois that the following described street(s) be improved under the Illinois Highway Code:

Name of Thoroughfare	Route	From	To
AIRPORT ROAD	FAU 6417	ILLINOIS ROUTE 9	GILL STREET

BE IT FURTHER RESOLVED,

1. That the proposed improvement shall consist of Reconstruction of Airport Road from Illinois Route 9 to Gill Street from a two lane rural cross section pavement to a five lane urban cross section pavement consisting of four - 11 foot wide lanes and a 13 foot wide bi-directional left turn lane in the center. There will be a storm sewer system to eliminate the existing ditches. There will be traffic signals at the intersection of Airport & IL Rt. 9, and the intersection of Airport & Clearwater. and shall be constructed 57 feet edge to edge wide and be designated as Section 97-00315-00-RP

2. That there is hereby appropriated the (additional ☒ Yes ☐ No) sum of One hundred seventy one thousand eight hundred eighty six ---------- and 25/100 Dollars ($171,886.25) for the improvement of said section from the municipality's allotment of Motor Fuel Tax funds.

3. That work shall be done by CONTRACT (Specify Contract or Day Labor); and,

BE IT FURTHER RESOLVED, that the Clerk is hereby directed to transmit two certified copies of this resolution to the district office of the Department of Transportation.

Approved

Date

Department of Transportation

Regional Engineer

I, Tracey Covert City Clerk in and for the City (City, Town or Village) of Bloomington County of McLean, hereby certify the foregoing to be a true, perfect and complete copy of a resolution adopted by the City Council (Council or President and Board of Trustees) at a meeting on February 24, 2014 (Date)

IN TESTIMONY WHEREOF, I have hereunto set my hand and seal this _____ day of _____

(SEAL)

City, Town, or Village Clerk

STATUS OF CLOSE-OUT OF THE CITY OF BLOOMINGTON'S OUTSTANDING MFT PROJECTS

dgg /rdy

2/19/2014 Items CDI has done to date.

No.	MFT Number	Priority	Common Name	Final Pay Estimate Sent	Final Pay Estimate Approved	Material Certification Sent	Material Certification Approved	Final Report Sent	Final Report Approved	Comments
1	99-00319-00-BR	1	Morris Ave Bridge over Goose Creek	5/14/2009		1/28/2014 2/11/2014				hard copy of Final Report in file signed by Russ, was it submitted?
2	02-00325-00-BR	2	Fell Ave Bridge Replacement		Yes		Yes	1/29/2014	2/11/2014	Final Approved by IDOT 2/11/2014
3	09-00344-00-RS	2	Lincoln (Main to Mercer), Ireland Grove Rd (Bridge to Dover) ERP Project	3/23/2012		2/10/2014		3/23/2012		Draft of letter and invoice (56,000) prepared for mailing to IDOT when Final Report approved.
4	10-00346-00-RS	2	General Maintenance Resurfacing 2010-11	2/14/2014		need		2/14/2014		May also need BLR 13210 Req for Chng in Plan. Russ submitted.
5	92-00283-00-RP	3	Lincoln St. (Bunn to Morrissey)	need		need		need		May also need BLR 13210 Req for Chng in plan
6 / 7	02-00328-00-TL/PV	3	Downtown Intersections (Arena) Improv		Yes		5/20/2008	1/24/2014		Supl MFT Resolution for $9,700.55 on 2/24/14 Council - need before approval of FR.
8	05-00332-00-PV	3	Mitsubishi Mtwy (Six Pnts to Sugar Crk)	need		need		need		May also need BLR 13210 Req for Chng in plan
9	82-00240-00-PV	4	ML King Dr (Oakland to Washington)							
10	93-00295-00-PV	4	Biech/Hamilton at Veterans Parkway							
11	93-00295-02-PV	4	Hamilton Rd (Greenwood to Timberlake)							
12	93-00295-03-PV	4	Hamilton Rd (Timberlake to Main)							
13	96-00306-00-SP	4	White Oak Rd & ML King Intersection							
14	96-00314-00-RP	4	Washington St (Clayton to Colton)		4/23/2008		4/16/2008	1/23/2014		waiting on IDOT to approve FR
15	97-00315-00-RP/TL	4	Airport Rd (IL Rt 9 to Gill)	2/12/2014		Yes	Yes	2/12/2014		Supl MFT Resolution on 2/24/2014 Council. Transmitted revised change in plans, revised final Pay estimate and revised final repot to IDOT 2/12/2014.
16	03-00327-00-TL	4	Market St. (W Rt 9)and I-55/74 Ramp							
17	03-00330-00-TL	4	McArthur & Bus US 51 (Main) Signals		Yes **		Yes **	3/11/2008		** Pay Est was erroniuosly approved. Need Matl Certification. Started on D5 PI0006's but not sent. NEED CONC TICKETS!
18	06-00336-00-PV/PT	4	Lafayette St (Maple to Morissey)							
19	07-00339-00-BD	4	904 E. Lincoln St Building Demolition							
20	10-00347-00-PV	4	Hershey Rd Extension (Hamilton to 750' S)							
21	11-00348-00-PV	4	Locust - Colton CSO Elimination Phase 1							
22	12-00349-00-PV	4	Morris Ave (Fox Hill Apts to Six Pnts)	2/14/2014				2/14/2014		Russ submitted.
23	12-00350-00-TL	4	Veterans Pkwy Traffic Signal UPS Instl							
24	97-00315-00-TL	4	Airport Rd from Gill to Route 9 Traffic Signals							
25	06-00336-00-PT	4	Lafayette St Reconstruct from Maple to Morrissey							
26	81-00230-00-PV	4	Project Not Constructed - Closed	N/A	N/A	N/A	N/A	N/A	N/A	No Further Effort Required.

FOR COUNCIL: February 24, 2014

SUBJECT: Supplemental Motor Fuel Tax Resolution for Downtown Intersection Improvements MFT Section 02-00328-00-TL

RECOMMENDATION/MOTION: That the supplemental resolution in the amount of $9,700.55 be adopted.

STRATEGIC PLAN LINK: Goal 1. Financially sound City providing quality basic services, and Goal 2. Upgrade city infrastructure and facilities.

STRATEGIC PLAN SIGNIFICANCE: Objective 1d. City services delivered in the most cost-effective, efficient manner, and Objective 2a. Better quality roads and sidewalks.

BACKGROUND: The Public Works Department is making an effort to reconcile older Motor Fuel Tax (MFT) projects with the Illinois Department of Transportation (IDOT). A recent IDOT audit shows a number of outstanding project needs. While none of the outstanding items are anticipated to be of major concern, multiple resolutions will be needed to finalize the outstanding audit items.

Staff workload and priorities required resources to be allocated to other priorities after completion of construction efforts. Staff workload continues to be at a level that does not allow for effort to be devoted to the final close out of the required paperwork. Clark Dietz, Inc. has been assisting staff with efforts to reduce the backlog of the open MFT projects. To date, Clark Dietz's scope of work has included correspondence with IDOT, preparation and submission of necessary IDOT paperwork, preparation of Council resolutions, and invoices to IDOT for MFT funds owed by IDOT to the City. Staff is actively partnering with IDOT in this effort. Staff deems the supplemental resolutions as routine in nature.

The above referenced project involved improvements at various intersections in the downtown area to facilitate the traffic flow associated with the U.S. Cellular Coliseum. The construction was completed in 2007. The final engineering and construction costs were slightly higher than originally anticipated. Final payment has been made from Motor Fuel Tax (MFT) Funds as follows:

Engineering fees (Farnsworth):	$51,996.40
Construction Costs (Rowe):	$357,704.15
Total	$409,700.55

Motor Fuel Tax Resolutions have been approved by Council as follows:

February 28, 2005	$275,000
June 13, 2005	$125,000
Total	$400,000

COMMUNITY GROUPS/INTERESTED PERSONS CONTACTED: Illinois Department of Transportation, District 5.

FINANCIAL IMPACT: In order to reconcile the project with IDOT, a supplemental resolution in the amount of $9,700.55 is necessary. No additional funds are requested or will be expended.

Respectfully submitted for Council consideration.

Prepared by: Jim Karch, PE, CFM, Director of Public Works

Reviewed by: Barbara J. Adkins, Deputy City Manager

Financial & budgetary review by: Chris Tomerlin, Budget Analyst
Carla A. Murillo, Budget Manager

Legal review by: Jeffrey R. Jurgens, Interim Corporation Counsel

Recommended by:

David A. Hales
City Manager

Attachments: Attachment 1. Supplemental Resolution for Improvements by Municipality Under the Illinois Highway Code
Attachment 2. Outstanding MFT Projects Status

Motion: _____ Seconded by: _____

	Aye	Nay	Other		Aye	Nay	Other
Alderman Black				Alderman Mwilambwe			
Alderman Fazzini				Alderman Sage			
Alderman Fruin				Alderman Schmidt			
Alderman Lower				Alderman Stearns			
				Mayor Renner			

Illinois Department of Transportation

Supplemental Resolution for Improvement by Municipality Under the Illinois Highway Code

BE IT RESOLVED, by the **Mayor and Council** of the
Council or President and Board of Trustees
City of **Bloomington** Illinois
City, Town or Village
that the following described street(s) be improved under the Illinois Highway Code:

Name of Thoroughfare	Route	From	To
East Street	FAP 730	at Front St.	
Madison Street	FAP 730	Front St.	Olive St.
Center Street	FAP 730	Olive St.	337 ft. South of Olive St.

BE IT FURTHER RESOLVED,

1. That the proposed improvement shall consist of Engineering and design, pavement widening, curb and gutter replacement, bituminous surface removal, bituminous concrete surfacing, traffic signal replacement, and related work.

and shall be constructed wide

and be designated as Section 02-00328-00-TL

2. That there is hereby appropriated the (additional ☒ Yes ☐ No) sum of

Nine thousand seven hundred and ---------- 55/100 Dollars ($9,700.55) for the improvement of said section from the municipality's allotment of Motor Fuel Tax funds.

3. That work shall be done by contract ; and,
Specify Contract or Day Labor

BE IT FURTHER RESOLVED, that the Clerk is hereby directed to transmit two certified copies of this resolution to the district office of the Department of Transportation.

Approved

Date

Department of Transportation

Regional Engineer

I, Tracey Covert City Clerk in and for the City of Bloomington
City, Town or Village
County of McLean , hereby certify the foregoing to be a true, perfect and complete copy of a resolution adopted by the City Council at a meeting on February 24, 2014
Council or President and Board of Trustees
Date
IN TESTIMONY WHEREOF, I have hereunto set my hand and seal this day of

(SEAL)

City, Town, or Village Clerk

STATUS OF CLOSE-OUT OF THE CITY OF BLOOMINGTON'S OUTSTANDING MFT PROJECTS

dgg /rdy

2/19/2014 Items CDI has done to date.

No.	MFT Number	Priority	Common Name	Final Pay Estimate Sent	Final Pay Estimate Approved	Material Certification Sent	Material Certification Approved	Final Report Sent	Final Report Approved	Comments
1	99-00319-00-BR	1	Morris Ave Bridge over Goose Creek	5/14/2009		1/28/2014 2/11/2014				hard copy of Final Report in file signed by Russ, was it submitted?
2	02-00325-00-BR	2	Fell Ave Bridge Replacement		Yes		Yes	1/29/2014	2/11/2014	Final Approved by IDOT 2/11/2014
3	09-00344-00-RS	2	Lincoln (Main to Mercer), Ireland Grove Rd (Bridge to Dover) ERP Project	3/23/2012		2/10/2014		3/23/2012		Draft of letter and invoice (56,000) prepared for mailing to IDOT when Final Report approved.
4	10-00346-00-RS	2	General Maintenance Resurfacing 2010-11	2/14/2014		need		2/14/2014		May also need BLR 13210 Req for Chng in Plan. Russ submitted.
5	92-00283-00-RP	3	Lincoln St. (Bunn to Morrissey)	need		need		need		May also need BLR 13210 Req for Chng in plan
6 / 7	02-00328-00-TL/PV	3	Downtown Intersections (Arena) Improv		Yes		5/20/2008	1/24/2014		Supl MFT Resolution for $9,700.55 on 2/24/14 Council - need before approval of FR.
8	05-00332-00-PV	3	Mitsubishi Mtwy (Six Pnts to Sugar Crk)	need		need		need		May also need BLR 13210 Req for Chng in plan
9	82-00240-00-PV	4	ML King Dr (Oakland to Washington)							
10	93-00295-00-PV	4	Biech/Hamilton at Veterans Parkway							
11	93-00295-02-PV	4	Hamilton Rd (Greenwood to Timberlake)							
12	93-00295-03-PV	4	Hamilton Rd (Timberlake to Main)							
13	96-00306-00-SP	4	White Oak Rd & ML King Intersection							
14	96-00314-00-RP	4	Washington St (Clayton to Colton)		4/23/2008		4/16/2008	1/23/2014		waiting on IDOT to approve FR
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19	07-00339-00-BD	4	904 E. Lincoln St Building Demolition							
20	10-00347-00-PV	4	Hershey Rd Extension (Hamilton to 750' S)							
21	11-00348-00-PV	4	Locust - Colton CSO Elimination Phase 1							
22	12-00349-00-PV	4	Morris Ave (Fox Hill Apts to Six Pnts)	2/14/2014				2/14/2014		Russ submitted.
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24	97-00315-00-TL	4	Airport Rd from Gill to Route 9 Traffic Signals							
25	06-00336-00-PT	4	Lafayette St Reconstruct from Maple to Morrissey							
26	81-00230-00-PV	4	Project Not Constructed - Closed	N/A	N/A	N/A	N/A	N/A	N/A	No Further Effort Required.

FOR COUNCIL: February 24, 2014

SUBJECT: Adoption of the 2012 Editions of the International Building, Residential, Fire, Mechanical, Fuel Gas and Energy Codes; as well as the adoption of the 2014 Edition of the National Electric Code.

RECOMMENDATION/MOTION: That the International Codes and National Electric Code be adopted and the Ordinance passed.

STRATEGIC PLAN LINK: Goal 4. Strong neighborhoods, and Goal 5. Great place – livable, sustainable City.

STRATEGIC PLAN SIGNIFICANCE: Building codes provide minimum standards requiring that buildings be constructed to be safe and structurally sound. Well constructed buildings retain their value as well as their function and strengthen neighborhoods. Consistent enforcement of modern, up to date building standards addresses areas of sustainable construction, energy efficiency and manageable maintenance of structures.

BACKGROUND: The Planning and Code Enforcement Department (PACE) maintains a set of construction standards for application to the physical development of residential and commercial structures. The International Code Council (ICC) is a respected, interdisciplinary organization that promulgates codes on a national level, based upon extensive research and analysis, publishing a revised and updated set of standards every three (3) years. The latest editions are for the year 2012, with the next updates due in 2015. The one (1) exception is the National Electric Code (NEC). The NEC is written and vetted by the National Fire Protection Association and is on a different schedule than the other Codes. Therefore, the most recent edition is for the year 2014.

One item of note: Due to the controversy over residential fire protection sprinkler systems during the adoption of the 2009 edition of the residential code, and the Council's reluctance to adopt the code's requirement that sprinkler systems be included in all new residential structures, staff has deleted the residential fire sprinkler requirement from the codes presented for adoption.

The Fire Department's mission is to reduce life and economic losses due to fire and related emergencies. It is the position of the Fire Department that all citizens should be protected against death, injury, and property loss resulting from fire in their residence. All homes should be equipped with both smoke alarms and automatic fire sprinklers, and all families should have and practice an emergency escape plan. The FD fully supports all efforts to reduce the tragic toll for fire losses in our community, including the International Residential Code that would require automatic sprinklers in all new residential construction.

COMMUNITY GROUPS/INTERESTED PERSONS CONTACTED: In an effort to engage the public in the adoption process, staff placed notice in the Pantagraph and provided a direct mailing to all registered contractors, indicating the intent to adopt the new code standards. An invitation was included to attend a public meeting before the Building Board of Appeals on December 19, 2013. At the hearing, staff provided a summary of proposed changes that would be relevant to the local construction industry. Testimony was heard relating to the changes. Approximately twenty (20) members of the building community were present to listen to the presentation and discussion among the board members. No member of the public offered testimony when presented with the opportunity. The board voted unanimously to recommend that Council adopt the updated editions of the codes. Copies of the updated codes are on file in the office the City Clerk and available for examination by the public as required by law.

FINANCIAL IMPACT: Little or no financial impact to the City is expected.

Respectfully submitted for Council consideration.

Prepared by: Mark R. Huber, Director, Planning and Code Enforcement

Reviewed by: Barb Adkins, Deputy City Manager

Financial & budgetary review by: Patti-Lynn Silva, Director of Finance

Legal review by: George D. Boyle, Asst. Corporation Counsel

Recommended by:

David A. Hales
City Manager

Attachments: Attachment 1. Unapproved BBA Minutes from December 19, 2013
Attachment 2. Ordinance
Attachment 3. BBA Codes

Motion: _____ Seconded by: _____

	Aye	Nay	Other		Aye	Nay	Other
Alderman Black				Alderman Mwilambwe			
Alderman Fazzini				Alderman Sage			
Alderman Fruin				Alderman Schmidt			
Alderman Lower				Alderman Stearns			
				Mayor Renner			

MINUTES ***(Unapproved)***

BLOOMINGTON BUILDING BOARD OF APPEALS

REGULAR MEETING Thursday, December 19, 2013

COUNCIL CHAMBERS, CITY HALL

109 EAST OLIVE STREET, BLOOMINGTON, ILLINOIS

Members Present:	John Meek, Michael Raikes, John Weber, Jeremy Dodson, Larry Stevig, Edwin Neaves, Jeffrey Brown, Douglas Dodson
Absent:	Barbara Page
Others Present:	Mark Huber - Director, Planning and Code Enforcement; Robert Coombs - Acting Secretary, Commercial Inspector; Mike Alwes - Electrical Inspector; Bob Jeakins - HVAC Inspector; Mike Conroy - Building Inspector; Kathryn Gruber - Building Inspector;
Call to Order:	Mr. Coombs called the meeting of the Building Board of Appeals to order 3:03 P.M.
Roll Call:	A quorum was present.
Minutes:	There were none. This was the first meeting of this Board.
Regular Agenda:	Mr. Huber began the meeting by inviting the Building Board of Appeals members to introduce themselves. The members proceeded to briefly describe their backgrounds and interest in being a part of this Board. Mr. Huber thanked the members for their service in the creation of this multi-functional/jurisdictional board. The Board was invited to provide nominations/volunteers for the election of a Chairperson. Mr. Meek was nominated for Chairman by Mr. D. Dodson with a second by Mr. Brown. All signified in favor with no opposition. Mr. Meek assumed the Chairman position. Purpose and Operations: Mr. Huber noted the duties and responsibilities as approved by the City Council. All of the duties and responsibilities from the former committees which had been disbanded were combined into the new Building Board of Appeals. The Building Safety Staff was introduced. This Board, according to statute, will have at least two meetings a year not to be more than once a month. The next meetings are Tuesday, May 6, 2014 at 3.00 p.m. and Tuesday, November 4, 2014 at 3.00 p.m.
Public Comment:	Chairman Meek invited public comment. There was none.

Old Business: None

New Business: **Case # BBA-1-13** City of Bloomington Staff requesting a recommendation to the City Council concerning the adoption of the 2012 International Code Council (ICC) family of codes. Specifically, the: IBC, International Building Code; IRC, International Residential Code; IFC, International Fire Code; IECC, International Energy Conservation Code; IMC, International Mechanical Code; IFGC, International Fuel Gas Code; In addition the Board is being asked to consider the NEC/2014, National Electrical Code.

Chairman Meek introduced the case and invited Mr. Huber to elaborate.

IRC. Mr. Huber referred to the packet of highlighted summary of changes. Mr. Huber commented on a few changes. The IRC and one major change to the code as written. The residential sprinkler requirements have been removed. With the sprinklers removed, a protection of floors is required as stated in section 501.3.

IECC. The City is going to adopt the IECC 2012 which the state already mandates with a uniformity of enforcement. Staff has entered into conversations with their counter-parts from Normal regarding the IECC 2012 enforcement across the division street in a uniform manner.

IFC. A couple of minor changes to the IFC have been included in the packet.

NEC. The focus was mostly on the expanded Ground Fault Circuit Interrupter (GFCI) use and Arc Fault Circuit Interrupter (AFCI) use. We attempt not to modify the code as they are embedded on a national level. We don't feel that we can change that much on a local level either, with the exception on the residential building and sprinkler area. Mr. Huber invited the board and public questions and discussion.

Chairman Meek invited questions from the board members. Mr. Neaves asked a procedural question regarding the next steps toward a recommandation for the city council. Mr. Huber encouraged keeping the code as a whole as much as possible. It makes it easier for staff to obtain training and provides uniformity for out of town contractors and designers coming into the area to do work. However, if the board feels strongly about a particular issue, we can push a recommendation.

Mr. Neaves entered into a ground fault location discussion. Mr. Alwes, electrical inspector, was invited to respond. He explained the history of the GFCI requirements for sump pumps, garage door openers, refrigerators and dish

washers. He also explained the need to meet the intention of the code as well as the philosophy on addressing issues as they may arrise.

Chairman Meek asked how to memorialize the decisions. Mr. Huber stated it's legitimate to revisit cases that may arise. Staff is trying to be practical with the Code; however, a builder is welcome to come to this board to express concern over issues which may arise.

Mr. Weber mentioned on-going Code change classes.

Mr. Stevig clarified, if NEC is accepted tonight we can address issues as they come forward. Mr. Huber sighted the GFCI requirement for sump pumps as an example of a Code requirement not working from a practical standpoint. The problem was brought before the electrical commission. A code change was instituted that waived the requirement. The process was a legitimate way to deal with a code section that was troublesome.

Mr. Stevig asked if the summary of changes included in the packet were unique to this location or just a summary of changes from 2009 to 2012. Mr. Huber stated the summary of changes Staff felt pertinent to this particular locale. For example, we would not take the hurricane wind requirements from the coast to apply to Illinois.

Mr. Stevig asked if the waiver for the GFCI of the sump pump would need to be spelled out. Mr. Huber stated the waiver has already been articulated with the 2011 addition and left the exemption in our local amendments. This board is voting on recommending the adoption of the 2012 codes and all of the local amendments would remain in force, unless there was specific action to remove them.

Chairman Meek stated Staff, Mr. Alwaes, addressed some of Mr. Neaves concerns. How were these concerns addressed and do we need to take some action today? Mr. Huber referred to an example of how the local authority addressed the GFCI requirement for the dishwasher. Mr. Alwes and his Normal counter-part, Rand Veerman, resolved this issue by placing the switch in the cabinet next to the dishwasher. Unless there is a specific issue or case, Mr. Huber suggested treating this recommendation as a whole package. The door is always open for modification or equivalencies.

IECC. The Energy Conservation Code is not modifiable as it is adopted and approved by the State. We are doing this more as equity of enforcement verses an attempt to adopt another code.

Chairman Meek reiterated Mr. Huber's comments to depend on the local Experts and Staff who have worked at resolving prior issues.

Chairman Meek invited the public comment. There were none.

Mr. Stevig requested an update on the residential sprinkler requirement. Mr. Huber stated the mandatory option has been in effect for two years. The only folks who have placed sprinklers into their homes have been Habitat for Humanity. They have been placing sprinklers into their homes before the code was adopted. It has been financially possible due to free labor and donations of materials. Mr. Stevig suggested the local sprinkler language remain the same.

Chairman Meek invited more comments. There were none.

Mr. Stevig approached the board regarding community resiliency with regard to the homes devastated by the recent tornados. If there would be an interested builder who might want to build a home more tornado resistant, would it be possible to encourage the public guidelines somehow? Maybe there would be something the city would be comfortable with in the guidelines.

Mr. Huber stated the Code is a minimum standard; however, the code has become more technical and detailed. If someone would come to staff about building a tornado shelter in their home, they would be pointed to the Code with the specifics. If one wanted to meet higher design criteria, maybe the city could give tax incentives or offer incentives to encourage the activity. This could be done with the fire protection sprinklers. Chairman Meek looks to this board to come forward with ideas on how to save lives.

Chairman Meek again invited public comments. No one spoke.

Chairman Meek invited a motion to accept the body of 2012 Code as presented. Mr. Neaves made the motion to accept the body of Codes as presented. The second was made by Mr. Weber. Chairman Meek invited any further discussion, seeing none, a vote was taken. All in favor signified by saying ‘Aye’. None opposed. **Case # BBA-1-13** passed by a vote of eight (8) to zero (0).

Chairman Meek invited any other business to come before the board.

Adjournment: Chairman Meek invited a motion for adjournment. Mr. Raikes moved to adjourn the meeting. Mr. J. Dodson seconded the motion which was approved unanimously. The meeting was adjourned at 3.56 p.m.

Respectfully submitted,
Bob Coombs

ORDINANCE NO. 2014 -

AN ORDINANCE AMENDING CHAPTERS 10 AND 15 OF THE BLOOMINGTON CITY CODE RELATING TO ADOPTION OF THE 2012 EDITIONS OF THE BUILDING, RESIDENTIAL, FIRE, MECHANICAL, FUEL GAS AND ENERGY CODES AS WELL AS THE ADOPTION OF THE 2014 EDITION OF THE NATIONAL ELECTRIC CODE

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BLOOMINGTON, ILLINOIS:

SECTION 1. That Bloomington City Code Chapter 10, Article II, Sections 13, 14, 16, 17, 18, 19 and 20 shall be and the same is hereby amended to read as follows: (additions are indicated by underlining; deletions are indicated by strikeouts):

SEC. 13 ADOPTION OF INTERNATIONAL BUILDING CODE – 2012 ~~2009~~.

There is hereby adopted for the purpose of establishing minimum regulations governing the design, construction, alteration, enlargement, repair, removal, demolition, equipment installation, use and occupancy, location, conditions and maintenance of all property, buildings and structures; by providing the standards for supplied utilities and facilities and other physical things and conditions essential to ensure that structures are safe, sanitary and fit for occupation and use; and the condemnation of buildings and structures unfit for human occupancy and use and the demolition of such structures as herein provided; providing for the issuance of permits, collection of fees and penalties, a Building Code known as the International Building Code, 2012 ~~2009~~ edition, including Appendix Chapters ~~B~~, C~~, F, G, I,~~ and J, as published by the International Code Council, Inc., and the whole thereof, hereinafter referred to as the International Building Code, save and except such portions as are deleted, modified or amended in Article IV of this Chapter, of which Code not less than one (1) copy has ~~have~~ been and now is ~~are~~ filed in the office of the Clerk of the City of Bloomington. The provisions of said Code are hereby adopted and incorporated as fully as if set out at length and the provisions thereof shall be controlling in regard to all property, buildings and structures within the corporate limits of the City~~, except as provided in Section 12 of this Article~~.

In addition to the one (1) copy of the International Building Code, 2012 ~~2009~~, which has been on file in the office of the City Clerk of the City, for use and examination by the public, at least one (1) copy of said Code shall be kept on file in the office of the Planning and Code Enforcement Department for public inspection.

All references to the "Board of Appeals" or "Board" in said Code shall be deemed references to the ~~Construction~~ Building Board of Appeals established in Bloomington City Code Chapter 2, Section 30 and Section 23 of this Chapter, unless a contrary reference is clearly dictated by the context of the reference.

SEC. 14 ADOPTION OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS - 2012 ~~2009~~.

There is hereby adopted the 2012 ~~2009~~ edition of the International Residential ~~code~~ Code for One- and Two-Family Dwellings, including Appendix Chapters ~~A, B, C, D~~, E, F, G, H, I, J, K and O ~~Q~~, as published by the International Code Council Inc. for the purpose of regulating and governing the construction, alteration, movement, enlargement, replacement, repair, equipment, location, their appurtenances and accessory structures, or maintenance of building, mechanical, and electrical systems, removal and demolition of detached one and two family dwellings and multiple single family dwellings (townhouses) not more than three stories in height with separate means of egress in the City of Bloomington; providing for the issuance of permits and collection of fees therefor; ~~providing for the issuance of permits and collection of fees therefor;~~ and each and all of the regulations, provisions, penalties, conditions and terms of said Residential Code of which not less than one (1) copy has been and now is filed in the office of the Clerk of the City of Bloomington, are hereby referred to, adopted, and made a part hereof, as if fully set out in this ordinance, with the additions, insertions, deletions and changes, if any, set forth ~~prescribed~~ in ARTICLE V of this Chapter. ~~ordinance, except as provided in Section 12 of this Article.~~

In addition to the one (1) copy of the International Residential Code for One- and Two-Family Dwellings - 2012 ~~2009~~, ~~which has been~~ on file in the office of the City Clerk, ~~of the City, for use and examination by the public,~~ at least one (1) copy of said Code shall be kept on file in the office of the Department of Planning and Code Enforcement for public inspection.

All references to the "Board of Appeals" or "Board" in said Code shall be deemed references to the Building Board of Appeals established in Bloomington City Code Chapter 2, Section 30 and Section 23 of this Chapter, unless a contrary reference is clearly dictated by the context of the reference.

SEC. 16 ADOPTION OF THE INTERNATIONAL MECHANICAL CODE - 2012 ~~2009~~.

There is hereby adopted by the City Council for the purpose of regulating and controlling the design, construction, quality of materials, erection, installation, alteration, repair, location, relocation, replacement, addition to, use or maintenance of mechanical systems, including heating systems, ventilation systems, cooling systems, steam and hot water heating systems, hydronic piping, boiler and pressure vessels, appliances using gas, liquid or solid fuel, chimneys and vents, mechanical refrigeration systems, fireplaces, solar systems, barbecues, incinerators, and crematories in the City of Bloomington, the International Mechanical Code, 2012 ~~2009~~, as published by the International Code Council, Inc. save and except such portions as are deleted, modified or amended in Article VII of this Chapter, of which Code not less than one (1) copy has been and now is on file in the office of the Clerk of the City of Bloomington. The provisions of said Code are hereby adopted and incorporated as fully as if set out at length and the provisions thereof shall be controlling in regard to the design, construction, quality of materials, erection, installation, alteration, repair, location, relocation, replacement, addition to, use or maintenance of mechanical systems, including heating systems, ventilation systems, cooling systems, steam and hot water heating systems, hydronic piping, boiler and pressure vessels, appliances using gas, liquid or solid fuel, chimneys and vents, mechanical refrigeration systems, fireplaces, solar systems, barbecues, incinerators, and crematories~~, except as provided in Section 12 of this Article~~.

In addition to the one (1) copy of the International Mechanical Code, 2012 ~~2009~~, which has been on file in the office of the Clerk of the City of Bloomington, for use and examination by the public, at least one (1) copy of said Code shall be kept on file in the office of the Planning and Code Enforcement Department for public inspection.

All references to the "Mechanical Board of Appeals", "Board of Appeals", "Board" or similar reference shall be considered as references to the ~~Heating, Ventilating and Air Conditioning~~ Building Board of Appeals established in Bloomington City Code Chapter 2, Section 30 and Section 23 of this Chapter, unless a contrary reference is clearly intended by context of the reference.

SEC. 17 ADOPTION OF THE INTERNATIONAL FUEL GAS CODE - 2012 ~~2009~~.

~~An ordinance of the City of Bloomington adopting~~ There is hereby adopted the 2012 ~~2009~~ edition of the International Fuel Gas Code, regulating and governing fuel gas systems and gas-fired appliances in the City of Bloomington; providing for the issuance of permits and collection of fees therefor; that a certain document, one (1) copy of which is on file in the office of the City of Clerk of the City of Bloomington, being marked and designated as the International Fuel Gas Code, 2012 ~~2009~~ edition, including Appendix Chapters A, B, C and D, as published by the International Code Council, be and is hereby adopted as the Fuel Gas Code of the City of Bloomington, ~~in the State of Illinois; for regulating and governing fuel gas systems and gas-fired appliances as herein provided for the issuance of permits and the collection of fees therefor;~~ and each and all of the regulations, provisions, penalties, conditions and terms of said Fuel Gas Code on file in the office of the City ~~of~~ Clerk of the City of Bloomington are hereby referred to, adopted, and made a pert hereof, as if fully set out in this ordinance, with the additions, insertions, deletions and changes, prescribed in ARTICLE VIII of this Chapter.

All references to the "Mechanical Board of Appeals", "Board of Appeals", "Board" or similar reference shall be considered as references to the ~~Heating, Ventilating and Air Conditioning Board established~~ in Bloomington City Code Chapter 2, Section 30 and Section 23 of this Chapter, unless a contrary reference is clearly intended by context of the reference.

SEC. 18 ADOPTION OF THE INTERNATIONAL FIRE CODE - 2012 ~~2009~~.

~~An ordinance of the City of Bloomington adopting~~ There is hereby the 2012 ~~2009~~ edition of the International Fire Code, ~~regulating and governing the safeguarding of life and property from fire and explosion hazards arising from the storage, handling and use of hazardous substances, materials and devices, and from conditions hazardous to life or property in the occupancy of buildings and premises in the City of Bloomington; providing for the issuance of permits for hazardous uses or operations. That a certain document,~~ at least one (1) copy of which is on file in the office of the City Clerk of the City of Bloomington, being marked and designated as the International Fire Code, including Appendix Chapters B, C, D, E, F and G, as published by the International Code Council, be and is hereby adopted as the code of the City of Bloomington for regulating and governing the safeguarding of life and property from fire and explosion hazards arising from the storage, handling and use of hazardous substances, materials

and devices, and from conditions hazardous to life or property in the occupancy of buildings and premises in the City of Bloomington and providing for the issuance of permits for hazardous uses or operations; and each and all of the regulations, provisions, conditions and terms of such International Fire Code, 2012 ~~2009~~ edition, published by the International Code Council, on file in the office of the City Clerk are hereby referred to, adopted and made a part hereof as if fully set out in this ordinance, with the additions, insertions, deletions and changes, if any, prescribed in ARTICLE IX of this Chapter.

All references to the "Board of Appeals" or "Board" in said Code shall be deemed references to the Building Board of Appeals established in Bloomington City Code Chapter 2, Section 30 and Section 23 of this Chapter, unless a contrary reference is clearly dictated by the context of the reference.

SEC. 19 ADOPTION OF THE INTERNATIONAL EXISTING BUILDING CODE - 2012 ~~2009~~.

~~An ordinance of the City of Bloomington adopting~~ There is hereby adopted the 2012 ~~2009~~ edition of the International Existing Building Code, regulating and governing the repair, alteration, change of occupancy, addition, and relocation of existing buildings, including historic buildings, in the City of Bloomington, providing for the issuance of permits and collection of fees therefor, ~~That a certain document,~~ at least one (1) copy of which is on file in the office of the City Clerk of City of Bloomington, being marked and designated as the International Existing Code, 2012 ~~2009~~ edition, including Appendix A, B, and C as published by the International Code Council, ~~be and is hereby adopted as the Existing Building Code of the City of Bloomington, in the State of Illinois for regulating and governing the repair, alteration, change of occupancy, addition and relocation of existing buildings, including historic buildings, as herein provided; providing for the issuance of permits and collection of fees therefor;~~ and each and all of the regulations, provisions, penalties, conditions and term of said Existing Building code on file in the office of the City Clerk are hereby referred to, adopted, and made a part hereof, as if fully set out in this ordinance, with the additions, insertions, deletions and changes, if any, prescribed in ARTICLE X of this Chapter.

All references to the "Board of Appeals" or "Board" in said Code shall be deemed references to the Building Board of Appeals established in Bloomington City Code Chapter 2, Section 30 and Section 23 of this Chapter, unless a contrary reference is clearly dictated by the context of the reference.

SEC. 20 ADOPTION OF THE INTERNATIONAL ENERGY CONSERVATION CODE – 2012 ~~2009~~.

There is hereby adopted for the purpose of establishing minimum regulations governing energy efficient building envelopes and installation of energy efficient mechanical, lighting and power systems; providing for the issuance of permits, collection of fees and penalties, an energy code by the name of the International Energy Conservation Code, 2012 ~~2009~~ edition, as published by the International Code Council, Inc., and the whole thereof, hereinafter referred to as International Energy Conservation Code, save and except such portions as are deleted,

modified or amended in Article IV of this Chapter, of which Code not less than one (1) copy ~~have been and now are~~ has been and is now filed in the office of Clerk of the City of Bloomington. The provisions of said Code are hereby adopted and incorporated as fully as if set out at length and provisions thereof shall be controlling in regard to all property, buildings and structures within the corporate limits of the City~~, except as provided in Section 12 of this Article~~.

All references to the "Board of Appeals" or "Board" in said Code shall be deemed references to the Building Board of Appeals established in Bloomington City Code Chapter 2, Section 30 and Section 23 of this Chapter, unless a contrary reference is clearly dictated by the context of the reference.

SECTION 2. That Bloomington City Code Chapter 10, Article IV, Sections 508.2, 1809.5, 3410.2 and the title heading shall be and the same is hereby amended to read as follows: (additions are indicated by underlining; deletions are indicated by strikeouts):

ARTICLE IV

ADDITIONS, COMPLETIONS, MODIFICATION, AND AMENDMENTS TO INTERNATIONAL BUILDING CODE - 2012 ~~2009~~

The numbered Sections of this Article correspond to sections of the International Building Code - 2012 ~~2009~~ or correspond to the Sections of said Code which are added to, completed, modified, amended or deleted as shown in the Sections herein.

~~SEC. 508.2 CLASSIFICATION.~~

~~Modify the Incidental Accessory Occupancies Table 508.2~~

~~INCIDENTAL ACCESSORY OCCUPANCIES~~

~~ROOM or AREA~~	~~SEPARATION and/or PROTECTION~~
~~Furnace Room~~	~~1 hour or provide automatic fire-extinguishing system~~
~~Rooms with any boiler~~	~~1 hour or provide automatic fire-extinguishing system~~

~~Remainder of table unchanged.~~

SEC. 1809.5 ~~1805.2.1~~ FROST PROTECTION.

Modify 1 as follows:

1. Extending below the frost line of 40 inches;

~~1. Extending below the frost line of at least forty inches (40") below the adjacent grade for frost protection.~~

~~SEC. 3410.2 APPLICABILITY.~~

~~Modify first sentence of Section 3410.2 to read as follows:~~

~~Structures existing prior to January 1, 1955, in which there is work involving additions, alterations or changes of occupancy, shall be made to conform to the requirements of this section or the provisions of Sections 3403.0 through 3407.0.~~

~~Remainder of section unchanged.~~

SECTION 3. That Bloomington City Code Chapter 10, Article V, Sections R101.1, R301.2(1), F313.1, R313.2.1, R105.2, R112, R313, R313.1, R313.1.1, R313.2, R313.2.1, R313.3 and the title heading shall be and the same is hereby amended to read as follows: (additions are indicated by underlining; deletions are indicated by strikeouts):

ARTICLE V

ADDITIONS, COMPLETIONS, MODIFICATIONS, AMENDMENTS TO THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS - 2012 ~~2009~~ EDITION

The numbered sections of this Article correspond to sections of the International Residential Code for One- and Two-Family Dwellings - 2012 ~~2009~~ Edition which are completed, modified, amended or deleted thereby.

SEC. R101.1 TITLE.

These provisions shall be known as the Residential Code for One- and Two-Family Dwellings of the City of Bloomington, shall be cited as such and shall be referred to herein as "this Code".

TABLE R301.2(1)

Insert the following into the Climatic and Geographic Design Criteria Table R 301.2(1)

Ground snow load (pounds per square foot) = 30
Wind Design speed (mph) = 90 mph
Wind Design Topographical Effects - No
Seismic Design Category = B
Subject to damage from:
Weathering = Severe
Frost line depth = minimum depth of 40" below finish grade

Termite = Moderate to Heavy
~~Decay = Slight to Moderate~~
Winter design temp. = -4 ~~-5~~ degrees F
Ice shield under-layment required = Yes
Flood Hazards = The Flood Insurance Study for the "City of Bloomington", dated "February 9, 2001", as amended or revised.
Air Freezing Index = 1,500
Mean Annual Temp. = 52

Part VII - PLUMBING. Chapters 25 through 32

The design and installation of plumbing systems, including sanitary and storm drainage, sanitary facilities, water supplies and storm water and sewage disposal in buildings shall comply with the requirements of the Illinois State Plumbing Code currently adopted by the City.

Delete: Sections F313.1 Townhouse automatic fire sprinkler system through R313.2 One and two-family dwellings automatic fire systems, including the exceptions.

Modify: R313.2.1 Design and installation – When provided, automatic residential fire sprinkler systems shall be designed and installed in accordance with Section P2902 or NFPA 13D/2010.

SEC. R105.2 WORK EXEMPT FROM PERMIT.

Modify the section by deleting subsections 1, 2, 3, 4, 5 and 10.

SEC. R112 BOARD OF APPEALS.

Modify by deleting the section in its entirety.

SEC. R313 AUTOMATIC FIRE SPRINKLER SYSTEMS.

Modify by deleting the section in its entirety.

SEC. R313.1 TOWNHOUSE AUTOMATIC FIRE SPRINKLER SYSTEMS.

Modify by deleting the section in its entirety.

SEC. R313.1.1 DESIGN AND INSTALLATION.

Modify by deleting the section in its entirety.

SEC. R313.2 ONE- AND TWO-FAMILY DWELLINGS AUTOMATIC FIRE SYSTEMS.

Modify by deleting the section in its entirety.

SEC. R313.2.1 DESIGN AND INSTALLATION.

Modify the language to read as follows:

When provided, automatic residential fire sprinkler systems shall be designed and installed in accordance with Section P2904 or NFPA 13D/2010.

SEC. R313.3 AUTOMATIC FIRE SPRINKLER SYSTEMS; MANDATORY OFFER REQUIRED.

A contractor or builder of a one- or two-family dwelling subject to the International Residential Code shall:

(a) Offer to the prospective purchaser or buyer the option to install, at the buyer's expense, an automatic fire sprinkler system in the building or dwelling unit designed and installed in accordance with the provisions of section R313.2.1 (relating to design and installation of automatic fire sprinkler systems) of the International Residential Code (2012 ~~2009~~ edition).

(b) Provide the prospective purchaser or buyer with information explaining the costs and benefits of installing and maintaining an automatic fire sprinkler system in the building or dwelling unit. The information provided shall include the following publications from the Home Fire Sprinkler Coalition:

(i) *Protect What You Value Most*
(ii) *The Future of Fire Safety Here Today*
(iii) *Now That You're Living With Sprinklers*

(c) Before issuance of a building permit for any one- or two-family residence, the contractor/applicant shall provide to the Planning and Code Enforcement Department a document signed by both the contractor and prospective purchaser or buyer (or in the case of one or two family dwellings built prior to having an identified buyer (commonly known as "spec homes"), signed by the contractor in place of the prospective purchaser or buyer) stating that the contractor has provided to the prospective purchaser or buyer the information required by Section 1(b) of this ordinance.

Said document shall be in the following form:

Mandatory Offer for Residential Fire Protection

Property Address: _____
Contractor: _____
Address: _____
Phone: _____
Prospective Purchaser/Buyer:_____
Address:_____

Phone:_____

We, the undersigned, confirm and agree that Contractor has provided Buyer with information regarding the installation of a residential fire protection system. Buyer has been provided with the following publications:

Protect What You Value Most
The Future of Fire Safety Here Today
Now That You're Living with Sprinklers

Contractor offers to install a fire protection system in accordance with NFPA 13D/2010 and applicable City of Bloomington ordinances at the subject property for the amount of $ _____.

Buyer has been informed that one- or two-family homes not provided with a fire protection system shall have the floors protected as required by Chapter 10, Article V, Section R313.3(2) of the Bloomington City Code.

Buyer hereby _____ accepts _____ declines the offer to install a residential fire suppression system at the subject property.

I hereby state that the information contained in this form is true and correct.

_____ Date:_____ _____ Date: _____

Buyer Contractor

Received by: _____ Date: _____

Planning and Code Enforcement Department

SECTION 4. That Bloomington City Code Chapter 10, Article VII, Sections M-130.0, M-130.1, M-130.2, M-130.3 and M-130.4 and the title heading shall be and the same is hereby amended to read as follows: (additions are indicated by underlining; deletions are indicated by strikeouts):

ARTICLE VII

ADDITIONS, COMPLETIONS, MODIFICATIONS, AMENDMENT TO INTERNATIONAL MECHANICAL CODE - ~~2009~~ 2012

The numbered Sections of this Article represent additions to the International Mechanical Code ~~2009~~ 2012 or correspond to Sections of said Code which are completed, modified, amended or deleted thereby.

SEC. M-130.0 LICENSING OF MECHANICAL CONTRACTORS.

SEC. M-130.1 MECHANICAL WORK; LICENSE REQUIRED.

It shall be illegal for any person to do work pertaining to any heating, cooling, ventilating, refrigeration systems, or gas piping systems without being a licensed mechanical contractor. ~~and only as permitted by license according to the following classifications:~~

~~Class "A" License: Enables holder to work on Warm Air Systems.~~

~~Class "B" License: Enables holder to do work on Steam and/or Hot Water Boiler Systems.~~

~~Class "C" License: Enables holder to do work on Cooling and/or Ventilating Systems.~~

~~Class "D" License: Enables holder to do work on Refrigeration Systems.~~

A building-occupant of a single-family residence can install or do mechanical work in his own house, including accessories of the same without a license but is subject to all other provisions of this Code.

To qualify as a builder-occupant, the single-family residence to be worked on must be resided in by the builder-occupant for a period of at least one (1) year from the date an occupancy certificate is issued and/or a final inspection is completed.

SEC. M-130.2 MECHANICAL BUSINESS; LICENSE REQUIRED.

(a) Except as provided in subsection (b) below, every person who shall desire to practice the business of a mechanical contractor ~~Contractor~~ shall first obtain a license to do so as provided by this Chapter.

(b) All manufacturing and commercial establishments that have a qualified maintenance staff to do the mechanical work must secure a premises-only license to do mechanical work on their own premises. The application must be filed by the authorized representative of such manufacturing or commercial establishment, and the license must be in the company, the firm, limited liability company or corporation's name. No bond is required in connection with such premises-only license. Permits must be taken out on all installations and major repairs, and inspection of the same requested upon completion.

SEC. M-130.3 EXAMINATION PREREQUISITE TO ISSUANCE.

Every applicant for any license required by this Mechanical Code must pass the N29 National Standard Master Mechanical examination, proctored by the International Code Council's (ICC) Contractor/Trades examination program. The exam shall be based on the most recent editions of the codes available. The cost of the exam shall be the responsibility of the applicant. ~~as administered by the International Code Council prior to the issuance of such license.~~

(a) Application for License ~~Examination~~. Application for a license as a mechanical contractor, shall be made to the Planning and Code Enforcement Department upon forms provided by the department. The application shall state the type of contracting in which the applicant is engaged; that he, or the partnership of which he is a member or a corporation of which he is an officer or representative, is a party directly interested in the license; if a nonresident, the address of his place of business; and if the application is for a license to be issued in the name of the partnership or corporation, the correct name thereof, the location of its principal office, and the length of time such partnership or corporation has been in existence. ~~examination shall be in accordance with the procedures set forth by the International Code Council.~~

(b) Applicant's Qualifications. An applicant for a license as a mechanical contractor as defined in this Mechanical Code shall be at least twenty-one (21) years of age and shall have had at least four (4) years' practical experience in the field or class in which a license is desired, or shall have satisfactorily completed a course in the subject for which the license is sought given by a recognized school, plus one (1) year practical experience in the same, or shall be a registered professional engineer.

SEC. M-130.4 BONDS, EXAMINATION, INSURANCE AND LICENSE FEES.

(a) Bond Required of Applicant.

(1) Any person applying for a new or renewed license required by this Mechanical Code shall execute and deliver to the City Clerk a bond in the penal sum of Two Thousand Dollars ($2,000.00) payable to the City or a continuation certificate for the same. Such bond shall be made for the use and benefit of the owner of, or any party in interest in the property where the Licensee furnishes any material furnished in violation of the requirements of any law of the State or Code of the City governing such work. The Secretary of the Board shall report to the Board as to the existence and sufficiency of such bond. The bond will be used to correct or complete a project in accordance to the laws and Codes of the City when the contractor fails or is unable to do the same upon written notice from the City.

(2) The requirements of subsection (1) above shall not preclude the Building Official from requiring, at his discretion, additional bond commensurate with the size of a project if he deems it necessary.

(b) Renewals; Expiration of License. Any person holding a valid license as a Mechanical Contractor from the City of Bloomington on the effective date of this Ordinance shall have the right, without further examination, to obtain a License from the Building Board of Appeals and a license each year thereafter from the City Clerk upon the payment to the City Clerk of a license fee, certificate of liability insurance, and the execution of a bond as required by this Chapter.

The license fee for an annual renewal of a license shall be Seventy-five Dollars ($75.00). All licenses and renewals of the same shall expire on the 31st day of December of each year, and a renewal shall be obtained on or before January 31st of the following year.

Any license forfeited for nonpayment of the renewal fee may be reinstated upon the payment of the annual renewal fee, plus Twenty-five Dollars ($25.00) for each month, or portion of a month that such delinquency has continued; provided, however, that after the same has been delinquent and not in force on March 1st of any year, then the same shall be null and void and shall not be renewed.

(c) Licenses for Partnerships, Limited Liability Companies, and Corporations. No partnership, limited liability company, or corporation shall practice or engage in the business of a Contractor, unless a member of the partnership, or an officer or duly authorized representative of such corporation shall obtain a license to be issued to him in behalf of and for the benefit of such partnership, limited liability company, or corporation, which shall be so named in such license, the license shall be issued only if such member of such firm, or officer or representative of such corporation, is personally qualified and complies with all of the provisions of this Chapter.

(d) Reciprocal Provisions. Any person, firm, limited liability company, or corporation who is registered or licensed for the current year in any jurisdiction where the requirements of registration or license were at the date of such registration or license substantially equal to the requirements in force in this City and such jurisdiction extends a similar privilege to the persons registered and licensed under this Mechanical Code, they shall not be required to take an examination, but shall pay a registration fee of Seventy-five Dollars ($75.00) as provided in this Chapter, to engage in mechanical contracting for such year in this City, and shall file a copy of his registration or license with the Secretary of the Building Board of Appeals.

(e) Liability Insurance Required of Applicant. A satisfactory certificate of liability insurance against any form of liability <u>with</u> ~~to~~ a minimum of One Hundred Thousand Dollars ($100,000.00) for property damage and Three Hundred Thousand Dollars ($300,000.00) for personal injury. The insurance shall be maintained in full force and effect during the term of the registration and said insurance or certificate provide that the City be notified of any cancellation of the insurance ten (10) days prior to the date of cancellation.

SECTION 5. That Bloomington City Code Chapter 15, Article II, Section 19 shall be and the same is hereby amended to read as follows: (additions are indicated by underlining; deletions are indicated by strikeouts):

SEC. 9 ADOPTION OF ELECTRIC CODE.

There is hereby adopted by the City for the purpose of establishing rules and regulations for the safe and practical installation, alteration and use of electrical equipment, including permits and penalties, that certain Electric Code known as the National Electrical Code, as published by the National Fire Protection Association, being particularly the <u>2014</u> ~~2011~~ edition thereof and the whole thereof, save and except such portions as are hereinafter deleted, modified

or amended, of which not less than one (1) copy is on filed in the office of the Clerk of the City and the same are hereby adopted and incorporated as fully as if set out at length herein and from the date on which the Ordinance shall take effect, the provisions thereof shall be controlling in the installation, alteration, and use of electrical equipment within the corporate limits of the City and on City owned property outside the corporate limits of the City.

SECTION 6. Except as provided herein, the Bloomington City Code, as amended, shall remain in full force and effect.

SECTION 7. The City Clerk is hereby directed and authorized to publish this Ordinance in pamphlet form as provided by law.

SECTION 8. This Ordinance is enacted pursuant to the authority granted to the City as a home rule unit by Article VII, Section 6 of the 1970 Illinois Constitution.

SECTION 9. This Ordinance shall be effective ten (10) days after the date of its publication.

PASSED this 24th day of February, 2014.

APPROVED this ___ day of February, 2014.

APPROVED:

Tari Renner
Mayor

ATTEST:

Tracey Covert
City Clerk

CITY OF Bloomington ILLINOIS

Planning and Code Enforcement Department
115 E. Washington Street
P.O. Box 3157
Bloomington, Illinois 61702-3157

MEMO

To: Building Board of Appeals Member:
From: Mark R. Huber, Director, Planning and Code Enforcement
Date: December 12, 2013
Subject: Packet Contents

Please find enclosed in this packet of materials the following information:

1. A copy of the city ordinance that creates the Building Board of Appeals.
2. A copy of a list of the membership of the Board including addresses, phone numbers and emails.
3. An agenda of the Board meeting of December 19, 2013
4. A copy of the information being used as a basis for Case BBA-1-13, including a summary of code changes and related background information.

If you have any questions, please feel free to contact me at (309) 434-2446 or mhuber@cityblm.org

Respectfully,

Mark R. Huber
Director, Planning and Code Enforcement

City Code Creating the Building Board of Appeals and the Board's Function

Section 23 : Building Board of Appeals

1. There is hereby created a Building Board of Appeals consisting of nine members. The members of the Board shall be individuals who are qualified by experience and training to decide upon matters pertaining to building construction and shall have the specific qualifications of each discipline set forth in this Section. Three members shall represent general construction, and two members each shall represent the disciplines of mechanical construction, electrical construction and plumbing.

    a. General Construction: A general construction representative must be a licensed architect, licensed structural engineer, an individual having a minimum of a Master's degree in construction technology or related field, or an individual having a minimum of five years of experience in general construction.

    b. Mechanical Construction: A mechanical construction representative must be a licensed mechanical engineer or a licensed HVAC contractor with a minimum of five years of experience in HVAC installation and maintenance.

    c. Electrical Construction: An electrical construction representative must be a licensed electrical engineer or a licensed electrical contractor with a minimum of five years of experience in electrical installation and maintenance.

    d. Plumbing Construction: A plumbing construction representative must be a licensed plumber with a minimum of five years of experience in plumbing or an individual with a minimum of a Bachelor's Degree in environmental science.

2. The Mayor, with the consent of the City Council, shall make appointments to the Building Board of Appeals. The initial board shall consist of representatives appointed for staggered terms with three representatives each appointed to serve a two, three, or four-year term. Thereafter, members shall be appointed for terms of four years and shall serve until their successors are appointed and duly qualified. The Board shall designate one of its members to serve as Chairperson. The Chairperson shall serve a one year term and may be reappointed. The Director of Planning and Code Enforcement or his designee shall serve as an advisor to the Board and may act as its Secretary. Vacancies

among Board members shall be filled for the unexpired term in the same manner as original appointments.

3. The Building Board of Appeals shall have the following functions:

    a. To hear and decide all appeals from rulings or determinations made by the Director of Planning and Code Enforcement or department staff pursuant to this Chapter, Chapter 15, (the Electrical Code), or Chapter 34, (the Plumbing Code). In any appeal pertaining to general, mechanical, electrical or plumbing construction, at least one board member representing the discipline at issue must attend and participate in the appeal hearing and deliberations, unless such participation would be prohibited by law. In the event a board member from the discipline at issue is unavailable, the appeal shall be continued in an expeditious manner to a date upon which a representative from the discipline at issue and quorum of the board can be present.

    b. To hear appeals related to applications for HVAC and electrical contractor licenses. In any such appeal, at least one board member representing electrical construction must attend and participate in the appeal hearing and deliberations.

    c. To conduct hearings on revocation or suspension of licenses, or the levying of fines against licensees.

    d. To serve as the “Board of Appeals" as that term is used in the various International construction codes adopted by the City of Bloomington. All appeals of decisions and determinations made under the International Property Maintenance Code or Chapter 45 of this Code shall be heard and reviewed by the Property Maintenance Board of Review as provided in that Chapter.

    e. To examine and review background, general practical knowledge, prerequisites and qualifications required to sit for the practical examinations for electricians and mechanical contractors as required in this Chapter and Chapter 15 of this Code.

    f. To recommend to the City Council reasonable rules and regulations governing the issuance of permits by the Director of Planning and Code Enforcement under this Chapter.

    g. To recommend to the City Council reasonable fees to be paid for the inspections performed by personnel of the Planning and Code Enforcement Department of the City of Bloomington under this Chapter.

h. To perform such other duties as may be given or assigned by the City Council.

i. The Building Board of Appeals, in concurrence with the Director of Planning and Code Enforcement, shall have the authority to provide for experimental programs or pilot studies, including studies which would allow for the installation of materials or methods which are otherwise prohibited by City of Bloomington ordinance. In determining whether to approve such studies or pilot programs, the Building Board shall consider the health and safety of the residents of the City of Bloomington, the likely future use of the product or method sought to be used, and the expected benefit of the intended material or method. Any program or study approved shall be limited in duration and scope such that a reasonable assessment can be made of the material or method. The Director of Planning and Code Enforcement shall report regularly to the Building Board of Appeals on the effectiveness of such material or method approved for a pilot program or study.

4. Quorum. Five members of the Board shall constitute a quorum. All decisions shall require an affirmative vote of a simple majority of the Board members present. No member of the Board shall consider or vote on any question in which he, or any corporation, limited liability company, or other legal entity in which he is a shareholder, is financially interested to an extent greater than other persons, firms or corporations performing or in business to perform comparable work.

5. Meetings and Records. Meetings of the Board shall be held biannually, or at the call of the Chairperson or such other times as the Board may determine. All hearings before the Board shall be open to the public. The Board shall keep minutes of its proceedings, showing the vote of each member on every question. If a member is absent or fails to vote, the minutes shall so indicate. The Board shall also keep records of its other official actions. Such minutes and such records shall be public records.

6. Appeal Procedure.

    a. Application for Appeal. Any application for appeal shall be made within ten days from the date of the decision appealed from, by filing with the Director of Planning and Code Enforcement a Notice of Appeal specifying the grounds for the appeal. The Director of Planning and Code Enforcement shall transmit to the Board of Appeals the Notice of Appeal and all papers or documents on which the matter appealed from was based.

b. Any petition for a variance/interpretation from the Building Board of Appeals shall be filed with the Planning and Code Enforcement Department, accompanied by a fee of One Hundred Fifty Dollars, payable to the City of Bloomington. Each additional petition in a multiple petition shall be charged a fee of Thirty Dollars.

c. Decision of the Board of Appeals. The Board of Appeals shall in every case reach a decision without unreasonable or unnecessary delay. Every decision of the Board shall be in writing and shall promptly be filed in the office of the Director of Planning and Code Enforcement and served either by personal delivery or regular mail on the party initiating the appeal.

d. If a decision of the Board of Appeals reverses or modifies a decision of the Director of Planning and Code Enforcement, the Director of Planning and Code Enforcement shall take action immediately in accordance with such decision. The decision of the Board shall be final, subject only to judicial review.

7. Rules and Regulations. The Board may establish rules and regulations for its own procedure not inconsistent with the provisions of this Chapter. (Ordinance No. 2013-68)

Building Board of Appeals

Mr. Mark Huber (Staff)
115 E Washington
Bloomington, IL 61701
(309) 434-2446 wk
E-mail: Mhuber@cityblm.org

Mr. Robert Coombs (Staff)
115 E Washington
Bloomington, IL 61701
(309) 434-2447 wk
E-mail: Rcoombs@cityblm.org

Mr. Michael Raikes (Electrical)
1520 N Clinton Blvd
Bloomington, IL 61701
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Updated: December 12, 2013

Agenda
Building Board of Appeals
Council Chambers, City Hall, 109 E. Olive Street, Bloomington
December 19, 2013, 3:00 p.m.

I. Call to Order (Secretary)

II. Board Member Introductions and Election of a Chairman

a. Introductory Statements – Mark Huber, Director of Planning and Code Enforcement (PACE)

b. Election of the Chair

III. Purpose and Operations – Mark Huber, Director of PACE

a. Meeting frequency

b. Areas of expertise and attendance

c. Introductions of Building Safety Staff

IV. Public Comment

V. Case # BBA-1-13 City of Bloomington Staff requesting a recommendation to the City Council concerning the adoption of the 2012 International Code Council (ICC) family of codes. Specifically, the:

IBC, International Building Code
IRC, International Residential Code
IFC, International Fire Code
IECC, International Energy Conservation Code
IMC, International Mechanical Code
IFGC, International Fuel Gas Code
In addition the Board is being asked to consider the National Electrical Code, NEC/2014.

VI. Other business.

Respectfully submitted,

Mark R. Huber
Director, Planning and Code Enforcement

Planning and Code Enforcement Department
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Proposed Code Adoptions

In an effort to keep the City of Bloomington in conformance with the latest in national standards for the built environment, staff is proposing the adoption of the following updated codes. These codes and standards have been thoroughly reviewed on a national level and are considered to be the leaders in the industry.

NEC, National Electric Code 2014
IBC, International Building Code/2012
IRC, International Residential Code/2012
IFC, International Fire Code/2012
IECC, International Energy Conservation Code/2012
IFGC, International Fuel Gas Code/2012
IMC, International Mechanical Code/2012

SYNAPSIS of CHANGES

The following information is presented as a brief synapsis of the changes relevant to the local construction industry. It is not meant to be all inclusive but address those items that are most likely to affect local contractors and developers. The information is presented here in a brief statement format. More detailed information on each area has been provided as appendices. This additional information is drawn from various publications of the International Code Council (ICC) partially entitled, "Significant Changes to the (applicable code)"

International Residential Code (IRC)

There are very few substantial changes to the residential code in this cycle. Staff has removed the fire protection requirement from the code as it did in the 2009 edition. However, there is a new section (501.3) that provides for floor protection options in cases were sprinklers are not provided. The mandatory option section of the code has remained intact.

Applicable Code Section	Summary of Change
Section R310.1 Emergency Escape and Rescue Openings	Clarification on how to measure the sill height of an emergency escape and rescue opening. The measurement is taken from the finished floor to the bottom of the clear opening.
Section R310.2.2 Window Well Drainage	New requirement for egress window well to drain to the foundation drainage system.

Applicable Code Section	Summary of Change
Section R313 Automatic Fire Sprinkler Systems	Staff is deleting the requirement in the 2012 edition of the code to provide fire suppression systems in one and two family dwellings.
Section R302.5.1 Garage Opening Protection	Doors between the garage and the living space are now required to have a self-closing device.
Section R308.4.6 Glazing adjacent Stairs and Ramps and Section R308.4.7 Glazing adjacent to the Bottom Stair Landing.	Modification of the requirements for safety glazing around stairs and landings.
Section R315.2 Carbon Monoxide Detection Systems	This new section now recognizes carbon monoxide detection systems and provides where they are to be installed and maintained.
Section 405.1 Foundation Drainage	Requires footing tile to be protected by an approved filter membrane or protection of the rock cover by a filter membrane.
Section 501.3 Fire protection of floors	This requirement provides fire protection to unprotected floors in cases where fire protection has not been provided.
Sections 602.10 and 602.12 Wall Bracing	Rewritten and additional sections to make wall bracing easier to understand and apply.

International Building Code, IBC

As in the residential code, there are few substantive changes in the 2012 edition of the Building Code. There are many sections intended to provide clarification and more restrictive requirements for fire protection in specific instances.

Applicable Code Section	Summary of Change
Section 703.3 Identification of Fire and Smoke Separation Walls	Modification of the marking required above ceiling and accessible spaces to increase the potential for such markings to be seen.
706.2 Double Fire Walls	Allows for the use of NFPA 221 double fire wall as an alternative to single wall construction.
707.8, 707.9 Intersections of Fire Barriers at Roof Assemblies	Allows the void at the intersection of a fire barrier and a nonfire-resistive roof assembly to be protected with an approved material.
712 Vertical Openings	A new emphasis on the presence of vertical openings rather than shaft enclosures.
716.3, 202 Marking for Fire-Rated Glazing Assemblies	A new table has been added to define and regulate the various test standards for fire-rated glazing, including the designations used to mark such glazing.
Table 716.6	Adds identification of the markings required on the fire-rated glazing for acceptance in specified applications.

Applicable Code Section	Summary of Change
716.6.4 Wired Glass in Fire Window Assemblies	The allowance for the use of wired glass without compliance with the appropriate test standards has been eliminated.
804.4 Interior Floor Finish Requirements	Floor finishes in rooms or spaces that are not separated from a corridor with full-height walls must meet the same requirement as the corridor.
903.2.4, 903.2.7, 903.2.9 Furniture Storage and Display in F-1, M and S-1 Occupancies	Automatic sprinkler systems are now required in occupancies where upholstered furniture or mattresses are manufactured, stored, or displayed.
903.2.11.1.3 Sprinkler Protection for Basements	Obstructions in basements that block hose streams now will require sprinklers.
907.2.11.3 Wireless Interconnection of Smoke Alarms	Smoke alarms are now required in use group I-1 occupancies and an allowance is being made for wireless smoke detectors.
908.7 Carbon Monoxide Alarms	CO alarms are now required in R and I occupancies with fuel fired appliances or attached garages.
1005 Means of Egress Capacity Determination	Reduced exit factors have been established for buildings with sprinklers and voice/alarm communication systems.
1008.1.2 Door Swing	Design occupant load of a space shall be used to determine door swing – not the load per door.
1009, 1010, and 202 Interior Stairways and Ramps	Revisions have been made throughout the code to coordinate the provisions for unenclosed interior stairways and ramps that can be used as a portion of the means of egress.
1012 Handrail Height	Transition pieces of a continuous handrail are now permitted to exceed the maximum permitted handrail height.
1012.3.1 & 1012.8 Handrail graspability and Projections	A minimum cross-section dimension has now been established for the graspability of noncircular Type I handrails.
1013.1 and 1013.8 Guards at Operable Windows	Requirements have been relocated in the code and height requiring protection has been modified from 24 to 36 inches.
1013.3 Guard Height	Heights have been reduced to 36 inches in R-3 and within units of R-2 uses.
1021.2.3 and Table 1021.2(1) Exits from Dwelling Units	Clarification of when a single exit is allowed from an individual dwelling unit.
Table 1607.1 Minimum Live Loads	Coordinates live load requirements with ASCE 7-10.
1609 and 202 Determination of Wind Loads	Coordinates with the latest wind load provisions in ASCE/SEI 7 (ASCE 7-10).
2406.1 and 2406.4 Safety Glazing – Hazardous Locations	Reorganization and clarification in order to provide better consistency between the IRC and IBC.

International Mechanical and Fuel Gas Codes

Applicable Code Section	Summary of Change
306.5 Equipment and Appliances on Roofs or Elevated Structures	Clarifies permanent access requirements for equipment above grade.
506.3.11.2 Field-Applied Grease Duct Enclosures	Field-applied grease duct enclosure systems are now prohibited from being used to reduce clearance to combustibles.
507.2.1 Type I Hoods	Type I hoods are no longer required to be installed where complying electric cooking appliances are being used.
507.2.2 Type II Hoods	Type II hoods are now required to be installed above all appliances that produce products of combustion but do not produce grease or smoke.
805.3 Factory-Built Chimney Offsets	The minimum offset in a factory-built chimney is now specified and the number of offsets has been limited.

International Fire Code

The fire code primarily provides additional occupancy specific standards for the building code. The following are just a few new issues that might be of interest to the local market.

Applicable Code Section	Summary of Changes
610 Commercial Kitchen Cooking Oil Storage	A new section on the classification (Class IIIB liquid) and storage of commercial cooking oil in kitchens.
5705.5 Alcohol-Based Hand Rubs Classified as I or II liquids	Requirements for touch-free alcohol-based had rubs have now been included in the IFC.
6104.3.1 Installation on Roof Prohibited	New section that prohibits the installation of stationary LP tanks on the roofs of buildings.
6109.15 LP-Gas Cylinder Exchange for Resale	New requirements regulating the design, operation, and maintenance of automated cylinder exchange stations and the LP-gas exchange cabinets accessible the public.

International Existing Building Code

There is one substantial change to the IEBC and it is more editorial than code related. The four compliance methods currently scattered throughout the code have been brought into a single new Chapter 3, Compliance Methods. A second part of that chapter is devoted to seismic designs and criteria. However, due to the geographic location of the City of Bloomington, it has little or no application.

International Energy Conservation Code

The proposed adoption of the International Energy Conservation code is primarily to assist in the enforcement of the standard already required by State Law. As a State mandate we are unable to affect any changes to the code but must enforce as adopted. The following are changes mostly applicable to residential construction.

Commercial requirements are left to the design professional of record to include with their construction documents and the commissioning requirement.

The primary emphasis in the residential portion of the 2012 code is on the building envelope. This can be seen in the increase in R-values, decrease in U-values, and tougher testing requirements (i.e. mandatory blower door test).

Applicable Code Section	Summary of Changes
Table R402.1.1 R-Value Computation for Building Thermal Envelope	Of particular note should be the increase in R-values of ceilings (R-38 to R-49) and foot note h where the compressed value of insulation is provided.
R402.4.1 and R402.4.2 Building Thermal Envelope and Testing	These sections provide the criteria for inspection and testing (blower door) of the building envelope. It should be noted that in most, if not all, cases, mechanical ventilation will be required in houses that meet the air tightness requirements.
R403.2 Duct construction and Sealing	Primarily requires all duct work to be sealed in accordance with the code and prohibits the use of framing cavities for plenums.
R403.2 Duct Tightness Verification	Generally required duct tightness to be leak tested. Note the test is not required if the ductwork is entirely located in the thermal envelope of the building.
R403.5 Mechanical Ventilation	New requirement to provide mechanical ventilation to the HVAC system.
R404.1 Lighting Equipment	Establishes a minimum of 75% of light fixtures to use high-efficacy lamp and eliminates the use of standing pilot lights in fuel fired equipment.

National Electrical Code

The most practical changes in the new electrical code are the expanded requirements for GFCI and AFCI devices.

Applicable Code Section	Summary of Changes
110.26(C)(3) Personnel Doors	The provisions for entrance/egress doors into work spaces have been reduced from 1200 to 800 amperes.
110.26 Space About Electrical Equipment	Dedicated equipment space is now required for both outdoor installations and for indoor installations.
210.8 Ground-Fault Circuit Interrupter protection for personnel.	GFCI protection is required within six feet of all dwelling unit sinks (including kitchen sinks)
210.8(A)(10) Ground-Fault Protection in Laundry areas	All dwelling unit laundry areas now require GRCI protection for 125-volt, single phase 15 and 20 ampere receptacles, regardless of the presence of a sink or the distance from the same.

Applicable Code Section	Summary of Changes
210.8(D) Ground-Fault Protection for Dishwashers	GFCI Protection is now required for all outlet that supply dishwashers installed in dwelling units.
210.12(A) AFCI Protection	Kitchens and laundry areas were added to the list of areas requiring AFCI protection. AFCI protection was also expanded from outlets only to outlets or devices, which would now include switches, etc.
210.12(C) AFCI Protection, Dormitory Units.	Dormitory units will now require AFCI protection.
210.52(G)(1) Dwelling Unit Garages	Receptacle provisions for basements, garages, and accessory buildings were revised into a list format. A branch circuit supplying garage receptacles is to supply only the garage. Receptacles are required for each car space in a garage.
Article 393 Low-Voltage Suspended Ceiling Power Distribution Systems	A new section added to address low-voltage Class 2 equipment connected to ceiling grids and wall constructed for this purpose.
406.9(B)(1) Receptacles in Damp or Wet Locations	Extra duty covers are now required of all 15- and 20-ampere, 125- and 250- volt receptacles installed in a wet location (not just those supported from grade). This requirement also includes dwelling unit wet location receptacles as well.

Appendix

R404.1

Lighting Equipment (Mandatory)

CHANGE TYPE: Modification

CHANGE SUMMARY: There are two ways to calculate compliance: lamp count and fixture count.

The 75 percent calculation is made for all electrical lighting fixtures that are not covered by the low-voltage exception.

Both interior and exterior lighting are included.

Fuel gas systems may not have constantly burning pilot lights.

2012 CODE: **R404.1 Lighting Equipment ~~(Prescriptive).~~ (Mandatory).** A minimum of 75 percent of the lamps in permanently installed lighting fixtures shall be high-efficacy lamps or a minimum of 75 percent of the permanently installed lighting fixtures shall contain only high-efficacy lamps.

Exception: Low-voltage lighting shall not be required to utilize high-efficiency lamps.

R404.1.1 Lighting Equipment (Mandatory). Fuel gas lighting systems shall not have continuously burning pilot lights.

CHANGE SIGNIFICANCE: In 2009 IECC, this section was a Prescriptive provision; in 2012 it is Mandatory and applies to all IECC regulated residential occupancies.

Some jurisdictions have amended their adopted earlier editions of the IECC to address the "chandelier option." This is now a clearly permitted choice in the 2012 IECC. A single one-hundred-lamp fixture may be counted either as one (1) fixture or as one hundred (100) lamps as long as the unit of measure stays the same (fixtures or lamps) throughout the calculation. Please see the examples below.

The high-efficacy requirement *does not* mandate or prohibit any fixture or socket configuration. Edison-type screw base high-efficacy bulbs may be perfectly compliant.

R404.1 continues

EXAMPLES:

Example 1. A new single family residence with 20 permanently installed lighting fixtures. At the time of final inspection:

- Ten of the fixtures are low voltage, not counted.
- Eight fixtures must contain ONLY high-efficacy lamps.
- Two fixtures may contain other than high-efficacy lamps.

Example 2. A similar single family residence with 20 permanently installed lighting fixtures. At the time of final inspection:

- None of the fixtures are low voltage.
- One chandelier contains 100 high-efficacy lamps.
- Up to 75 lamps in the remaining 19 fixtures may be other than high efficacy.

This is one type of low voltage lamp. It does not contribute to the overall count.

This CFL is one type of high-efficacy lamps*

*Definition: High-efficacy lamps. Compact fluorescent lamps, T-8 or smaller diameter linear fluorescent lamps, or lamps with a minimum efficacy of:

1. 60 lumens per watt for lamps over 40 watts;
2. 50 lumens per watt for lamps over 15 watts to 40 watts; and
3. 40 lumens per watt for lamps 15 watts or less.

R403.5 continued

CHANGE SIGNIFICANCE: With the increased building envelope tightness requirements, the health-related ventilation provisions have been brought to the forefront. The IRC ventilation standard was developed in response to concerns of increasing levels of indoor contaminants and mold growth in residential buildings. Years of studies and input by building science experts and health professionals indicated a need for mechanical ventilation in homes to protect the health of occupants and the value of the building.

Whole-house mechanical ventilation can be accomplished using single or multiple ventilation fan(s), air exchanger(s), outdoor air duct(s) connected to return duct(s) or local exhaust(s), or a combination of these to achieve the required airflow.

In older houses with poor air sealing, the required "ventilation" *was* easily achieved through uncontrolled and random air infiltration. The difference between that uncontrolled infiltration and code-compliant controlled ventilation is similar to that between a hole broken in the side of a bathtub and a properly designed and installed overflow. In both cases, the tub will never fill above the flood level, but the end results are entirely different.

R403.5

Mechanical Ventilation (Mandatory)

CHANGE TYPE: Addition

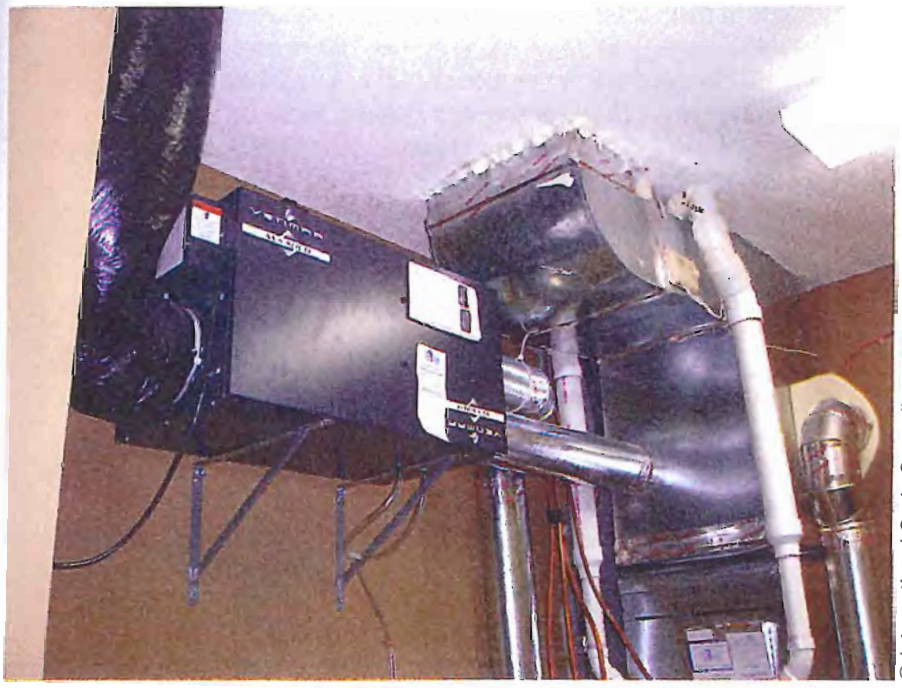
CHANGE SUMMARY: 2012 *International Residential Code* Section R303.4 mandates mechanical ventilation in any building that has less than five air changes per hour at 50 Pascals (5ACH/50). IECC Section R402.4.1.2 allows a maximum of 5 ACH/50 in any residential building. It is very unlikely that many residential buildings will have EXACTLY 5.00 ACH/50 in a testing environment. The practical outgrowth of this change is that mechanical ventilation with appropriate dampers is required in virtually every residential building.

2012 CODE: **R403.5 Mechanical Ventilation (Mandatory).** The building shall be provided with ventilation that meets the requirements of the *International Residential Code* or *International Mechanical Code*, as applicable, or with other approved means of ventilation. Outdoor air intakes and exhausts shall have automatic or gravity dampers that close when the ventilation system is not operating.

2012 International Residential Code

Section R303.4 Mechanical Ventilation. Where the air infiltration rate of a dwelling unit is less than five air changes per hour when tested with a blower door at a pressure of 0.2 inch w.c. (50 Pa) in accordance with *(IRC)* Section N1102.4.1.2, the dwelling unit shall be provided with whole-house mechanical ventilation in accordance with *(IRC)* Section M1507.3.

R403.5 continues



An air exchanger may be used to satisfy the whole house ventilation requirement

R403.2

Duct Tightness Verification

This is a Rough-in Total Leakage test, without the air handler installed. The blower and manometer are the only equipment required

CHANGE TYPE: Modification

CHANGE SUMMARY: In order to properly address the changes in this section, the comments are broken into two portions. The first portion (above) addressed construction and sealing. This second will now address the changes in tightness verification.

1. In the 2009 IECC, there were two acceptable test methods:
   a. Leakage to outdoors, utilizing both a blower door and duct blower.
   b. Total leakage, pressurizing the ducts only.
   In the 2012 IECC, total leakage is the only acceptable test method.
2. The allowable leakage performance numbers have been improved.

2012 CODE: R403.2 Ducts. Ducts and air handlers shall be in accordance with Sections R403.2.1 through R403.2.3.

R403.2.2 Sealing (Mandatory). ~~All~~ Ducts, air handlers, and filter boxes ~~and building cavities used as ducts shall be sealed~~ shall be sealed. Joints and seams shall comply with either the *International Mechanical Code* or ~~Section M1601.4.1 of the~~ *International Residential Code*, as applicable. *(Construction and sealing requirements are addressed in the previous section)*

Duct tightness shall be verified by either of the following:

1. Post construction test: ~~Leakage to outdoors shall be less than or equal to 8 cfm (226.5 L/min) per 100 ft^2 (9.29 m^2) of *conditioned floor area* or a~~ Total leakage shall be less than or equal to ~~12cfm (12 L/min)~~ 4 cfm (113.3 L/min) per 100 square feet (9.29 m^2) of conditioned floor area when tested at a pressure differential of 0.1 inches w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure. All register boots shall be taped or otherwise sealed during the test.
2. Rough-in test: Total leakage shall be less than or equal to ~~6cfm (169.9 L/min)~~ 4 cfm (113.3 L/min) per 100 square feet (9.29 m^2) of conditioned floor area when tested at a pressure differential of 0.1 inches w.g. (25 Pa) across the system, including the manufacturer's air handler enclosure. All registers shall be taped or otherwise sealed during the test. If the air handler is not installed at the time of the test, total leakage shall be less than or equal to ~~4 cfm (113.3 L/min)~~ 3 cfm (85 L/min) per 100 square feet (9.29 m^2) of conditioned floor area.

Exception: ~~Duct tightness~~ The total leakage test is not required for ducts and air handlers located entirely within the ~~conditioned space~~ building thermal envelope.

CHANGE SIGNIFICANCE: There is only one approved method of testing; Total Leakage.

NOTE: Please remember that the "conditioned floor area" referenced in this provision is the space *served by the one specific HVAC unit being tested.* The floor area used to size each piece of equipment per Section R403.6 should correlate with the floor area for the test.

1. *"Air-impermeable spray foam products..."* will primarily be of benefit for construction utilizing air-impermeable spray foam as the building thermal envelope insulation. Ducts completely embedded in impermeable insulation do not need to be redundantly sealed prior to installation of the insulation.

   NOTES:

   i. Inspector should verify joints are completely covered and

   ii. Not all foams are air-impermeable; for example, many of the open cell foams are considered to be air-permeable and would not be acceptable.

2. *"Where a duct connection is made partially inaccessible, three screws or rivets...equally spaced..."* may serve as the mechanical connection. This exception is a duct CONSTRUCTION provision and does not anticipate screws or rivets as the sealing method. The connection will need to be sealed and tested, unless otherwise excepted below.
3. *"Continuously welded and locking longitudinal joints..."* (seams running the long direction of the duct work) are stipulated as the only type available for this exception. All others must be sealed in the field at the time of installation.

III. "Air Handlers shall have the manufacturer's designation for an air leakage of no more than 2 percent." This will be a specification and plan review issue.

IV. In the 2012 IECC, this Mandatory provision now prohibits the use of building cavities for any supply or return utilization. In short, all air transfer must be contained within dedicated duct or plenum material.

R403.2 continued

IV. Air handlers shall have the manufacturer's designation for an air leakage of no more than 2 percent ...

V. Building framing cavities may not be used as ducts or plenums (supply or return).

2012 CODE: R403.2 Ducts. Ducts and air handlers shall be in accordance with Sections R403.2.1 through R403.2.3.

R403.2.2 Sealing (Mandatory). ~~All~~ Ducts, air handlers, and filter boxes ~~and building cavities used as ducts shall be sealed~~ shall be sealed. Joints and seams shall comply with either the *International Mechanical Code* or ~~Section M1601.4.1 of the~~ *International Residential Code*, as applicable.

Exceptions:

1. Air-impermeable spray foam products shall be permitted to be applied without additional joint seals.
2. Where a duct connection is made that is partially inaccessible, three screws or rivets shall be equally spaced on the exposed portion of the joint so as to prevent a hinge effect.
3. Continuously welded and locking-type longitudinal joints and seams in ducts operating at static pressures less than 2 inches of water column (500 Pa) pressure classification shall not require additional closure systems.

Duct tightness shall be verified by either of the following. *(Verification is addressed in the next section.)*

R403.2.2.1 Sealed Air Handler. Air handlers shall have a manufacturer's designation for an air leakage of no more than 2 percent of the design air flow rate when tested in accordance with ASHRAE 193.

R403.2.3 Building Cavities (Mandatory). Building framing cavities shall not be used as ~~supply~~ ducts or plenums.

CHANGE SIGNIFICANCE:

I. The IMC and IRC both clearly state that UNLISTED tape is not permitted as a sealant on any duct. It should be clear that a product used outside of the scope of its listing is unlisted for that application. As of this printing, no company has been able to document a verified listing for metal-to-metal taped connections. Without that listing, a taped metal-to-metal joint is in violation of IRC, IMC, and IECC. The tape choices appear to be nonexistent; however, there are other code-compliant methods and materials available.

II. The exceptions:

NOTE: These exceptions **do not** apply to the tightness verification requirement found in the second portion of this section. Any system that is not completely within the *building thermal envelope* shall be tested for tightness.

R403.2

Duct Construction and Sealing

CHANGE TYPE: Modification

CHANGE SUMMARY: In order to properly address the changes in this section, the comments are broken into two portions. This first portion addresses construction and sealing. The second will address tightness verification.

I. In order to understand the intent of this provision, the reader should become familiar with the referenced sections of the IRC and IMC; they are NOT identical. Please refer to the *Significant Changes* publications for each of these codes for a more detailed discussion. Although the referenced codes are not identical, they do result in substantially similar construction:

- *SMACNA HVAC Duct Construction Standards—Metal and Flexible and NAIMA Fibrous Glass Duct Construction Standards are referenced*
- *UL-181 A listing is required for Duct Board construction.*
- *UL-181B listing is flexible construction.*
- *Unlisted duct tape is prohibited on any duct.*
- *An exception for certain longitudinal seams (found in this section's exceptions).*

II. The three exceptions, new to the IECC, are common with the 2012 IRC (*including the one found in the IMC).

III.

1. Air-impermeable spray foam products
2. Where a duct connection is made partially inaccessible
3. **Continuously welded and locking longitudinal joints*

R403.2 continues

Tapes may appear to be identified by a manufacturer as suitable for metal, however a closer reading will show that it has been labeled to transition metal to flex, and nothing else. Some manufacturers have also been known to include logos for which they have not been authorized.

R402.4.1.2 continued

~~field verified. Where required by the *code official*, an *approved* party independent from the installer of the insulation shall inspect the air barrier and insulation.~~

2012 International Residential Code Section R303.4 Mechanical Ventilation. Where the air infiltration rate of a dwelling unit is less than five air changes per hour when tested with a blower door at a pressure of 0.2 inch w.c. (50 Pa) in accordance with *(IRC)* Section N1102.4.1.2, the dwelling unit shall be provided with whole-house mechanical ventilation in accordance with *(IRC)* Section M1507.3.

2012 International Residential Code Chapter 2 Definitions.

LOCAL EXHAUST. An exhaust system that uses one or more fans to exhaust air from a specific room or rooms within a dwelling.

WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM. An exhaust system, supply system, or combination thereof that is designed to mechanically exchange indoor air for outdoor air when operating continuously or through a programmed intermittent schedule to satisfy the whole-house ventilation rate. For definition applicable in *(IRC)* Chapter 11, see *(IRC)* Section N1101.9.

CHANGE SIGNIFICANCE: The testing requirement is not exclusive to the IECC. The 2012 *International Residential Code* Section R303.4 mandates a blower door test. An authorization is included for the code official to require an *approved* third party, for example a contractor with certification by a recognized association such as ResNet or Building Performance Institute. The significance of this provision cannot be underestimated. However, the building official should be aware the test methods and data sources may vary, even with certified personnel.

Air leakage and infiltration is the largest cause of unnecessary energy loss in residential buildings. This section addresses the quality of workmanship that has been invested in the project. Two seemingly identical residential buildings may have enormously different test results and subsequent operational costs. Testing and inspection, when done together, provide the home owner with measurable and objective assurance that he/she is getting the product quality that is anticipated.

R402.4.1.2
Testing-Air Leakage

CHANGE TYPE: Modification

CHANGE SUMMARY: The 2009 IECC introduced testing as an option. The 2012 IECC deletes the option and makes *both* inspection and testing mandatory while increasing the tightness requirements. It should be noted that in most, if not all, cases, mechanical ventilation will be required in houses that meet the air tightness requirements.

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A blower door is used to test the tightness of the house

2012 CODE: ~~**402.4.2 Air sealing and insulation.** Building envelope air tightness and insulation installation shall be demonstrated to comply with one of the following options given by Section 402.4.2.1 or 402.4.2.2:~~

~~**402.4.2.1 Testing option.** Building envelope tightness and insulation installation shall be considered acceptable when tested air leakage is less than seven air changes per hour (ACH) when tested with a blower door at a pressure of 50 Pascals (1 psf). Testing shall occur after rough in and after installation of penetrations of the building envelope, including penetrations for utilities, plumbing, electrical, ventilation and combustion appliance~~

R402.4.1.2 Testing. The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding five air changes per hour in Climate Zones 1 and 2, and three air changes per hour in Climate Zones 3 through 8. Testing shall be conducted with a blower door at a pressure of 0.2 inches w.g. (50 Pascals). Where required by the code official, testing shall be conducted by an *approved* third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the *code official*. Testing shall be performed at any time after creation of all penetrations of the *building thermal envelope*.

During testing:

1. Exterior windows and doors, fireplace, and stove doors shall be closed, but not sealed, beyond the intended weather-stripping or other infiltration control measures;
2. Dampers including exhaust, intake, makeup air, back draft, and flue dampers shall be closed, but not sealed beyond intended infiltration control measures;
3. Interior doors, if installed at the time of the test, shall be open;
4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed;
5. Heating and cooling systems, if installed at the time of the test, shall be turned off; and
6. ~~HVAC ducts shall not be sealed; and~~
7 6. Supply and return registers, if installed at the time of the test, shall be fully open.

~~**402.4.2.2 Visual inspection option.** Building envelope tightness and insulation installation shall be considered acceptable when the items listed in Table 402.4.2, applicable to the method of construction, are~~

R402.4.1.2 continues

R402.4.1 continued

CHANGE SIGNIFICANCE: The actual requirements of the table are largely unchanged. However, it should be noted that the fireplace component has a new item, gasketed doors. This requirement has been relocated from the text of R402.4.2.

TABLE 402.4.2 R402.4.1.1 Air Barrier and Insulation Installation

Component	Criteria[a]
Air barrier and thermal barrier	~~Exterior thermal envelope insulation for framed walls is installed in substantial contact and continuous alignment with building envelope air barrier.~~ ~~Breaks or joints in the air barrier are filled or repaired.~~ ~~Air-permeable insulation is inside of an air barrier.~~ A continuous air barrier shall be installed in the building envelope. Exterior thermal envelope contains a continuous air barrier. Breaks or joints in the air barrier ~~are filled or repaired~~ shall be sealed. Air-permeable insulation shall not be used as a sealing material.
Ceiling/attic	The air barrier in any dropped ceiling/soffit ~~is substantially~~ shall be aligned with the insulation and any gaps ~~are~~ in the air barrier sealed. ~~Attic access (except unvented attic) knee wall, or~~ Access openings, drop-down stair ~~is~~ or knee wall doors to unconditioned attic spaces shall be sealed.
Walls	Corner sand headers ~~are~~ shall be insulated and the junction of the foundation and sill plate ~~is~~ shall be sealed. The junction of the top plate and top of exterior walls shall be sealed. Exterior thermal envelope insulation for framed walls shall be installer insubstantial contact and continuous alignment with the air barrier. Knee walls shall be sealed.
Windows, sky light sand doors	The Space between window/doorjambs and framing ~~is~~ and skylights and framing shall be sealed.
Rim joists	Rim joists ~~are~~ shall be insulated and include ~~an~~ the air barrier.
Floors (including above-garage and cantilevered floors)	Insulation ~~is~~ shall be installed to maintain permanent contact with underside of subfloor decking. The air barrier shall be installed at any exposed edge of insulation.
Crawl space walls	Where provided in lieu of floor insulation, insulation ~~is~~ shall be permanently attached to the crawl space walls. Exposed earth in unvented crawl spaces ~~is~~ shall be covered with a Class I vapor retarder with overlapping joints taped.
Shafts, penetrations	Ducts hafts, utility penetrations, and flue shafts opening to exterior or unconditioned space ~~are~~ shall be sealed.
Narrow cavities	Batts in narrow cavities ~~are~~ shall be cut to fit, or narrow cavities ~~are~~ shall be filled by sprayed~~/blown~~ insulation that on installation readily conforms to the available cavity space.
Garage separation	Air sealing ~~is~~ shall be provided between the garage and conditioned spaces.
Recessed lighting	Recessed light fixtures installed in the building thermal envelope ~~are~~ shall be air tight, IC rated, and sealed to the dry wall. ~~Exception—fixtures in conditioned space.~~
Plumbing and wiring	~~Insulation is placed between outside and pipes.~~ Batt insulation ~~is~~ shall be cut neatly to fit around wiring and plumbing in exterior walls, or ~~sprayed/blown insulation extends~~ insulation that on installation readily conforms to available space shall extend behind piping and wiring.
Shower/tub on exterior wall	Exterior walls adjacent to showers and tubs ~~on exterior wall shave insulation~~ shall be insulated and the air barrier installed separating them from the ~~exterior wall~~ showers and tubs.
Electrical/phone box on exterior walls	The air barrier ~~extends~~ shall be installed behind electrical or communication boxes or air sealed boxes ~~are~~ shall be installed.
~~Common wall~~	~~Air barrier is installed in common wall between dwelling units.~~
HVAC register boots	HVAC register boots that penetrate building thermal envelope ~~are~~ shall be sealed to the sub floor dry wall.
Fireplace	~~Fire place walls include~~ An air barrier shall be installed on fireplace walls. Fireplaces shall have gasketed doors.

a. In addition, inspection of log walls shall be in accordance with the provisions of ICC-400.

R402.4.1 continues

R402.4.1

Building Thermal Envelope

© International Code Council

Air barrier and insulation performance is primarily an issue with workmanship. Good inspections and testing will find problems like this.

CHANGE TYPE: Modification

CHANGE SUMMARY: There is now no option for testing OR visual inspection. The requirement is now testing AND visual inspection. The code official is authorized to require an *approved* third party to inspect and verify.

2012 CODE: **R402.4.1 Building Thermal Envelope.** The *building thermal envelope* shall ~~be durably sealed to limit infiltration~~ comply with Sections R402.4.1.1 and R402.4.1.2. The sealing methods between dissimilar materials shall allow for differential expansion and contraction. ~~The following shall be caulked, gasketed, weatherstripped or otherwise sealed with an air barrier material, suitable film or solid material:~~

~~1. All joints, seams and penetrations.~~

~~2. Site-built windows, doors and skylights.~~

~~3. Openings between window and door assemblies and their respective jambs and framing.~~

~~4. Utility penetrations.~~

~~5. Dropped ceilings or chases adjacent to the thermal envelope.~~

~~6. Knee walls.~~

~~7. Walls and ceilings separating a garage from conditioned spaces.~~

~~8. Behind tubs and showers on exterior walls.~~

~~9. Common walls between dwelling units.~~

~~10. Attic access openings.~~

~~11. Rim joist junction.~~

~~12. Other sources of infiltration.~~

R402.4.1.1 Installation. The components of the *building thermal envelope*, as listed in Table R402.4.1.1, shall be installed in accordance with the manufacturer's instructions and the criteria listed in Table R402.4.1.1, as applicable to the method of construction. Where required by the *code official*, an *approved* third party shall inspect all components and verify compliance.

Table 402.1.1 continued

~~with insulated sheathing of at least R-2.~~ 40 percent or less of the exterior, continuous insulation *R*-value shall be permitted to be reduced by no more than R-3 in the locations where structural sheathing is used — to maintain a consistent total sheathing thickness.

j. ~~For impact rated fenestration complying with Section R301.2.1.2 of the *International Residential Code* or Section 1608.1.2 of the *International Building Code*, the maximum *U*-factor shall be 0.75 in Zone 2 and 0.65 in Zone 3.~~

CHANGE SIGNIFICANCE: Footnote a. The requirements for compressed batt insulation are now very clear: the insulation still needs to provide the full value as required by the table. Labeling per Section R303.1.2 may or may not indicate the compressed *R*-value of the insulation. It will be incumbent on the permit holder to provide documentation of the compressed *R*-values.

Footnote b. In Climate Zones 1 to 3, there is an allowance in the skylight SHGC requirement from 0.25 up to 0.30. This seems to be a concession to product availability, in that many of the commercially available skylight assemblies appear to be in the SHGC range of 26 to 30.

Footnote h. A 13+5 assembly can be reduced to 13+2 for up to 40 percent of the exterior of a structure, where structural sheathing is utilized for compliance with the bracing requirements found in Chapter 6 of the International Residential Code.

Footnote j. The *U*-factor reduction for impact-rated fenestration has been deleted; impact-rated fenestration is now considered the same as all other fenestration.

CHANGE TYPE: Modification

CHANGE SUMMARY: As always the footnotes are as important as the table they modify.

- Footnote a notes the reduction in *R*-value when batt insulation is compressed. (See table below for examples)
- Footnote b allows the exclusion of certain skylights from the Solar Gain Heat Coefficient (SHGC) requirements in Climate Zones 1 to 3.
- Footnote h has been completely reworked to allow for consistent sheathing thickness while maintaining wall bracing.
- Footnote j, regarding impact rated fenestration, has been deleted.

Table 402.1.1

Footnotes

OWENS CORNING ® INNOVATIONS FOR LIVING®

Nominal Lumber Size	Cavity Depth	Insulation R-Values When Compressed In Framing Cavity											
2 x 12	11 ¼"	37	38										
2 x 10	9 ¼"	32	35	28									
2 x 8	7 ¼"	27	29	25	27	24							
2 x 6	5 ½"			21	22	20	19	21	18				
2 x 4	3 ½"						14	15	13	15	13	11	
2 x 3	2 ½"									11	10	8.9	8.0
2 x 2	1 ½"										6.6	6.1	5.7
2 x 1	¾"												3.3
Product R-Value		R-38	R-38C	R-30	R-30C	R-25	R-22	R-21	R-19	R-15	R-13	R-11	R-8
Label Thickness		12"	10 ¼"	9 ½"	8 ¼"	8"	6 ¾"	5 ½"	6 ¼"	3 ½"	3 ½"	3 ½"	2 ½"

Notes: 1. Minimum dressed lumber thickness per U.S. Dept. of Commerce/NIST publication PS 20-10.
2. Above listing for information only; some products will resist compression into framing cavities.

Batt insulation R-values are reduced significantly when the material is compressed.

2012 CODE: **Table R402.1.1 Footnotes**

a. *R*-values are minimums. *U*-factors and SHGC are maximums. ~~R-19 batts compressed into a nominal 2 × 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.~~ When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the installed *R*-value of the insulation shall not be less than the *R*-value specified in the table.

b. The fenestration *U*-factor column excludes skylights. The SHGC column applies to all glazed fenestration.

Exception: Skylights may be excluded from glazed fenestration SHGC requirements in Climate Zones 1 through 3 where the SHGC for such skylights does not exceed 0.30.

h. First value is cavity insulation, second is continuous insulation or insulated siding, so "13 + 5" means R-13 cavity insulation plus R-5 continuous insulation or insulated siding. If structural sheathing covers ~~more than 25 percent of exterior, structural sheathing shall be supplemented~~

Table 402.1.1 continues

Table R402.1.1 continued

When approved by the Code Official based on equivalency and intent of the code, alternative methods of construction, materials, and insulation systems may also be used as an alternative to the prescriptive *R*-values of Table R402.1.1. For example, designers may substitute greater stud spacing, insulated plates and insulated headers in walls as an alternative to the prescribed cavity and/or continuous insulation.

ICC-ES issued Environmental Criteria 115 (EC115) to address these issues, which provides multiple options and compliance alternatives. ICC-ES may benchmark and provide a Verification of Attributes Report (VAR) on assembly configurations for compliance with the tabular *R*-values.

The full text of EC115, environmental criteria for determination of equivalent wood frame wall assemblies to the prescriptive building thermal envelope requirements of *The International Energy Conservation Code*® and *International Residential Code*®, EC115, Effective date: October 1, 2012, is available from ICC-ES.

For additional discussion regarding the prescriptive compliance paths available for roof assemblies, refer can be made to *Guidelines for Complying with Energy Code Requirements for Roof Assemblies: International Energy Conservation Code, 2009 and 2012 Editions,* © 2012 by the National Roofing Contractors Association.

CHANGE TYPE: Modification

CHANGE SUMMARY: The prescriptive insulation and fenestration Table R402.1.1 has been modified with half of the values left unchanged.

2012 CODE:

Table R402.1.1

R-value Computation for Building Thermal Envelope

TABLE R402.1.1 Insulation and Fenestration Requirements by Component[a]

Climate Zone	Fenestration *U*-Factor[b]	Skylight[b] *U*-Factor	Glaze Defenestration SHGC[b, e]	Ceiling *R*-Value	Wood Frame Wall *R*-Value	Mass Wall *R*-Value[i]	Floor *R*-Value	Basement[c] Wall *R*-Value	Slab[d] *R*-Value & Depth	Crawl Space[c] Wall *R*-Value
1	~~1.2~~ NR	0.75	~~0.30~~ 0.25	30	13	3/4	13	0	0	0
2	~~0.65~~ 0.40	~~0.75~~ 0.65	~~0.30~~ 0.25	~~30~~ 38	13	4/6	13	0	0	0
3	~~0.50~~ 0.35	~~0.65~~ 0.55	0.30 0.25	3038	~~13~~ 20 or 13 + 5[h]	~~5/8~~ 8/13	19	5/13[f]	0	5/13
4 except Marine	0.35	~~0.60~~ 0.55	~~NR~~ 0.40	~~38~~ 49	~~13~~ 20 or 13 + 5[h]	~~5/10~~ 8/13	19	10 /13	10, 2 ft	10/13
5 and Marine 4	~~0.35~~ 0.32	0.60 0.55	NR	~~38~~ 49	20 or 13 + 5[h]	13/17	30[g]	15/ 19	10, 2 ft	~~10/13~~ 1/19
6	~~0.35~~ 0.32	~~0.60~~ 0.55	NR	49	~~20 or 13 + 5~~ 20 + 5 or 13 + 10[h]	~~15/19~~ 15/20	30[g]	15/ 19	10, 4 ft	~~10/13~~ 1/19
7 and 8	~~0.35~~ 0.32	~~0.60~~ 0.55	NR	49	~~21~~ 20 + 5 or 13 + 10[h]	19/21	38[g]	15/ 19	10, 4 ft	~~10/13~~ 1/19

See Table R402.1.1 Footnotes section on page 95

CHANGE SIGNIFICANCE: The format is unchanged, as are half of the values. A major change is that compliance with the wood frame wall values in Climate Zones 3, 4, and 5 may not be, and Climate Zones 6 through 8 cannot be met using this Table without the addition of continuous insulation. It should also be noted that 2 × 6 framing might be necessary for wall assemblies for some of the options in Climate Zones 3 through 8, depending on the choice of cavity insulation.

Building science principles should be considered when evaluating building envelope alternatives. Calculations related to the dew point location in the wall, as well as the vapor permeability of envelope components, will help to identify the location of potential moisture condensation and the path for moisture movement.

Table R402.1.1 continues

6109.15 continued

New requirements were added in Section 6109.15 to address all LP-gas cylinder exchange stations. This new section requires all cylinder exchange cabinets, regardless of whether they are manual or automatic, to be designed so that the cabinet naturally ventilates the stored cylinders and is equipped with a means of securing cylinders from tampering. An approved sign is required to inform consumers that bringing cylinders inside of a building is prohibited, based on the requirement in Section 6109.9, as well as emergency contact information in the event of a leaking cylinder or other emergency involving the exchange station.

Item 2 in Section 6109.15 limits access to cylinders to authorized personnel or to users of automated cylinder exchange stations. At an automated cylinder exchange station, Item 5 of Section 6109.15.1 requires that when a manual override occurs, it must be performed by an authorized person before returning the station to automatic operation. Code officials should apply the requirements in Section 4.4 of NFPA 58 for qualification of personnel who are involved in the operation of cylinder exchange stations. NFPA 58 requires that they be trained in proper cylinder handling procedures. Training can be provided by the LP-gas supplier, and many suppliers offer programs prepared by the Propane Education and Research Council, which offers a Certified Employee Training Program to its members. NFPA 58 Section 4.4 also requires refresher training of authorized personnel at least every 3 years, and all training must be documented.

Section 6109.15.1 contains new provisions for automated LP-gas cylinder exchange stations. These requirements ensure that consumers properly remove filled cylinders and return empty cylinders so that they are positioned with the pressure relief valve in direct communication with the vapor space. The vending system must be designed to limit the consumer to one cylinder per transaction. Components inside the exchange cabinet can be powered by pneumatic, mechanical, or electrical energy.

When electrical equipment is used inside or within 5 feet of an automated exchange station, it must be listed for use in Class I, Group D, Division 2 hazardous locations in accordance with the NEC®. Normally flammable gases in storage do not require hazardous location electrical equipment, but in the case of automated LP-gas cylinder exchange stations, the possibility exists for a cylinder valve to not be completely closed on a cylinder that has been returned by a consumer. Item 4 in Section 6109.15.1 specifies hazardous location electrical equipment and the boundary of the hazardous location to mitigate the risk of igniting fugitive gas. Some cabinet manufacturers provide a remote POS kiosk that is located more than 5 feet from the exchange station to accommodate this requirement with ordinary electrical equipment.

Automated cylinder exchange stations are required to be inspected by authorized personnel at a frequency specified by the fire code official. Factors to consider in establishing a required inspection frequency include the servicing/refill interval for the cabinet. Certainly an inspection each time the exchange station is restocked with filled cylinders is one possible interval that could be deemed compliant with Section 6109.15.1, Item 6.

6109.15.1 Automated Cylinder Exchange Stations. Cylinder exchange stations that include an automated vending system for exchanging cylinders shall comply with the following additional requirements:

1. The vending system shall only permit access to a single cylinder per individual transaction.
2. Cabinets storing cylinders shall be designed such that cylinders can only be placed inside when they are oriented in the upright position.
3. Devices operating door releases for access to stored cylinders shall be permitted to be pneumatic, mechanical or electrically powered.
4. Electrical equipment inside of or within 5 feet of a cabinet storing cylinders, including but not limited to electronics associated with vending operations, shall comply with the requirements for Class I, Division 2 equipment in accordance with NFPA 70.
5. A manual override control shall be permitted for use by authorized personnel. On newly installed cylinder exchange stations, the vending system shall not be capable of returning to automatic operation after a manual override until the system has been inspected and reset by authorized personnel.
6. Inspections shall be conducted by authorized personnel to verify that all cylinders are secured, access doors are closed and the station has no visible damage or obvious defects, which necessitate placing the station out of service. The frequency of inspections shall be as specified by the fire code official.

CHANGE SIGNIFICANCE: Cylinder exchange cabinets for 20-pound LP-gas cylinders have been available to consumers for over 15 years and have an extremely respectable safety record. Cabinets for exchange of industrial cylinders, such as those found on forklift trucks, are also in use. Though a limited number of incidents resulting from impact from vehicles has been reported, none of these events has resulted in loss of life or severe injuries. It is estimated that several million sales transactions occur annually at cylinder exchange stations.

Requirements for locating LP-gas cylinder exchange stations are found in Table 6109.12 and were revised in the 2006 IFC. NFPA 58 has since been revised to correlate with the IFC table.

One of the bigger advancements in cylinder exchange programs is the use of automation at the point of sale (POS). These improvements have allowed exchange stations to become self-service, meaning that retailers can allow their employees to focus on other interests in the store rather than managing the exchange of LP-gas cylinders. Consumers can now use an electronic banking card at automated exchange stations, where they receive a properly filled and code-compliant cylinder of LP-gas while the supplier receives an empty cylinder in return. Because the automated cabinet POS is monitored, the consumer is assured that product is almost always available.

6109.15 continues

Appendix A Chapters shall be deemed to comply with this section.

2.1. The seismic evaluation and design of unreinforced masonry bearing wall buildings in Risk Category I or II are permitted to be based on the procedures specified in Appendix Chapter A1.

2.2. Seismic evaluation and design of the wall anchorage system in reinforced concrete and reinforced masonry wall buildings with flexible diaphragms in Risk Category I or II are permitted to be based on the procedures specified in Chapter A2.

2.3. Seismic evaluation and design of cripple walls and sill plate anchorage in residential buildings of light-frame wood construction in Risk Category I or II are permitted to be based on the procedures specified in Chapter A3.

2.4. Seismic evaluation and design of soft, weak, or open-front wall conditions in multiunit residential buildings of wood construction in Risk Category I or II are permitted to be based on the procedures specified in Chapter A4.

2.5. Seismic evaluation and design of concrete buildings in all risk categories are permitted to be based on the procedures specified in Chapter A5.

3. Compliance with ASCE 31 based on the applicable performance level as shown in Table 301.1.4.2. It shall be permitted to use the BSE-1 earthquake hazard level as defined in ASCE 41 and subject to the limitations in Item 4 below.

4. Compliance with ASCE 41 using the BSE-1 Earthquake Hazard Level and the performance level shown in Table 301.1.4.2. The design spectral response acceleration parameters S_{XS} and S_{X1} specified in ASCE 41 shall not be taken less than 75 percent of the respective design spectral response acceleration parameters S_{DS} and S_{D1} defined by the *International Building Code*.

301.2 Additional codes. *Alterations, repairs, additions* and *changes of occupancy* to, or relocation of, *existing buildings* and structures shall comply with the provisions for *alterations, repairs, additions* and *changes of occupancy* or relocation, respectively, in this code and the *International Energy Conservation Code*, *International Fire Code*, *International Fuel Gas Code*, *International Mechanical Code*, *International Plumbing Code*, *International Property Maintenance Code*, *International Private Sewage Disposal Code*, *International Residential Code* and NFPA 70. Where provisions of the other codes conflict with provisions of this code, the provisions of this code shall take precedence.

[B] TABLE 301.1.4.2
PERFORMANCE CRITERIA FOR REDUCED IBC—LEVEL SEISMIC FORCES RISK CATEGORY

RISK CATEGORY (Based on IBC Table 1604.5)	PERFORMANCE LEVEL FOR USE WITH ASCE 31	PERFORMANCE LEVEL FOR USE WITH ASCE 41 BSE-1 EARTHQUAKE HAZARD LEVEL
I	Life safety (LS)	Life safety (LS)
II	Life safety (LS)	Life safety (LS)
III	Notes a, b	Note a
IV	Immediate occupancy (IO)	Immediate occupancy (IO)

a. Acceptance criteria for Risk Category III shall be taken as 80 percent of the acceptance criteria specified for Risk Category II performance levels, but need not be less than the acceptance criteria specified for Risk Category IV levels.

b. For Risk Category III, the ASCE 31 screening phase checklists shall be based on the life safety performance level.

CHAPTER 3
COMPLIANCE METHODS

**

SECTION 301
COMPLIANCE METHODS

301.1 General. The *repair*, *alteration*, *change of occupancy*, *addition* or relocation of all *existing buildings* shall comply with one of the methods listed in Sections 301.1.1 through 301.1.3 as selected by the applicant. Application of a method shall be the sole basis for assessing the compliance of work performed under a single permit unless otherwise approved by the *code official*. Sections 301.1.1 through 301.1.3 shall not be applied in combination with each other. Where this code requires consideration of the seismic force-resisting system of an *existing building* subject to *repair*, *alteration*, *change of occupancy*, *addition* or relocation of *existing buildings*, the seismic evaluation and design shall be based on Section 301.1.4 regardless of which compliance method is used.

Exception: Subject to the approval of the *code official*, *alterations* complying with the laws in existence at the time the building or the affected portion of the building was built shall be considered in compliance with the provisions of this code unless the building is undergoing more than a limited structural *alteration* as defined in Section 907.4.3. New structural members added as part of the *alteration* shall comply with the *International Building Code*. *Alterations* of *existing buildings* in *flood hazard areas* shall comply with Section 701.3.

301.1.1 Prescriptive compliance method. *Repairs*, *alterations*, *additions* and *changes of occupancy* complying with Chapter 4 of this code in buildings complying with the *International Fire Code* shall be considered in compliance with the provisions of this code.

301.1.2 Work area compliance method. *Repairs*, *alterations*, *additions*, changes in occupancy and relocated buildings complying with the applicable requirements of Chapters 5 through 13 of this code shall be considered in compliance with the provisions of this code.

301.1.3 Performance compliance method. *Repairs*, *alterations*, *additions*, changes in occupancy and relocated buildings complying with Chapter 14 of this code shall be considered in compliance with the provisions of this code.

[B] 301.1.4 Evaluation and design procedures. The seismic evaluation and design shall be based on the procedures specified in the *International Building Code*, ASCE 31 or ASCE 41. The procedures contained in Appendix A of this code shall be permitted to be used as specified in Section 301.1.4.2.

[B] 301.1.4.1 Compliance with IBC level seismic forces. Where compliance with the seismic design provisions of the *International Building Code* is required, the procedures shall be in accordance with one of the following:

1. One-hundred percent of the values in the *International Building Code*. Where the existing seismic force-resisting system is a type that can be designated as "Ordinary," values of R, Ω_0 and C_d used for analysis in accordance with Chapter 16 of the *International Building Code* shall be those specified for structural systems classified as "Ordinary" in accordance with Table 12.2-1 of ASCE 7, unless it can be demonstrated that the structural system will provide performance equivalent to that of a "Detailed," "Intermediate" or "Special" system.
2. Compliance with ASCE 41 using both the BSE-1 and BSE-2 earthquake hazard levels and the corresponding performance levels shown in Table 301.1.4.1.

[B] 301.1.4.2 Compliance with reduced IBC level seismic forces. Where seismic evaluation and design is permitted to meet reduced *International Building Code* seismic force levels, the procedures used shall be in accordance with one of the following:

1. The *International Building Code* using 75 percent of the prescribed forces. Values of R, Ω_0 and C_d used for analysis shall be as specified in Section 301.1.4.1 of this code.
2. Structures or portions of structures that comply with the requirements of the applicable chapter in Appendix A as specified in Items 2.1 through 2.5 and subject to the limitations of the respective

[B] TABLE 301.1.4.1
PERFORMANCE CRITERIA FOR IBC—LEVEL SEISMIC FORCES OCCUPANCY

RISK CATEGORY (Based on IBC Table 1604.5)	PERFORMANCE LEVEL FOR USE WITH ASCE 41 BSE-1 EARTHQUAKE HAZARD LEVEL	PERFORMANCE LEVEL FOR USE WITH ASCE 41 BSE-2 EARTHQUAKE HAZARD LEVEL
I	Life safety (LS)	Collapse prevention (CP)
II	Life safety (LS)	Collapse prevention (CP)
III	Note a	Note a
IV	Immediate occupancy (IO)	Life safety (LS)

a. Acceptance criteria for Risk Category III shall be taken as 80 percent of the acceptance criteria specified for Risk Category II performance levels, but need not be less than the acceptance criteria specified for Risk Category IV performance levels.

6109.15

LP-Gas Cylinder Exchange for Resale

CHANGE TYPE: New

CHANGE SUMMARY: New requirements regulate the design, operation, and maintenance of automated cylinder exchange stations and the LP-gas exchange cabinets that are accessible to the public

2012 CODE: **6109.15 LP-Gas Cylinder Exchange for Resale.** In addition to other applicable requirements of this chapter, facilities operating cylinder exchange stations for LP-gas that are accessible to the public shall comply with the following requirements:

1. Cylinders shall be secured in a lockable, ventilated metal cabinet or other approved enclosure.
2. Cylinders shall be accessible only by authorized personnel or by use of an automated exchange system in accordance with Section 6109.15.1.
3. A sign shall be posted on the entry door of the business operating the cylinder exchange stating "DO NOT BRING LP-GAS CYLINDERS INTO THE BUILDING" or similar approved wording.
4. An emergency contact information sign shall be posted within 10 feet of the cylinder storage cabinet. The content, lettering, size, color and location of the required sign shall be as required by the fire code official.

International Code Council®

Automated cylinder exchange station

Portable cylinders on roofs are not prohibited by Section 6104.3.1. *(Courtesy of Midwest Roofing Contractors Association, Glenview, IL)*

approved Department of Transportation (DOT) cylinders or ASME-compliant containers, piping, and equipment such as pressure regulators that remain on the site for an indefinite time period. Section 105.7.10 requires a construction permit for any LP-gas system.

Installation of stationary containers on the roof of buildings is prohibited by Section 6.6.7 of NFPA 58, unless such placement is specifically approved by the code official or authority having jurisdiction as well as the fire department. Only after approvals have been granted by the fire code official and fire department can consideration be given to installing a stationary container on a building roof. NFPA 58 limits these installations to a maximum of 4000-gallon water capacity and only allows them on the roof of Type I or II buildings with minimum 2-hour structural assemblies. Numerous other requirements for the arrangement of piping and valves, the preparation of a written fire safety analysis, and location of the stationary container are also specified in NFPA 58.

Based on Section 6104.3.2.1, stationary LP-gas containers are not permitted on the roof of any building. The IFC requirement takes precedence over the NFPA 58 requirements because of the code text in IFC Section 102.7.1.

Section 6104.3.2.1 does not prohibit the building owner or tenant from using LP-gas cylinders inside buildings or on roofs or balconies. LP-gas is commonly used by contractors for soldering water or refrigerant piping systems. Many roof covering systems are applied using LP-gas-fueled torch systems. These instances constitute hot work and must comply with the requirements in IFC Chapter 35; torch-applied roofing systems also need to comply with the requirements in Section 3317 for hot work. When LP-gas cylinders are required on a building roof or inside a building for maintenance or construction reasons, their on-site transportation and use should comply with the NFPA 58, Section 6.19 requirements for cylinders, equipment, piping, and appliances in buildings, building roofs, and exterior balconies.

6104.3.1

Installation on Roof Prohibited

CHANGE TYPE: New

CHANGE SUMMARY: A stationary LP-gas installation on the roof of a building is not allowed.

2012 CODE: **6104.3.1 Installation on Roof Prohibited.** LP-gas containers used in stationary installations shall not be located on the roofs of buildings.

CHANGE SIGNIFICANCE: The IFC adopts NFPA 58, *Liquefied Petroleum Gas Code,* by reference, and many of its requirements are linked to specific provisions in Chapter 61. Liquefied petroleum gas (LP-gas) is a mixture of several flammable gases, including ethane, propane, and butane. LP-gas is a liquefied compressed gas as defined in Section 202 because it is stored as a liquid in a low-pressure gas cylinder or tank. It can be withdrawn as either liquid or gas depending on the cylinder or container design. LP-gas has an approximate vapor density of 1.52 (with air = 1), making it heavier than air, and an approximate flammable range of 2.0% to 10.1% by volume in air. NFPA 58 requires LP-gas to be odorized before it is made available to consumers so that they can detect a leak with their olfactory senses—in the general population, detection of the odorant generally occurs at 20% to 25% of the gas mixture's lower flammable limit.

A stationary LP-gas installation is defined in NFPA 58 as "*an installation of LP-gas containers, piping and equipment for indefinite use at a particular location; an installation is not normally expected to change in status, condition, or location.*" A stationary installation is assembled from

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A 2000-gallon-water-capacity stationary ASME container is prohibited on the roof of a building.

long-term care residents against health-care-acquired infections, the definition of ABHR in Section 202 was revised to increase the permissible volume of ethyl or isopropyl alcohol from 70% to 95%. ABHRs formulated at this concentration are classified as Class IB flammable liquids.

Because of the increased volume of alcohol in ABHRs, the heat release rate and burning time of 95% ethanol was calculated and compared to that of weaker solutions found in older ABHRs. The calculations confirmed that 95% ethanol will exhibit the highest heat release when compared to more dilute ethanol/water solutions but exhibits the shortest-duration pool fire because the lack of water allows for quicker volatilization of the fuel.

The provisions in Section 5705.5 were modified to address the installation of "touch-free" ABHRs. Touch-free ABHRs were developed to eliminate the need for persons to touch the dispenser, which creates a potential path for passing of microorganisms. The devices are generally activated by passing the hands in front of or under an optical scanner, which activates and dispenses a specified dose of ethanol or isopropanol. In addition to compliance with all seven of the requirements in Section 5705.5, these particular ABHRs are required by Item 5.1 to be tested each time the dispenser is refilled in accordance with the manufacturer's care and use instructions. To prevent accidental activation of the device in the event a cart is pushed near a touch-free ABHR, Item 5.3.1 only allows dispensing to occur within 4 inches of the device. If a cart or other obstruction is located close enough to activate the ABHR, Item 5.3.3 limits the device to dispensing only a single dose—the dispenser must be designed so it does not continue to cycle and dispense additional doses of alcohol. Finally, Item 5.3.2 requires the discharged dose to be limited to the amount necessary for hand hygiene.

5705.5 continued

3. The dispensers shall not be installed directly adjacent to, directly above or below an electrical receptacle, switch, appliance, device or other ignition source. The wall space between the dispenser and the floor shall remain clear and unobstructed.
4. Dispensers shall be mounted so that the bottom of the dispenser is a minimum of 42 inches (1067 mm) and a maximum of 48 inches (1219 mm) above the finished floor.
5. Dispensers shall not release their contents except when the dispenser is manually activated. Facilities shall be permitted to install and use automatically activated "Touch Free" alcohol based hand-rub dispensing devices with the following requirements:
   - **5.1.** The facility or persons responsible for the dispensers shall test the dispensers each time a new refill is installed in accordance with the manufacturer's care and use instructions.
   - **5.2.** Dispensers shall be designed and must operate in a manner that ensures accidental or malicious activations of the dispensing device are minimized. At a minimum, all devices subject to or used in accordance with this section shall have the following safety features:
     - **5.3.1.** Any activations of the dispenser shall only occur when an object is placed within four inches of the sensing device.
     - **5.3.2.** The dispenser shall not dispense more than the amount required for hand hygiene consistent with label instructions as regulated by the United States Food and Drug Administration (USFDA).
     - **5.3.3.** An object placed within the activation zone and left in place will cause only one activation.
6. Storage and use of alcohol-based hand rubs shall be in accordance with the applicable provisions of Sections 3404 and 3405.
7. Dispensers installed in occupancies with carpeted floors shall only be allowed in smoke compartments or *fire areas* equipped throughout with an *approved* automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.

CHANGE SIGNIFICANCE: Alcohol-based hand rubs (ABHRs) are essential in care occupancies for controlling the spread of unwanted infectious microorganisms. Numerous studies conducted on the use ABHRs have found that they provide a vastly improved efficacy against numerous pathogens and are more effective for a longer time period when compared to hand-washing with soap and water.

As part of their ongoing research to control the outbreak of multiple-drug-resistant bacteria, such as vancoymin-resistant enterococcus (VRE) and similar "super bugs," that are highly resistant to antibiotics, the U.S. Centers for Disease Control and the U.S. Food and Drug Administration have been continuing to study the performance of ABHRs. As a result of their research, both agencies now recommend that the concentration of ethanol or isopropanol in ABHR be increased to 95% by volume. Their research has found that a higher alcohol concentration offers much more virucidal activity when compared to ABHRs formulated with 70% alcohol by volume. To help protect health care workers, hospital patients, and

5705.5

Alcohol-Based Hand Rubs Classified as Class I or II Liquids

CHANGE TYPE: Modification

CHANGE SUMMARY: Requirements for touch-free alcohol-based hand rubs have been included in the IFC.

2012 CODE: 5702.1 Definitions. The following ~~words and~~ terms ~~shall, for the purposes of this section and as used elsewhere in this code, have the meanings shown herein~~ are defined in Chapter 2:

> **ALCOHOL-BASED HAND RUB.** An alcohol-containing preparation designed for application to the hands for reducing the number of viable microorganisms on the hands and containing ethanol or isopropanol in an amount not exceeding ~~70~~ 95 percent by volume.

5705.5 Alcohol-Based Hand Rubs Classified as Class I or II Liquids. The use of wall-mounted dispensers containing alcohol-based hand rubs classified as Class I or II liquids shall be in accordance with all of the following:

1. The maximum capacity of each dispenser shall be 68 ounces (2 L).
2. The minimum separation between dispensers shall be 48 inches (1219 mm).

5705.5 continues

Touch-free alcohol-based disinfectant dispenser. *(Courtesy of Gojo Industries, Akron, OH)*

610 continued

TABLE 610-A Cooking Oil Flashpoint and Ignition Temperatures

Cooking Oil	Flashpoint Temperature (°F)	Ignition Temperature (°F)
Canola Oil	450	626
Corn Oil	490	740
Cotton Seed Oil	486	650
Palm Oil	323	600
Peanut Oil	540	833
Soybean Oil	549	833
Sunflower Seed Oil	550	Undetermined

Section 610.2 requires storage tanks for cooking oil storage to be listed as complying with either Underwriters Laboratories (UL) 142, *Standard for Steel Aboveground Storage Tanks for Flammable and Combustible Liquids,* or UL 80, *Standard for Steel Tanks for Oil-Burner Fuels and Other Combustible Liquids.* Both standards are limited to shop-fabricated aboveground storage tanks (ASTs) designed to operate at atmospheric pressure. Both standards require tanks to be constructed of carbon steel meeting a certain specification, be liquid-tight, and, before shipment, tested at the factory to confirm they are liquid-tight. Tanks constructed to UL 80 have a maximum volume of 660 gallons versus UL 142, which does not limit the volume of ASTs.

Installations of ASTs for cooking oil also must comply with the requirements in Section 5704 for storage tanks and the manufacturer's installation instructions. ASTs are available for indoor and outdoor installations. Section 5707.2.10 requires drainage and diking for cooking oil ASTs installed outdoors; Exception 2 to this section waives the requirement when the AST is a listed secondary tank.

Section 610.4 requires the tank to be equipped with a normal and emergency vent. The normal vent for cooking oil ASTs installed indoors is not required to be terminated outside the building when it is equipped with a pressure/vacuum vent (see Section 5704.2.7.3.3). All ASTs for cooking oil require an emergency vent in accordance with Section 5704.2.7.4.

Many cooking oil storage tank systems will contain internal heaters to keep the oil above its melting temperature so it can be removed by a vacuum truck. Section 610.5 requires the electrical equipment to be listed and its design and installation to comply with the NEC. This provision does not require any temperature controls that ensure the cooking oil is not heated above its flashpoint temperature.

The phrase "cooking oil storage tank" implies that it is listed as a complete assembly, but such an assumption is incorrect. Code officials will need to evaluate the tank, piping, valves, and fittings, as well as the electrical equipment, for compliance with the IFC and the NEC. Additionally, installation of the AST and its piping will require an IFC construction permit in accordance with Section 105.7.8.

610
Commercial Kitchen Cooking Oil Storage

CHANGE TYPE: New

CHANGE SUMMARY: Cooking oil storage tanks in commercial kitchens must comply with new Chapter 6 requirements for these installations and Chapter 57.

2012 CODE:

SECTION 610
COMMERCIAL KITCHEN COOKING OIL STORAGE

610.1 General. Storage of cooking oil (grease) in commercial cooking operations shall comply with Chapter 57. Systems used to store cooking oils in larger than 60 gallon (227 L) aboveground tanks shall also comply with Sections 610.2 through 610.5. For purposes of this section, cooking oil shall be classified as a Class IIIB liquid unless otherwise determined by testing.

610.2 Storage Tanks. Cooking oil storage tanks shall be listed in accordance with UL 142 or UL 80, and shall be installed in accordance with Section 5704 and the tank manufacturer's instructions.

610.3 Other Storage Components. Cooking oil storage system components, including but not limited to piping, connections, fittings, valves, tubing, and other related components used for the transfer of cooking oil from the cooking appliance to the storage tank, and from the storage tank to the discharge point, shall be installed in accordance with Section 5703.6.

610.4 Tank Venting. Normal and emergency venting for cooking oil storage tanks shall terminate outside the building as specified in Sections 5704.2.7.3 and 5704.2.7.4.

610.5 Electrical Equipment. Electrical equipment used for the operation and heating of the cooking oil storage system shall be listed and comply with NFPA 70.

Cooking oil storage tank and oil recovery cart *(Photograph courtesy of Darling International Inc., Irving, TX)*

CHANGE SIGNIFICANCE: Used cooking oil has benefits in that it can be recycled and used again for commercial cooking operations. It can also be chemically modified into biodiesel and used to fuel mobile or stationary equipment. Because it can be recycled and reused, many restaurants and similar businesses that perform commercial cooking operations have found that capturing used cooking oil reduces waste disposal costs. As a result, the food service industry is seeking options for the storage of waste cooking oils. The requirements in IFC Section 610 address the indoor and outdoor storage of cooking oils.

This code change specifies that for the application of these requirements, all cooking oils are classified as Class III-B combustible liquids in accordance with the definition in IFC Section 202. These liquids have a closed-cup flashpoint temperature greater than 200°F. Flashpoint and ignition temperatures for common cooking oils are shown in Table 610-A, and research confirms this classification is correct.[2]

[2]Simpson, Larry, *Commercial Cooking Operations Application Guide*, International Code Council, Washington, DC, 2010, p. 5.

610 continues

805.3

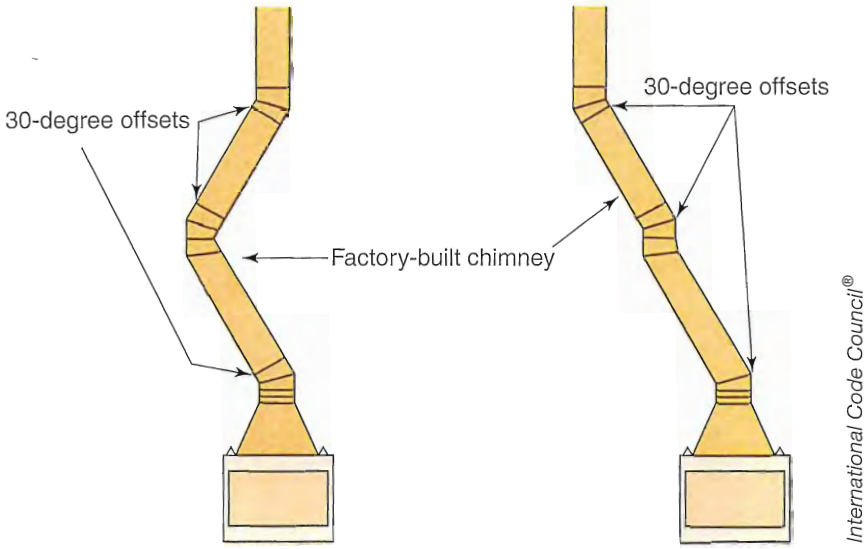
Factory-Built Chimney Offsets

CHANGE TYPE: Addition

CHANGE SUMMARY: The maximum offset in a factory-built chimney is now specified and the number of offsets has been limited.

2012 CODE: **805.3 Factory Built Chimney Offsets.** Where a factory-built chimney assembly incorporates offsets, no part of the chimney shall be at an angle of more than 30 degrees from vertical at any point in the assembly and the chimney assembly shall not include more than 4 elbows.

CHANGE SIGNIFICANCE: UL 103 addressing factory-built chimneys is the basis for the limitations specified in the new Section 805.3. There has always been confusion about offsets in factory-built chimneys, and, because of the lack of specific code provisions, reference was commonly made to the offset requirements for Type B vents used with gas-fired appliances. The new requirements now specify the maximum permitted offset in a factory-built chimney, as well as the maximum number of offsets allowed.



Factory-built chimney offset

507.2.2

Type II Hoods

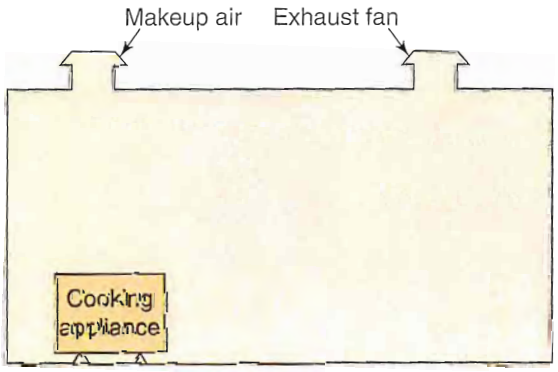
CHANGE TYPE: Modification

CHANGE SUMMARY: A Type II hood is now required to be installed above all appliances that produce products of combustion but do not produce grease or smoke. An exact exhaust rate is specified for areas where a cooking appliance is being used but a Type II hood is not required.

2012 CODE: **507.2.2 Type II Hoods.** Type II hoods shall be installed above dishwashers and appliances that produce heat or moisture and do not produce grease or smoke as a result of the cooking process, except where the heat or moisture loads from such appliances are incorporated into the HVAC system design or into the design of a separate removal system. Type II hoods shall be installed above all light duty appliances that produce products of combustion and do not produce grease or smoke as a result of the cooking process. Spaces containing cooking appliances that do not require Type II hoods shall be ~~ventilated~~ provided with exhaust at a rate of 0.70 cfm per square foot (0.00033 m^3/s). ~~in accordance with Section 403.3.~~ For the purpose of determining the floor area required to be ~~ventilated~~ exhausted, each individual appliance that is not required to be installed under a Type II hood shall be considered as occupying not less than 100 square feet. Such additional square footage shall be provided with exhaust at a rate of 0.70 cfm per square foot.

CHANGE SIGNIFICANCE: Previously, a space or area where a cooking appliance was allowed to operate without a Type II hood was required to be ventilated in accordance with Section 403.3 in the IMC. Table 403.3 in the IMC does not establish any values for outside air in a kitchen, as it only specifies an exhaust rate. For clarity purposes, the exhaust rate of 0.70 cfm per square foot taken from Table 403.3 refers to a space where a cooking appliance is being used without a Type II hood. A Type II hood is now permitted to be used with appliances that are rated for other than light duty and do not produce grease, smoke, or combustion products.

The addition of the text "as a result of the cooking process" is intended to clarify that the smoke being referenced is that smoke produced as part of the normal cooking process and not a result of the food being burned. As an example, toast that is burned in a toaster and produces smoke would not establish the need for a Type II hood.



Room = 2000 sq.ft.
Cooking appliance = 100 sq.ft.
2100 x 0.70 = 1470 CFM of exhaust required

Cooking appliance that does not require a Type II hood

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507.2.1
Type I Hoods

CHANGE TYPE: Modification

CHANGE SUMMARY: Type I hoods no longer are required to be installed where complying electric cooking appliances are being used.

2012 CODE: **507.2.1 Type I Hoods.** Type I hoods shall be installed where cooking appliances produce grease or smoke as a result of the cooking process. Type I hoods shall be installed over medium-duty, heavy-duty and extra-heavy-duty cooking appliances. Type I hoods shall be installed over light-duty cooking appliances that produce grease or smoke.

> **Exception:** A Type I hood shall not be required for an electric cooking appliance where an approved testing agency provides documentation that the appliance effluent contains 5 mg/m^3 or less of grease when tested at an exhaust flow rate of 500 cfm (0.236 m^3/s) in accordance with Section 17 of UL 710B.

CHANGE SIGNIFICANCE: Where the cooking process does not produce quantities of grease exceeding the prescribed threshold, a Type I hood is no longer required for electric cooking appliances. The IMC provisions are now current with those of NFPA 96, *Standard for Ventilation Control, and Fire Protection Cooking Operations,* and UL 710 B, *Recirculating Systems*, that allow for the elimination of a Type I hood where grease emissions are minimal or nonexistent.

Electric oven where a hood is not required *(Courtesy of TurboChef Global)*

506.3.11.2

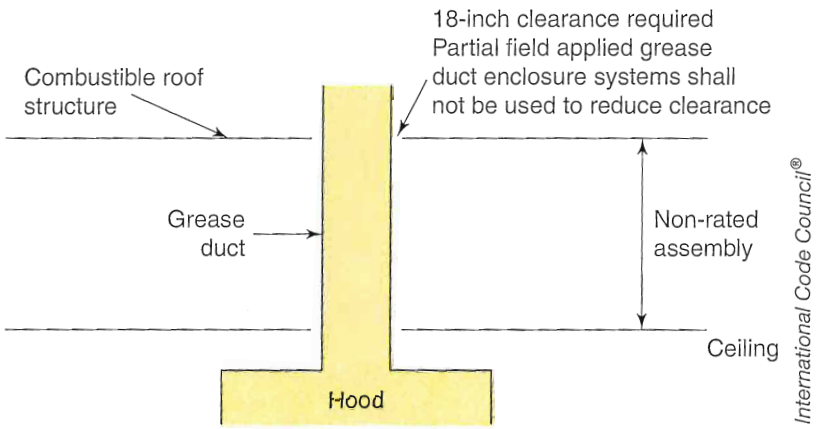
Field-Applied Grease Duct Enclosures

CHANGE TYPE: Clarification

CHANGE SUMMARY: Field-applied grease duct enclosure systems are now specifically prohibited from being used to reduce clearance to combustibles.

2012 CODE: **506.3.11.2 Field-Applied Grease Duct Enclosure.** Commercial kitchen grease ducts constructed in accordance with Section 506.3.1 shall be enclosed by field-applied grease duct enclosure that is a listed and labeled material, system, product, or method of construction specifically evaluated for such purpose in accordance with ASTM E2336. The surface of the duct shall be continuously covered on all sides from the point at which the duct originates to the outlet terminal. Duct penetrations shall be protected with a through-penetration fire-stop system classified in accordance with ASTM E814 or UL 1497 and having a "F" and "T" rating equal to the fire-resistance rating of the assembly being penetrated. Such systems shall be installed in accordance with the listing and the manufacturer's installation instructions. Partial application of a field-applied grease duct enclosure system shall not be installed for the sole purpose of reducing clearance to combustibles at isolated sections of grease duct. Exposed duct-wrap systems shall be protected where subject to physical damage.

CHANGE SIGNIFICANCE: The basis of this code change comes from the misuse of a listed product. Field-applied grease duct enclosure systems serving Type I hoods have not been tested as partial systems for the purpose of reducing the clearance of a grease duct to combustible material. The misapplication of this duct enclosure system usually occurs where a grease duct does not require an enclosure per IMC Section 506.3.11.4 and the grease duct penetrates a roof assembly that is constructed of combustible material or there is combustible material on the decking. In order to reduce the clearance between the grease duct and the combustible roof assembly or combustible material on the decking, the field-applied grease duct enclosure system is often installed around the grease duct at the roof penetration. However, this method of clearance reduction is unacceptable, as the duct enclosure system was never intended to be used this way, nor was it tested for this type of use.



Grease duct clearance

306.5 continued

ladder shall be a minimum of 30 inches (762 mm) measured perpendicular to the rungs. This distance shall be maintained from the point of ladder access to the bottom of the roof hatch. A minimum clear width of 15-inches (381 mm) shall be provided on both sides of the ladder measured from the midpoint of and parallel with the rungs except where cages or wells are installed.

8. Landing required. The ladder shall be provided with a clear and unobstructed bottom landing area having a minimum dimension of 30 inches (762 mm) by 30 inches (762 mm) centered in front of the ladder.

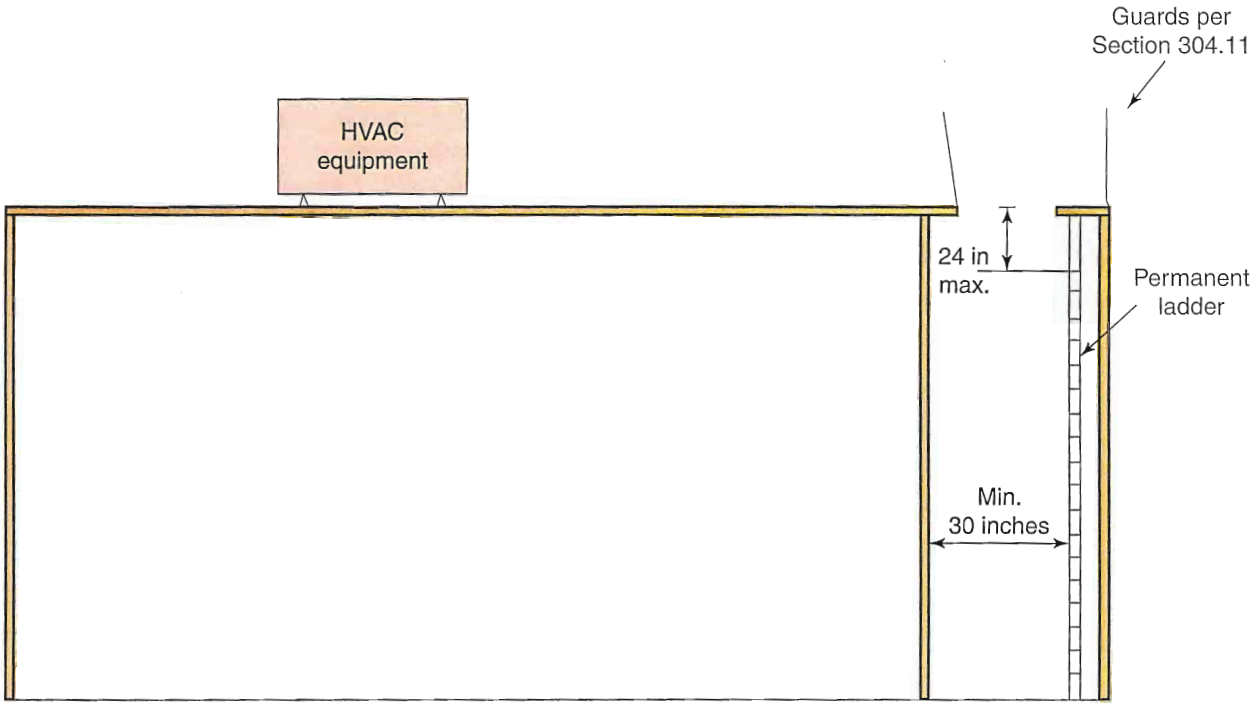
~~7~~9. Ladders shall be protected against corrosion by approved means.

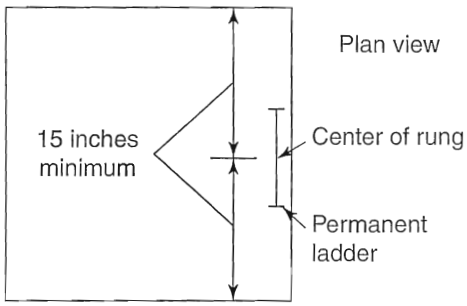
10. Access to ladders shall be provided at all times.

Catwalks installed to provide the required access shall be not less than 24 inches (610 mm) wide and shall have railings as required for service platforms.

Exception: This section shall not apply to Group R-3 occupancies.

CHANGE SIGNIFICANCE: Where a piece of equipment or an appliance that requires access is located on a roof or elevated structure more than 16 feet above grade level, it has been clarified that a means of access must be provided. If an appliance is located on the roof of a multistory building and the roof access is through a roof hatch opening on the top story of the building, a permanent ladder is required from the floor level to the top roof hatch. The same requirements would apply if a piece of equipment or an appliance were located on an elevated platform on the roof of a building. A permanent ladder would be required to the appliance or equipment located on the platform. The modifications to the permanent ladder criteria will eliminate several hazards that have commonly occurred with roof or elevated-structure access ladders. Previous code editions did not specify how far away a ladder could terminate from a roof access opening or a minimum required distance from the front or sides of a ladder to an obstruction. A minimum landing area is also now required at the bottom of a ladder, requiring ladders to be accessible at all times.





Minimum 30 inch × 30 inch bottom landing

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Access ladder

24 inches (610 mm) below the upper edge of the roof hatch, roof or parapet, as applicable.

3. Ladders shall have a toe spacing not less than 6 inches (152 mm) deep.
4. There shall be a minimum of 18 inches (457 mm) between rails.
5. Rungs shall have a minimum 0.75-inch (19 mm) diameter and be capable of withstanding a 300-pound (136.1kg) load.
6. Ladders over 30 feet (9144 mm) in height shall be provided with offset sections and landings capable of withstanding 100 pounds per square foot (488.2 kg/m2). Landing dimensions shall be not less than 18 inches (457 mm) and not less than the width of the ladder served. A guard rail shall be provided on all open sides of the landing.
7. Climbing clearance. The distance from the centerline of the rungs to the nearest permanent object on the climbing side of the

306.5 continues

306.5

Equipment and Appliances on Roofs or Elevated Structures

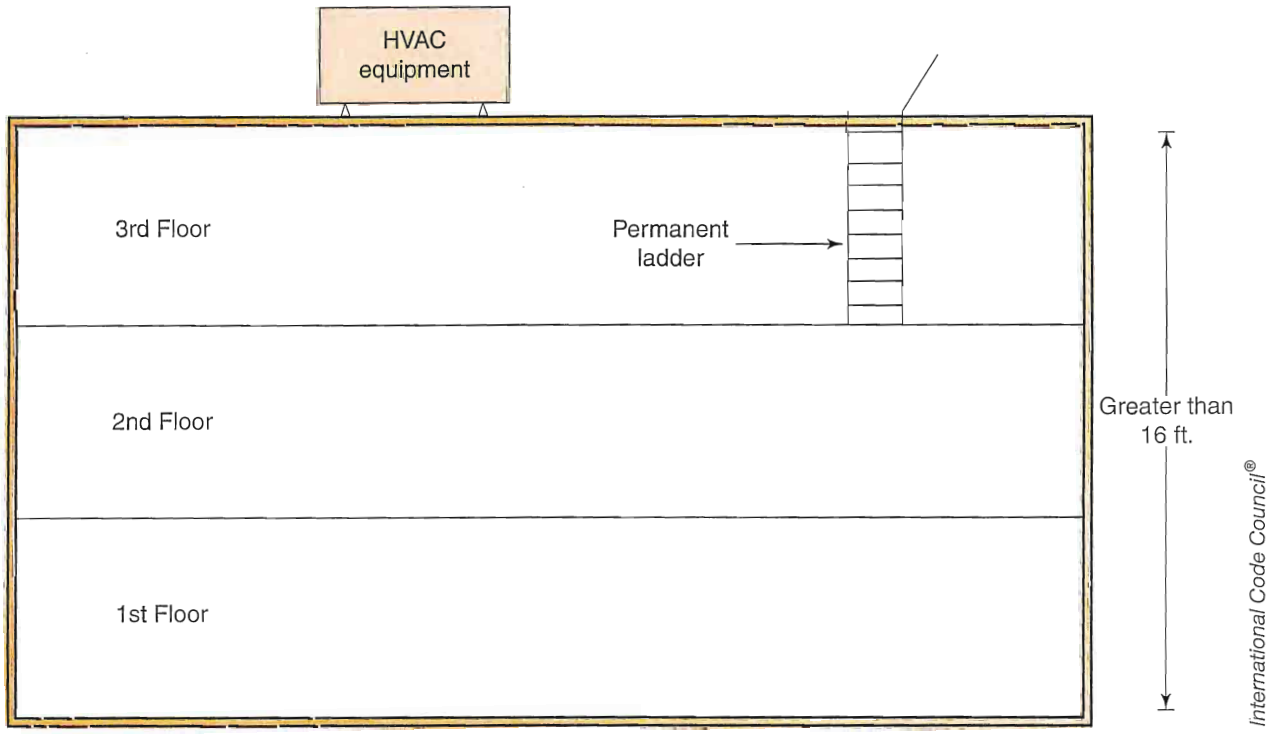
CHANGE TYPE: Modification

CHANGE SUMMARY: It has been clarified that permanent access is required to equipment and appliances on a roof or elevated structure higher than 16 feet above grade, and required clearances are now provided to assure access to ladders required for access to roofs or elevated structures.

2012 CODE: **306.5 Equipment and Appliances on Roofs or Elevated Structures.** Where equipment requiring access ~~and~~ or appliances are ~~installed on roofs or elevated structures at a height exceeding 16 feet (4877 mm), such access shall be provided by a permanent approved means of access, the extent of which shall be from grade or floor level to the equipment and appliances' level service space~~ located on an elevated structure or the roof of a building such that personnel will have to climb higher than 16 feet (4877 mm) above grade to access such equipment or appliances, an interior or exterior means of access shall be provided. Such access shall not require climbing over obstructions greater than 30 inches (762 mm) in height or walking on roofs having a slope greater than 4 units vertical in 12 units horizontal (33-percent slope). Such access shall not require the use of portable ladders. Where access involves climbing over parapet walls, the height shall be measured to the top of the parapet wall.

Permanent ladders installed to provide the required access shall comply with the following minimum design criteria:

1. The side railing shall extend above the parapet or roof edge not less than 30 inches (762 mm).
2. Ladders shall have rung spacing not to exceed 14 inches (356 mm) on center. The upper-most rung shall be a maximum of



Roof access

hot tub, spa, or whirlpool. To illustrate the most significant impact of the change, consider a bathroom with a shower that is enclosed on three sides by solid walls and on the fourth side by a set of glass doors. Previously, these four sides created the "enclosure" for the shower and the only location regulated for safety glazing purposes was the glass doors. Under the revised provisions, if a person would step out of the enclosed shower and a window in the wall of the bathroom is located within the established 60-inch height and 60-inch horizontal distance, that window is regulated. Previously, because the bathroom window was considered outside of the shower "enclosure," it would have been regulated by the general window requirements (Section 2406.4, Item 7) and not by the shower enclosure provisions of Section 2406.4, Item 5.

The provisions of Sections 2406.4.6 and 2406.4.7 will replace what had previously been Section 2406.4, Items 10 and 11, addressing two different locations related to glazing near stairways. The primary distinction is that Section 2406.4.7 will only regulate the glazing that is adjacent to the bottom landing on a stair. Therefore, when a stairway terminates at a floor level, Section 2406.4.7 would be applicable within 60 inches of the bottom tread, but if the landing were located between two adjacent flights of stairs, then Section 2406.4.6 would be the applicable provision. Code users should note that the provisions dealing with glazing at the bottom of the stair will apply when the bottom edge of the glazing is less than 36 inches above the landing. Previously, any glazing that was less than 60 inches above the nosing of the last tread was regulated. The reduction down to the 36-inch height was made based on an exception within the IRC exempting safety glazing where a solid wall or panel that places the glazing at or above the handrail or guard height is capable of withstanding the guard loading requirements.

2406.1, 2406.4 continued

~~3. Glazing materials used as curved glazed panels in revolving doors.~~

~~4. Commercial refrigerated cabinet glazed doors.~~

~~5. Glass-block panels complying with Section 2101.2.5.~~

~~6. Louvered windows and jalousies complying with the requirements of Section 2403.5.~~

~~7. Mirrors and other glass panels mounted or hung on a surface that provides a continuous backing support.~~

CHANGE SIGNIFICANCE: An effective reorganization of the hazardous locations for safety glazing purposes has been accomplished, resulting in the elimination of conflicts, creation of consistency, and ease of use. By taking the 11 hazardous locations and seven exceptions that previously existed in Section 2604.4 and reformatting them into seven individual provisions with the appropriate exceptions located directly within the applicable provision, the understanding of the intent should be much easier. Code users should be aware that although this was predominately a reorganization effort, some technical changes do result from the relocation or combination of provisions. As an example, see the discussion related to Section 2406.4.5.

The point-by-point explanation that follows should assist in understanding the reorganization of the various requirements.

The exception to Section 2406.1 was relocated from Item 7 in Section 2406.4.1 with no change in application because these items were previously exempted.

The "glazing in doors" requirements of new Section 2406.4.1 now include Items 1 through 4 from previous Section 2406.4. In a technical change, jalousie windows were previously exempted from the safety glazing requirement. Because jalousies are no longer listed among the exceptions, they are now required to be safety glazing unless exempted by the limited size or decorative glazing provisions of Exception 1 or 2. The four exceptions that are listed in this section were previously listed as the first four exceptions in Section 2406.4.1.

Section 2406.4.2 dealing with "glazing adjacent to doors" and several of the exceptions were previously found in Item 6 of Section 2406.4. New Exception 1 was previously Exception 2 in Section 2406.4.1. Exception 4 was revised in order to clarify the provisions and to coordinate with similar text in the IRC.

The glazed window requirements of Section 2406.4.3 now combine the provisions of previous Section 2406.4, Item 7, and Exception 2 from Section 2406.4.1. The provisions regarding protecting the window from impact by the use of a horizontal rail have been revised in order to coordinate with the language of the IRC.

Section 2406.4.5 addressing glazing adjacent to wet surfaces is essentially a combination of the previous provisions related to glazing adjacent to hot tubs, bathtubs, and showers (Item 5 in Section 2406.4) as well as pools and spas (Item 9 in Section 2406.4). A single section relating to hazardous glazing adjacent to water will include the criteria that previously applied to walls and fences around a pool as the means to determine if the glazing is in a hazardous location. This revision will affect the application

2406.4.5 Glazing and Wet Surfaces. Glazing in walls, enclosures, or fences containing or facing hot tubs, spas, whirlpools, saunas, steam rooms, bathtubs, showers, and indoor or outdoor swimming pools, where the bottom exposed edge of the glazing is less than 60 inches (1524 mm) measured vertically above any standing or walking surface, shall be considered a hazardous location. This shall apply to single glazing and all panes in multiple glazing.

Exception: Glazing that is more than 60 inches (1524 mm), measured horizontally and in a straight line, from the water's edge of a bathtub, hot tub, spa, whirlpool, or swimming pool.

~~10.~~ **2406.4.6 Glazing Adjacent Stairs and Ramps.** Glazing ~~adjacent to~~ where the bottom exposed edge of the glazing is less than 60 inches (1524 mm) above the plane of the adjacent walking surface of stairways, landings between flights of stairs, and ramps shall be considered a hazardous location ~~within 36 inches (914 mm) horizontally of a walking surface; when the exposed surface of the glass is less than 60 inches (1524 mm) above the plane of the adjacent walking surface~~.

Exceptions:

1. The side of a stairway, landing, or ramp that has a guard complying with the provisions of Sections 1013 and 1607.8, and the plane of the glass is greater than 18 inches (457 mm) from the railing.
2. Glazing 36 inches (914 mm) or more measured horizontally from the walking surface.

~~11.~~ **2406.4.7 Glazing Adjacent The Bottom Stair Landing.** ~~Glazing adjacent to stairways within 60 inches (1524 mm) horizontally of the bottom tread of a stairway in any direction when the exposed surface of the glass is less than 60 inches (1524 mm) above the nose of the tread.~~ Glazing adjacent the landing at the bottom of a stairway where the glazing is less than 36 inches (914 mm) above the landing and within 60 inches (1524 mm) horizontally of the bottom tread shall be considered a hazardous location.

Exception: ~~Safety glazing for Item 10 or 11 is not required for the following installations where:~~

1. ~~The side of a stairway, landing or ramp which has~~ Glazing that is protected by a guard ~~or handrail, including balusters or in-fill panels,~~ complying with ~~the provisions of~~ Sections 1013 and 1607.8; and ~~2. The~~ the plane of the glass is greater than 18 inches (457 mm) from the ~~railing~~ guard.

~~**2406.4.1 Exceptions.** The following products, materials and uses shall not be considered specific hazardous locations:~~

~~1. Openings in doors through which a 3-inch (76 mm) sphere is~~

2406.1, 2406.4 continued

~~swings when opened,~~ on the latch side of and perpendicular to the plane of the door in a closed position in one- and two-family dwellings or within dwelling units in Group R-2.

~~7.~~ **2406.4.3 Glazing in Windows.** Glazing in an individual fixed or operable panel~~, other than in those locations described in preceding Items 5 and 6, which~~ that meets all of the following conditions shall be considered a hazardous location:

~~7.~~1. ~~Exposed~~ The exposed area of an individual pane is greater than 9 square feet (0.84 m^2).

~~7.~~2. ~~Exposed~~ The bottom edge of the glazing is less than 18 inches (457 mm) above the floor.

~~7.~~3. ~~Exposed~~ The top edge of the glazing is greater than 36 inches (914 mm) above the floor.

~~7.~~4. One or more walking surface(s) are within 36 inches (914 mm), measured horizontally ~~of the plane~~ and in a straight line, of the glazing.

Exceptions: ~~Safety glazing for Item 7 is not required for the following installations:~~

~~1. A protective bar 11/2 inches (38 mm) or more in height, capable of withstanding a horizontal load of 50 pounds plf (730 N/m) without contacting the glass, is installed on the accessible sides of the glazing 34 inches to 38 inches (864 mm to 965 mm) above the floor.~~

1. Decorative glazing.

2. When a horizontal rail is installed on the accessible side(s) of the glazing 34 to 38 inches above the walking surface. The rail shall be capable of withstanding a horizontal load of 50 pounds per linear foot (730 N/m) without contacting the glass and be a minimum of 1½ inches (38 mm) in cross-sectional height.

~~2~~3. The outboard Outboard panes in insulating glass units or multiple glazing where the bottom exposed edge of the glass is 25 feet (7620 mm) or more above any grade, roof, walking surface, or other horizontal or sloped (within 45 degrees of horizontal) (0.78 rad) surface adjacent to the glass exterior.

~~8.~~ **2406.4.4 Glazing in Guards and Railings.** Glazing in guards and railings, including structural baluster panels and nonstructural in-fill panels, regardless of area or height above a walking surface, shall be considered a hazardous location.

~~9. Glazing in walls and fences enclosing indoor and outdoor swimming pools, hot tubs and spas where all of the following conditions are present:~~

~~9.1. The bottom edge of the glazing on the pool or spa side is less than 60 inches (1524 mm) above a walking surface on the pool or spa side of the glazing; and~~

~~9.2. The glazing is within 60 inches (1524 mm) horizontally of the water's edge of a swimming pool or spa.~~

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Glazing near wet surfaces is considered as being in a hazardous location.

Exceptions:

1. Glazed openings of a size through which a 3-inch (76-mm)-diameter sphere is unable to pass.
2. Decorative glazing.
3. Glazing materials used as curved glazed panels in revolving doors.
4. Commercial refrigerated cabinet glazed doors.

~~6.~~ **2406.4.2 Glazing Adjacent to Doors.** Glazing in an individual fixed or operable panel adjacent to a door where the nearest ~~exposed~~ vertical edge of the glazing is within a 24-inch (610-mm) arc of either vertical edge of the door in a closed position and where the bottom exposed edge of the glazing is less than 60 inches (1524 mm) above the walking surface shall be considered a hazardous location.

Exceptions:

1. Decorative glazing.
2. ~~Panels where~~ Where there is an intervening wall or other permanent barrier between the door and glazing.
3. Where access through the door is to a closet or storage area 3 feet (914 mm) or less in depth. Glazing in this application shall comply with Section ~~2406.4, Item 7~~ 2406.4.3.

2406.1, 2406.4

Safety Glazing—Hazardous Locations

CHANGE TYPE: Modification

CHANGE SUMMARY: The hazardous locations identified in the safety glazing provisions have been reorganized and clarified in order to provide better consistency between the IBC and IRC.

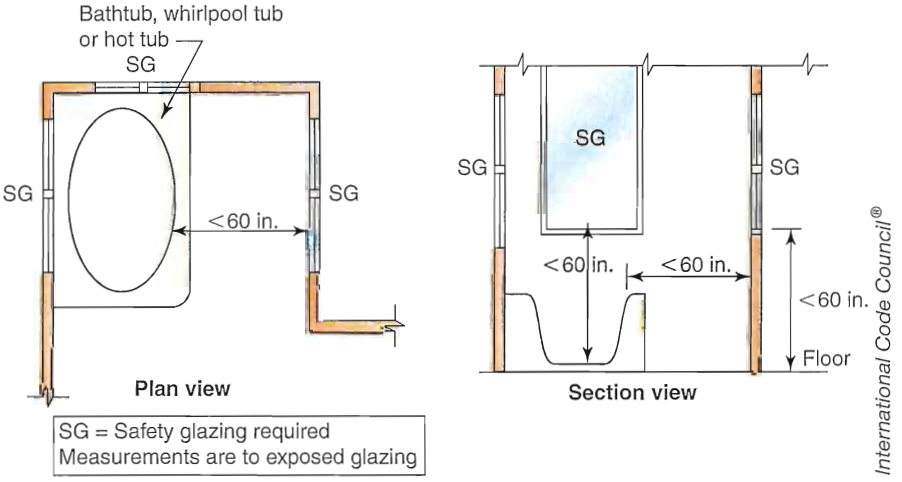
2012 CODE: **2406.1 Human Impact Loads.** Individual glazed areas, including glass mirrors, in hazardous locations as defined in Section 2406.4 shall comply with Sections 2406.1.1 through 2406.1.4.

Exception: Mirrors and other glass panels mounted or hung on a surface that provides a continuous backing support.

2406.4 Hazardous Locations. The ~~following~~ locations specified in Sections 2306.4.1 through 2406.4.7 shall be considered specific hazardous locations requiring safety glazing materials.~~:~~

1. ~~Glazing in swinging doors except jalousies (see Section 2406.4.1).~~
2. ~~Glazing in fixed and sliding panels of sliding door assemblies and panels in sliding and bifold closet door assemblies.~~
3. ~~Glazing in storm doors.~~
4. ~~Glazing in unframed swinging doors.~~
5. ~~Glazing in doors and enclosures for hot tubs, whirlpools, saunas, steam rooms, bathtubs and showers. Glazing in any portion of a building wall enclosing these compartments where the bottom exposed edge of the glazing is less than 60 inches (1524 mm) above a standing surface.~~

2406.4.1 Glazing in Doors. Glazing in all fixed and operable panels of swinging, sliding, and bifold doors shall be considered a hazardous location.



Hazardous locations near wet surfaces

- The hurricane-prone region is redefined in terms of the ultimate design wind speed as shown on the Risk Category II wind speed map.
- The windborne debris region is now defined in terms of the ultimate design wind speed and determined from the appropriate risk category wind speed map. For example, for Risk Category II and III buildings and structures, except health care facilities, the windborne debris region is based on Figure 1609A. For Risk Category IV buildings and structures and Risk Category III health care facilities, the windborne debris region is based on Figure 1609B.
- The ultimate design wind speed, V_{ult}, for the special wind regions indicated, near mountainous terrain and near gorges is to be determined in accordance with local jurisdiction requirements and in accordance with Section 26.5.1 of ASCE 7. In nonhurricane-prone regions, when the ultimate design wind speed is estimated from regional climatic data, V_{ult}, is to be determined in accordance with Section 26.5.3 of ASCE 7.

It should be noted that the alternate all-heights wind design procedure is maintained in the 2012 IBC but was updated to conform to the new ultimate wind design procedure in ASCE 7-10.

1609 continued

It should also be noted that the term "basic wind speed" in ASCE 7-10 corresponds to the "ultimate design wind speed" in the 2012 IBC.

Because many different code provisions in the code are based upon wind speed, it was necessary to modify the wind speed conversion section so that the many provisions triggered by wind speed were not changed. The terms "ultimate design wind speed" and "nominal design wind speed" were incorporated in numerous locations to help the code user distinguish between them. In cases where wind speed is used to trigger a requirement, the ultimate wind speed, V_{ult}, must be converted to an equivalent wind speed that corresponds to the former basic wind speed. Thus, a new table in the 2012 IBC converts V_{ult} to V_{ASD} so that the mapped wind speed thresholds in various parts of the code can still be used:

V_{ult}	100	110	120	130	140	150	160	170	180	190	200
V_{asd}	78	85	93	101	108	116	124	132	139	147	155

For example, in a case where the 2009 IBC imposed requirements where the basic wind speed exceeds 100 mph, the 2012 IBC imposes the requirements where V_{asd} exceeds 100 mph. A nominal design speed, V_{asd}, equal to 100 mph corresponds to an ultimate design wind speed, V_{ult}, equal to 129 mph. The following table (which is not in the IBC) may be more useful to the code user because it gives V_{ult} in terms of V_{asd} in increments of 10 mph:

V_{asd}	85	90	100	110	120	130	140	150
V_{ult}	110	115	126	139	152	164	177	190

For a comparison of ASCE 7-93 fastest mile wind speeds, ASCE 7-05 3-second gust ASD wind speeds, and ASCE 7-10 3-second gust wind speeds, refer to Table C26.5-6 of the ASCE 7-10 commentary. Note that the conversion in ASCE 7-10 is given by $V_{ult} = V_{asd}\sqrt{1.6}$, which produces slightly different values than IBC Equation 16-33.

Beyond the adoption of the new strength design wind speed maps, ASCE/SEI 7-10 also includes a new simplified method for use in the determination of wind loads for buildings up to 160 feet in height. In addition, the wind load calculation provisions that were contained in Chapter 6 of ASCE/SEI 7-05 have been reorganized into six separate chapters (26 through 31) for improved clarity and ease of use. This is similar to the reorganization in ASCE 7-05 where the seismic design provisions were divided into several chapters to facilitate use. This reorganization into multiple chapters required several coordination revisions to the code text.

A few other changes to the wind design provisions in Section 1609 are worth noting:

- To use any of the five standards referenced in the exception in Section 1609.1.1, the ultimate design wind speed must be determined based on the risk category of the building then converted to the nominal design wind speed.
- Wind tunnel test limitations in 2009 IBC Section 2309.1.2 were deleted from the IBC because they are incorporated into Chapter 31

produced by the new model increased compared to those produced by the hurricane simulation model used to develop previous wind speed maps.

In developing the new wind speed maps, it was decided to use multiple ultimate event or strength design based maps in conjunction with a wind load factor of 1.0 for strength design. For allowable stress design (ASD), the load factor has been reduced from 1.0 to 0.6, thus the load combinations in Section 1605 had to be modified accordingly. Several important factors related to more accurate wind load determination were considered that led to the decision to move to strength based ultimate event wind loads:

1. An ultimate event or strength design wind speed map makes the overall approach consistent with the well-established strength-based seismic design procedure in that both wind and seismic load effects are mapped as ultimate events and use a load factor of 1.0 for the strength design load combinations.
2. Utilizing different maps for the different risk categories eliminates previous issues associated with using importance factors that vary according to the risk (occupancy) category of the building. The different importance factors in ASCE 7-05 for hurricane prone versus non-hurricane prone regions for Risk (Occupancy) Category I structures prompted many questions by code users. This is no longer an issue in ASCE 7-10 because Risk Category I, Risk Category II, and Risk Category III and IV have separate wind speed maps, and the importance factor no longer appears in the velocity pressure equation. Note that the importance factor for wind in ASCE 7 Table 1.5-2 is now 1.00 for all risk categories.
3. The use of multiple maps based on risk category eliminates some confusion associated with the recurrence interval associated with the previous wind speed map in ASCE 7-05 because it was not a uniform 50-year return period map. This results in a situation where the level of safety achieved by the overall design was not consistent along the hurricane coast. The wind maps in ASCE/SEI 7-10 have a mean recurrence interval (MRI) of 300 years for Risk Category I, 700 years for Risk Category II, and 1700 years for Risk Categories III and IV.

As a result of the new strength-based wind speed, new terminology was introduced into the 2012 IBC. The former term "basic wind speed" has been changed to "ultimate design wind speed" and is designated V_{ult}. The wind speed that is equivalent to the former basic wind speed is now called the nominal design wind speed, V_{asd}, and the conversion between the two is given by Equation 16-33 as,

$$V_{asd} = V_{ult}\sqrt{0.6}$$

The conversion from V_{asd} to V_{ult} is a result of the wind load being proportional to the square of the velocity pressure and the ASD wind load being 0.6 times the strength level ultimate wind load. Thus,

$$W \cong V^2$$

1609 continued

1609.3.1 Wind speed conversion. When required, the ~~3-second gust basic~~ ultimate design wind speeds of Figure 1609A, B, and C shall be converted to nominal design wind speeds, V_{asd}, ~~fastest-mile wind speeds, V_{fm}~~, using Table 1609.3.1 or Equation 16-33.

$$V_{fm} = \frac{V_{3S} - 10.5}{1.05} \qquad \textbf{(Equation 16-33)}$$

where:

V_{3S} = 3-second gust basic wind speed from Figure 1609.

$V_{asd} = V_{ult}\sqrt{0.6}$

Where:

V_{asd} = nominal design wind speed applicable to methods specified in Exceptions 1 through 5 of Section 1609.1.1

V_{ult} = ultimate design wind speeds determined from Figures 1609A, 1609B, or 1609C

TABLE 1609.3.1 Equivalent Basic Wind Speeds[a,b,c]

V_{3S}	85	90	100	105	110	120	125	130	140	145	150	160	170
V_{fm}	71	76	85	90	95	104	109	114	123	128	133	142	152

For SI: 1 mile per hour = 0.44 m/s.

a. Linear interpolation is permitted.

b. $V3S$ is the 3-second gust wind speed (mph).

c. Vfm is the fastest mile wind speed (mph).

TABLE 1609.3.1 Wind Speed Conversions[a,b,c]

V_{ul}	100	110	120	130	140	150	160	170	180	190	200
V_{asd}	78	85	93	101	108	116	124	132	139	147	155

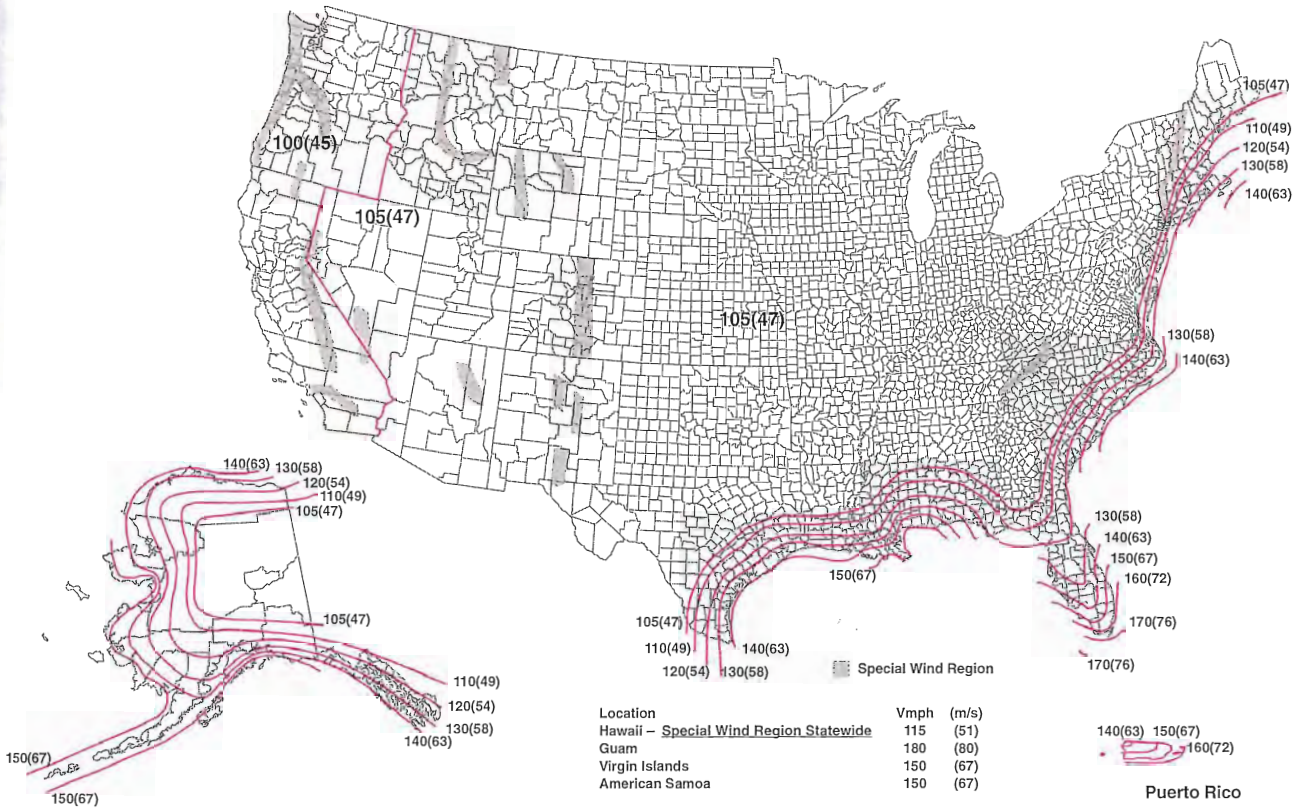
a. Linear interpolation is permitted

b. V_{asd} = nominal design wind speed applicable to methods specified in Exceptions 1 through 5 of Section 1609.1.1

c. V_{ult} = ultimate design wind speeds determined from Figures 1609A, 1609B, or 1609C

Because this code change affected substantial portions of Chapters 16 and 17, the entire code change text is too extensive to be included here. Refer to Code Change S84-09/10 in the *2012 IBC Code Changes Resource Collection* for the complete text and history of the code change.

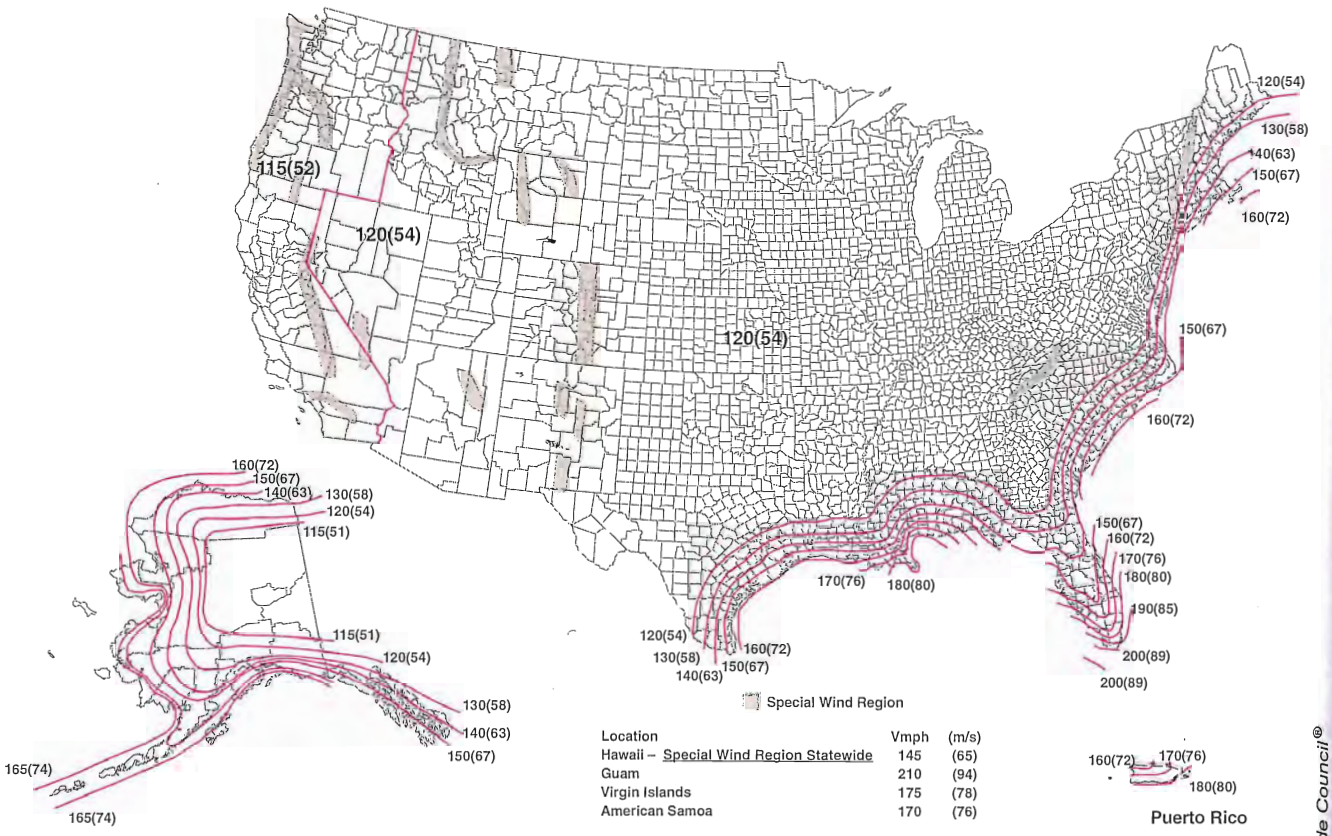
CHANGE SIGNIFICANCE: The most significant aspect of the wind design change is that the wind speed maps in the 2012 IBC were updated to those adopted in ASCE 7-10. Over the past 10 years, new research has indicated that the hurricane wind speeds provided in ASCE 7-05 have been too conservative and should be adjusted downward. As more hurricane data became available, it was also recognized that substantial improvements could be made to the hurricane simulation model used to develop the wind speed maps. The new data resulted in an improved representation of the hurricane wind field, including the modeling of the sea–land transition and the hurricane boundary layer height; new models for hurricane weakening after landfall; and an improved statistical model for the Holland *B* parameter, which controls the



Notes:

1. Values are nominal design 3-second gust wind speeds in miles per hour (m/s) at 33 ft (10m) above ground for Exposure C category.
2. Linear interpolation between contours is permitted.
3. Islands and coastal areas outside the last contour shall use the last wind speed contour of the coastal area.
4. Mountainous terrain, gorges, ocean promontories, and special wind regions shall be examined for unusual wind conditions.
5. Wind speeds correspond to approximately a 15% probability of exceedance in 50 years (Annual Exceedance Probability = 0.00333, MRI = 300 years).

Figure 1609C Ultimate Design Wind Speeds, V_{ult}, For Risk Category I Buildings and Other Structures

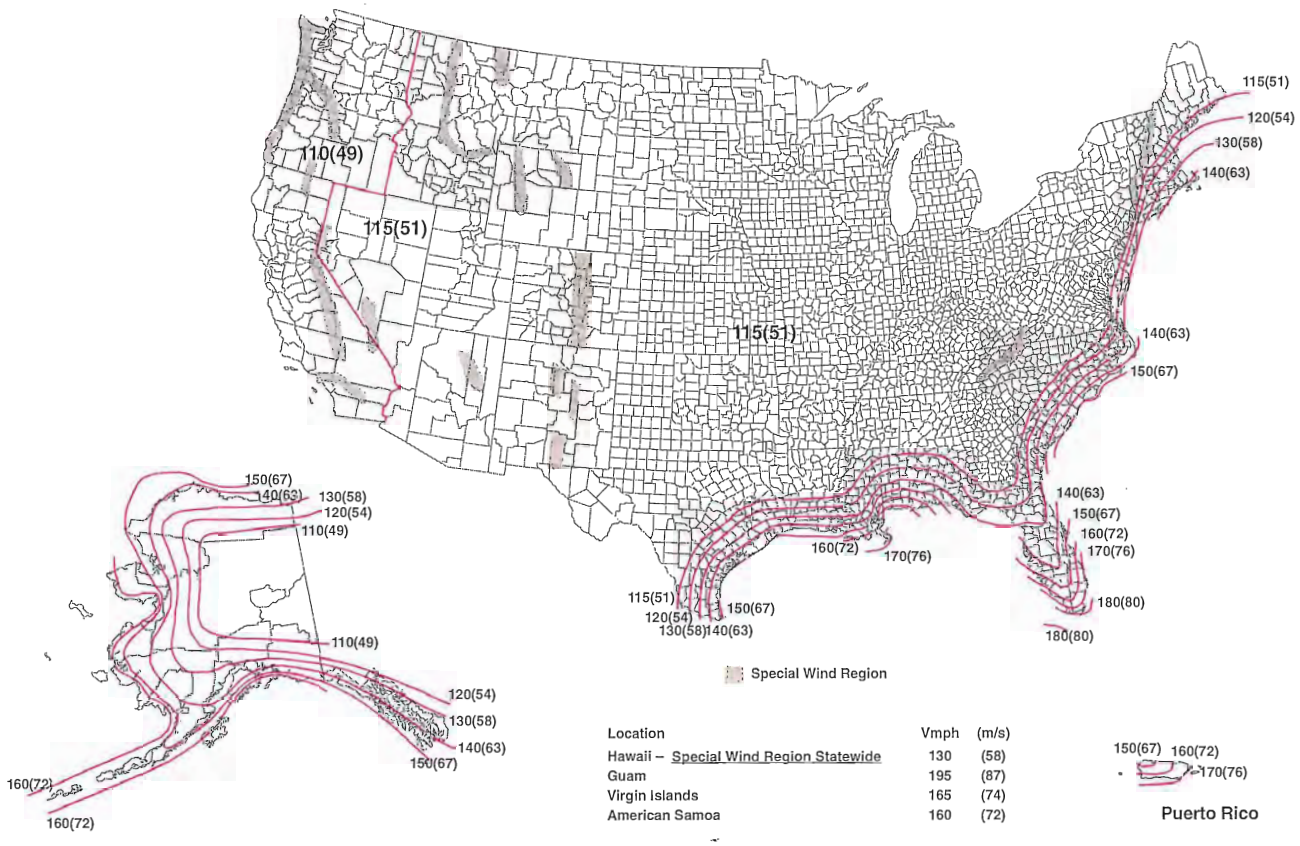


Notes:

1. Values are nominal design 3-second gust wind speeds in miles per hour (m/s) at 33 ft (10m) above ground for Exposure C category.
2. Linear interpolation between contours is permitted.
3. Islands and coastal areas outside the last contour shall use the last wind speed contour of the coastal area.
4. Mountainous terrain, gorges, ocean promontories, and special wind regions shall be examined for unusual wind conditions.
5. Wind speeds correspond to approximately a 3% probability of exceedance in 50 years (Annual Exceedance Probability = 0.000588, MRI = 1700 years).

Figure 1609B Ultimate Design Wind Speeds, V_{ult}, For Risk Categories III And IV Buildings and Other Structures

In nonhurricane-prone regions, when the ~~basic~~ ultimate design wind speed, V_{ult}, is estimated from regional climatic data, the ~~basic~~ ultimate design wind speed, V_{ult}, shall be ~~not less than the wind speed associated with an annual probability of 0.02 (50-year mean recurrence interval), and the estimate shall be adjusted for equivalence to a 3-second gust wind speed at 33 feet (10 m) above ground in Exposure Category C. The data analysis shall be performed~~ determined in accordance with Section 26.5.3 ~~6.5.4.2~~ of ASCE 7.



Notes:

1. Values are nominal design 3-second gust wind speeds in miles per hour (m/s) at 33 ft (10m) above ground for Exposure C category.
2. Linear interpolation between contours is permitted.
3. Islands and coastal areas outside the last contour shall use the last wind speed contour of the coastal area.
4. Mountainous terrain, gorges, ocean promontories, and special wind regions shall be examined for unusual wind conditions.
5. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (Annual Exceedance Probability = 0.00143, MRI = 700 years).

Figure 1609A Ultimate Design Wind Speeds, V_{ult}, For Risk Category II Buildings and Other Structures

1609 continued

1609.1.2 Protection of Openings. In windborne debris regions, glazing in buildings shall be impact resistant or protected with an impact-resistant covering meeting the requirements of an approved impact-resistant standard or ASTM E1996 and ASTM E1886 referenced herein as follows:

1. Glazed openings located within 30 feet (9144 mm) of grade shall meet the requirements of the Large Missile Test of ASTM E1996.
2. Glazed openings located more than 30 feet (9144 mm) above grade shall meet the provisions of the small missile test of ASTM E1996.

Exceptions:

1. Wood structural panels with a minimum thickness of $^{7}/_{16}$ inch (11.1 mm) and maximum panel span of 8 feet (2438 mm) shall be permitted for opening protection in one- and two-story buildings classified as Group R-3 or R-4 occupancy. Panels shall be precut so that they shall be attached to the framing surrounding the opening containing the product with the glazed opening. Panels shall be predrilled as required for the anchorage method and shall be secured with the attachment hardware provided. Attachments shall be designed to resist the components and cladding loads determined in accordance with the provisions of ASCE 7, with corrosion-resistant attachment hardware provided and anchors permanently installed on the building. Attachment in accordance with Table 1609.1.2 with corrosion-resistant attachment hardware provided and anchors permanently installed on the building is permitted for buildings with a mean roof height of 45 feet (13716 mm) or less where V_{asd} determined in accordance with Section 1609.3.1 ~~wind speeds do~~ does not exceed 140 mph (63 m/s).
2. Glazing in ~~Occupancy~~ Risk Category I buildings as defined in Section 1604.5, including greenhouses that are occupied for growing plants on a production or research basis, without public access shall be permitted to be unprotected.
3. Glazing in ~~Occupancy~~ Risk Category II, III, or IV buildings located over 60 feet (18288 mm) above the ground and over 30 feet (9144 mm) above aggregate surface roofs located within 1500 feet (458 m) of the building shall be permitted to be unprotected.

1609.3 Basic Wind Speed. The ~~basic~~ ultimate design wind speed, V_{ult}, in mph, for the determination of the wind loads shall be determined by ~~Figure 1609~~ Figures 1609A, 1609B, and 1609C. The ultimate design wind speed, V_{ult}, for use in the design of Risk Category II buildings and structures shall be obtained from Figure 1609A. The ultimate design wind speed, V_{ult}, for use in the design of Risk Category III and IV buildings and structures shall be obtained from Figure 1609B. The ultimate design wind speed, V_{ult}, for use in the design of Risk Category I buildings and structures shall be obtained from Figure 1609C. ~~Basic~~ The ultimate design wind speed, V_{ult}, for the special wind regions indicated, near mountainous terrain and near gorges shall be in accordance with local jurisdiction

Exceptions:

1. Subject to the limitations of Section 1609.1.1.1, the provisions of ICC 600 shall be permitted for applicable Group R-2 and R-3 buildings.
2. Subject to the limitations of Section 1609.1.1.1, residential structures using the provisions of the AF&PA WFCM.
3. Subject to the limitations of Section 1609.1.1.1, residential structures using the provisions of AISI S230.
4. Designs using NAAMM FP 1001.
5. Designs using TIA-222 for antenna-supporting structures and antennas, provided the extent of Topographic Category 2, escarpments, in Section 2.6.6.2 of TIA-222 shall extend 16 times the height of the escarpment.
6. Wind tunnel tests in accordance with ~~Section 6.6~~ Chapter 31 of ASCE 7~~, subject to the limitations in Section 1609.1.1.2~~.

The wind speeds in Figure 1609A, 1609B, and 1609C are ultimate design wind speeds, V_{ult}, and shall be converted in accordance with Section 1609.3.1 to nominal design wind speeds, V_{asd}, when the provisions of the standards referenced in Exceptions 1 through 5 are used.

~~**1609.1.1.2 Wind Tunnel Test Limitations.** The lower limit on pressures for main wind-force-resisting systems and components and cladding shall be in accordance with Sections 1609.1.1.2.1 and 1609.1.1.2.2.~~

~~**1609.1.1.2.1 Lower Limits on Main Wind-Force-Resisting System.** Base overturning moments determined from wind tunnel testing shall be limited to not less than 80 percent of the design base overturning moments determined in accordance with Section 6.5 of ASCE 7, unless specific testing is performed that demonstrates it is the aerodynamic coefficient of the building, rather than shielding from other structures, that is responsible for the lower values. The 80-percent limit shall be permitted to be adjusted by the ratio of the frame load at critical wind directions as determined from wind tunnel testing without specific adjacent buildings, but including appropriate upwind roughness, to that determined in Section 6.5 of ASCE 7.~~

~~**1609.1.1.2.2 Lower Limits on Components and Cladding.** The design pressures for components and cladding on walls or roofs shall be selected as the greater of the wind tunnel test results or 80 percent of the pressure obtained for Zone 4 for walls and Zone 1 for roofs as determined in Section 6.5 of ASCE 7, unless specific testing is performed that demonstrates it is the aerodynamic coefficient of the building, rather than shielding from nearby structures, that is responsible for the lower values. Alternatively, limited tests at a few wind directions without specific adjacent buildings, but in the presence of an appropriate upwind roughness, shall be permitted to be used to demonstrate that the lower pressures are due to the shape of the building and not to shielding.~~

1609, 202

Determination of Wind Loads

$$V_{asd} = V_{ult}\sqrt{0.6}$$

Equation 16-33, conversion of wind speed from V_{ult} to V_{ASD}

CHANGE TYPE: Modification

CHANGE SUMMARY: The wind design requirements of Section 1609 have been updated and coordinated with the latest wind load provisions in ASCE/SEI 7 (ASCE 7-10) and the wind load maps in the IBC are now based on ultimate design wind speeds, V_{ult}, which produce a strength level wind load similar to seismic load effects.

2012 CODE: The following are excerpted portions of the subject code text. The entire code change is not shown here for brevity.

202 Definitions.

HURRICANE-PRONE REGIONS. Areas vulnerable to hurricanes defined as:

1. The U. S. Atlantic Ocean and Gulf of Mexico coasts where the ~~basic~~ ultimate design wind speed, V_{ult}, for Risk Category II buildings is greater than 115 ~~90~~ mph (51.4 m/s).
2. Hawaii, Puerto Rico, Guam, Virgin Islands, and American Samoa.

WINDBORNE DEBRIS REGION. Areas within ~~Portions of~~ hurricane-prone regions located: ~~that are~~

1. Within 1 mile (1.61 km) of the coastal mean high water line where the ~~basic~~ ultimate design wind speed, V_{ult}, is 130 ~~110~~ mph (58 m/s) or greater; or
2. In areas ~~portions of hurricane-prone regions~~ where the ~~basic~~ ultimate design wind speed, V_{ult}, is 140 ~~120~~ mph (63.6 m/s) or greater; or Hawaii.

For Risk Category II buildings and structures and Risk Category III buildings and structures, except health care facilities, the windborne debris region shall be based on Figure 1609A. For Risk Category IV buildings and structures and Risk Category III health care facilities, the windborne debris region shall be based on Figure 1609B.

WIND SPEED, V_{ult}. Ultimate design wind speeds.

WIND SPEED, V_{ASD}. Nominal design wind speeds.

1609.1.1 Determination of Wind Loads. Wind loads on every building or structure shall be determined in accordance with Chapters ~~6~~ 26 to 30 of ASCE 7 or provisions of the alternate all-heights method in Section 1609.6. The type of opening protection required, the ~~basic~~ ultimate design wind speed, V_{ult}, and the exposure category for a site is permitted to be determined in accordance with Section 1609 or ASCE 7. Wind shall be assumed to come from any horizontal direction, and wind pressures shall be assumed to act normal to the surface considered.

Table 1607.1 continued

CHANGE SIGNIFICANCE: Many live loads set forth in Chapter 4 of ASCE 7 were updated in the 2010 edition. To coordinate the changes in ASCE 7-10 with the 2012 IBC, corresponding modifications were made to Section 1607 and Table 1607.1. These changes are summarized as follows:

- Footnotes i, j, and k pertaining to residential attic live loads were updated to clarify the intent.
- The live load for stage floors was increased from 125 psf to 150 psf, and the live load for platforms in assembly areas was decreased from 125 psf to 100 psf.
- Various recreational type uses were consolidated under a new item called "recreational uses." These uses include bowling alleys, pool rooms, dance halls and ballrooms, gymnasiums, reviewing stands, grandstands and bleachers, and stadiums and arenas with fixed seats. No technical changes were made to the live loads. The factor, $f_1 = 1$ (See Section 1605.2.1) now applies to floors in places of public assembly areas and recreational uses for live loads in excess of 100 pounds per square foot. Skating rinks are deleted from Table 1607.1 because they are not listed in Table 4-1 of ASCE 7 and Table C4-1 of ASCE-7 specifies uniform live loads of 250 psf for ice skating rinks and 100 psf for roller skating rinks. Footnote m has been added to clarify that a live load reduction is not permitted unless specific exceptions of Section 1607.9 apply. The footnote has been added at each specific use or occupancy in Table 1607.1 where a live load reduction is restricted. With the addition of this footnote, Table 1607.1 clarifies limitations on live load reduction. References are added to Sections 1607.10.1 and 1607.10.2 to correlate with the footnote.
- The 300-pound concentrated load for stair treads has been relocated from footnote f to the table and the clarification is added that the 300-pound concentrated load need not act concurrently with the uniform load.
- New loading requirements for helipads have been added to Section 1607.6. (See a detailed discussion in the commentary to Section 1607.6.)
- The terminology associated with "occupiable roofs" has been clarified and coordinated with ASCE 7-10. Occupiable roof gardens and assembly areas have a live load of 100 psf. Occupiable roofs other than roof gardens and assembly areas must be designed for appropriate loads based on use or as required by the building official. Landscaped areas of roofs that are unoccupied must be designed for a live load of 20 psf plus the weight of the landscaping and saturated soil, which is considered a dead load.

Occupancy or Use	Uniform (psf)	Concentrated (lb)
Occupiable roofs:		
Roof gardens	100	
Assembly areas	100[m]	
All other similar areas	Note l	Note l
~~32.~~ 29. Sidewalks, vehicular driveways, and yards, subject to trucking	250[d, m]	8000[e]
~~33. Skating rinks~~	~~100~~	—
~~34. Stadiums and arenas~~		
~~Bleachers~~	~~100[c]~~	—
~~Fixed seats (fastened to floor)~~	~~60[c]~~	
~~35.~~ 30. Stairs and exits		~~Note f~~
One- and two-family dwellings	40	300[f]
All other	100	300[f]
~~36.~~ 31. Storage warehouses (shall be designed for heavier loads if required for anticipated storage)		
Heavy	250[m]	—
Light	125[m]	
~~37.~~ 32. Stores		
Retail		
First floor	100	1000
Upper floors	75	1000
Wholesale, all floors	125[m]	1000
~~38.~~ 33. Vehicle barriers ~~systems~~	See Section 1607.8.3	
~~40.~~ 35. Yards and terraces, pedestrian	100 [m]	—

(Portions of table not shown are unchanged)

f. The minimum concentrated load on stair treads ~~(~~shall be applied on an area of ~~4 square~~ 2 inches by 2 inches~~)~~ ~~is 300 pounds~~. This load need not be assumed to act concurrently with the uniform load.

g. Where snow loads occur that are in excess of the design conditions, the structure shall be designed to support the loads due to the increased loads caused by drift buildup or a greater snow design determined by the building official (see Section 1608). ~~For special-purpose roofs, see Section 1607.11.2.2.~~

i. Uninhabitable attics without storage are those where the maximum clear height between the joists and rafters is less than 42 inches, or where there are not two or more adjacent trusses with web configurations capable of accommodating an assumed rectangle 42 inches in height by by 24 inches in width, or greater, within the plane of the trusses. ~~For attics without storage,~~ This live load need not be assumed to act concurrently with any other live load requirements.

j. ~~For attics with limited storage and constructed with trusses, this live load need only be applied to those portions of the bottom chord~~ Uninhabitable attics with storage are those where the maximum clear height between the joists and rafters is 42 inches or greater, or where there are two or more adjacent trusses with ~~the same~~ web configurations capable of ~~containing~~ accommodating an assumed rectangle 42 inches ~~high~~ in height by 24 inches ~~wide~~ in width, or greater, ~~located~~ within the plane of the trusses

~~The rectangle shall fit between the top of the bottom chord and the bottom of any other truss member, provided that each of the following criteria is met:~~ The live load need only be applied to those portions of the joists or truss bottom chords where both of the following conditions are met:

i. The attic area is accessible ~~by a pull-dwon stairway or framed opening in accordance with Section 1209.2,~~ from an opening not less than 20 inches in width by 30 inches in length that is located where the clear height in the attic is a minimum of 30 inches; and

ii. The slopes of the joists or truss ~~shall have a~~ bottom chords ~~pitch less than 2:12~~ are no greater than 2 units vertical to 12 units horizontal.

~~iii. Bottom chords of trusses shall be designed for the greater of actual imposed dead load or 10 psf, uniformly distributed over the entire span.~~ The remaining portions of the joists or bottom chords shall be designed for a uniformly distributed concurrent live load of not less than 10 lb/ft^2.

k. Attic spaces served by ~~a fixed stair~~ stairways other than pull-down type shall be designed to support the minimum live load specified for habitable attics and sleeping rooms.

l. ~~Roofs used for other special purposes~~ Areas of occupiable roofs, other than roof gardens and assembly areas, shall be designed for

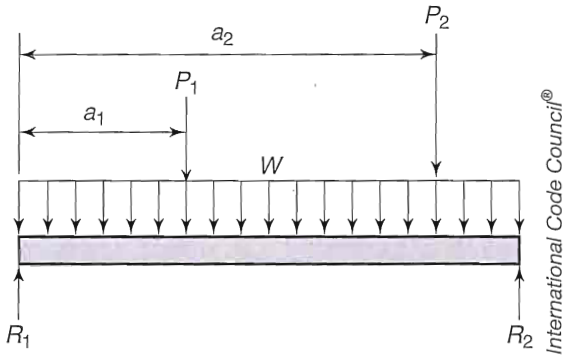
Table 1607.1 continued

Occupancy or Use	Uniform (psf)	Concentrated (lb)
~~17. Grandstands (see stadium and arena bleachers)~~	~~—~~	~~—~~
~~18. Gymnasiums, main floors and balconies~~	~~100~~	~~—~~
~~19.~~ 15. Handrails, guards and grab bars		See Section 1607.8
16. Helipads		See Section 1607.6
~~22~~ 19. Libraries		
Corridors above first floor	80	1000
Reading rooms	60	1000
Stack rooms	150[b, m]	1000
~~23~~ 20. Manufacturing		
Heavy	250[m]	3000
Light	125[m]	2000
24. Recreational uses:		
Bowling alleys, poolrooms, and similar uses	75[m]	
Dance halls and ballrooms	100[m]	
Gymnasiums	100[m]	
Reviewing stands, grandstands, and bleachers	100[c, m]	
Stadiums and arenas with fixed seats (fastened to floor)	60[c, m]	
~~27.~~ 25. Residential		
One- and two-family dwellings		
Uninhabitable attics without storage[i]	10	
Uninhabitable attics with ~~limited~~ storage[i, j, k]	20	
Habitable attics and sleeping areas[k]	30	—
All other areas	40	
Hotels and multiple-family dwellings		
Private rooms and corridors serving them	40	
Public rooms[m] and corridors serving them	100	
~~28. Reviewing stands, grandstands and bleachers~~		~~Note c~~
~~29.~~ 26. Roofs:		
All roof surfaces subject to maintenance workers		300
Awnings and canopies:		
Fabric construction supported by a ~~lightweight rigid~~ skeleton structure	5 Nonreducible	
All other construction	20	
Ordinary flat, pitched, and curved roofs (that are not occupiable)	20	
Where primary roof members, are exposed to a work floor, at single panel points of lower chord of roof trusses, or any point along primary structural members supporting roofs:		
Over manufacturing, storage warehouses, and repair garages		2000
All other ~~occupancies~~ primary roof members		300
~~Roofs used for other special purposes~~	~~Note l~~	~~Note l~~
~~Roofs used for promenade purposes~~	~~60~~	
~~Roofs used for roof gardens or~~	~~100~~	

CHANGE TYPE: Modification

CHANGE SUMMARY: The live loads established in IBC Section 1607 and Table 1607.1 have been modified and updated in order to coordinate with the live loads of Chapter 4 and Table 4-1 in ASCE 7-10.

Table 1607.1
Minimum Live Loads



Simple beam load diagram

2012 CODE:

TABLE 1607.1 Minimum Uniformly Distributed Live Loads, L_o, and Minimum Concentrated Live Loads[g]

Occupancy or Use	Uniform (psf)	Concentrated (lb)
3. Armories and drill rooms	150[m]	—
4. Assembly areas ~~and theaters~~		
Fixed seats (fastened to floor)	60[m]	
Follow spot, projections, and control rooms	50	
Lobbies	100[m]	
Movable seats	100[m]	—
Stages ~~and~~ floors	~~125~~ 150[m]	
Platforms (assembly)	~~125~~ 100	
Other assembly areas	100[m]	
5. Balconies ~~(exterior)~~ and decks[h]	Same as occupancy served	
~~6. Bowling alleys~~	~~75~~	—
~~7.~~ 6. Catwalks	40	300
~~9.~~ 8. Corridors~~, except as otherwise indicated~~		
First floor	100	
Other floors	Same as occupancy served except as indicated	—
~~10. Dance halls and ballrooms~~	~~100~~	—
~~11~~ 9. Dining rooms and restaurants	100[m]	—
~~13.~~ 11. Elevator machine room grating (on area of ~~4 in^2~~ 2 inches by 2 inches)	—	300
~~14.~~ 12. Finish light floor plate construction (on area of ~~1 in^2~~	—	200

organize all of the provisions in a single location. The base paragraph refers to both single-story and multi-story dwelling units so it is clear that the provision can be applied to a multi-story unit even if it has an unenclosed exit access stairway as permitted by Section 1009.3, Exception 2.

Item 1 of Section 1021.2.3 and its reference to Section 1015.1 directs users to the two provisions for spaces with one exit or exit access including, (1) the 125 foot common path of travel limit from Section 1014.3 (referenced from Section 1015.1, Item 2) and (2) the occupant load limitation of 20 that is found in Exception 1 to Section 1015.1, Item 1. The second item addresses the code requirements for the means of egress after the occupant has left the individual dwelling unit. The two possible situations, (a) the occupant discharges directly to the exterior at the level of exit discharge, or (b) the occupant enters a common exit access which leads to at least two exits, are also addressed elsewhere in the code. If the person leaves the building, they are in the exit discharge and are considered safe because they are outside the building at ground level and have access to the public way. If the occupant has left the dwelling unit and is not on the level of exit discharge, then the occupant is now continuing through the exit access portion of the building, and will generally require access to at least two exits from the point that the occupant traveled out of the dwelling unit. However, Section 1021.2 and Table 1021.2(1) will provide another option where up to 4 dwelling units may be located on a story with access to only a single exit from the basement, first, second, or third story.

As mentioned previously, Section 1021.2 provides two options for exiting from the individual dwelling unit and the story of the building. These options are most clearly seen by comparing the requirements of Section 1021.2.3 (primarily item 2) with the general egress requirements that apply when using Sections 1015.1 and Table 1021.2(1). Table 1021.2(1) will allow a single exit from the basement, first, second, or third story if there are a maximum of 4 dwelling units with a limited travel distance; while Section 1021.2.3 can be used for any story (including the basement, first, second, or third) without a limitation on the number of units on the floor and a more generous travel distance limit. These two options are located in Section 1021.2 and the general egress requirements or in Exception 7 and its reference to Section 1021.2.3.

A second table to specifically address Group R-2 dwelling units continues the effort to clarify the application of the requirements for a single exit from a building or story (Section 1021) versus the requirements for egress from a space (Section 1015). Dividing the previous table into two tables addresses code modifications that have occurred over the past two editions that dealt with the common path of travel for sprinklered Group R-2 dwelling units. When the IBC was initially developed, not all residential occupancies were required to be sprinklered and as such a shorter common path of travel was imposed on the Group R-2 dwelling units. Splitting the tables allows for Table 1021.2(1) to address the requirements for Group R-2 dwelling units based on the number of units on the story while Table 1021.2(2) will regulate Group R-1, R-2 sleeping units and R-4 occupancies based on the number of occupants. Listing the individual residential occupancies also helps to clarify that Group R-3 occupancy buildings are always permitted to have a single exit (see Section 1021.2,

1021.2.3, Table 1021.2(1) continued

TABLE 1021.2(1) Stories with One Exit or Access to One Exit for R-2 Occupancies

Story	Occupancy	Maximum Number of Dwelling Units	Maximum Exit Access Travel Distance
Basement, first, second or third story	R-2[a, b]	4 dwelling units	125 feet
Fourth story and above	NP	NA	NA

For SI: 1 foot = 3048 mm.
NP – Not Permitted
NA – Not Applicable
a. Buildings classified as Group R-2 equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 and provided with emergency escape and rescue openings in accordance with Section 1029.
b. This Table is used for R-2 occupancies consisting of dwelling units. For R-2 occupancies consisting of sleeping units, use Table 1021.2(2).

TABLE 1021.2(2) Stories with One Exit or Access to One Exit for Other Occupancies

Story	Occupancy	Maximum Occupants Story ~~(Or Dwelling Units) Per Floor And Travel Distance~~	Maximum Exit Access Travel Distance
First story or basement	A, B[bd], E[e], F[bd], M, U, S[bd]	49 occupants ~~and 75 feet travel distance~~	75 feet
	H-2, H-3	3 occupants ~~and 25 feet travel distance~~	25 feet
	H-4, H-5, I, ~~R,~~ R-1, R-2[a,c ~~e,f~~], R-4	10 occupants ~~and 75 feet travel distance~~	75 feet
	S[a]	29 occupants ~~and 100 feet travel distance~~	100 feet
Second story	B[b], F, M, S[a]	29 occupants ~~and 75 feet travel distance~~	75 feet
	~~R-2~~	~~4 dwelling units and 50 feet travel distance~~	
~~Third story~~	~~R-2[c]~~	~~4 dwelling units and 50 feet travel distance~~	
Third story and above	NP	NA	NA

For SI: 1 foot = 304.8 mm.
NP – Not Permitted
NA – Not Applicable
~~a. For the required number of exits for parking structures, see Section 1021.1.2.~~
~~b. For the required number of exits for air traffic control towers, see Section 412.1.~~
a. ~~c.~~ Buildings classified as Group R-2 equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 and provided with emergency escape and rescue openings in accordance with Section 1029.
b. ~~d.~~ Group B, F, and S occupancies in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 shall have a maximum travel distance of 100 feet.
~~e. Day care occupancies shall have a maximum occupant load of 10.~~
c. This Table is used for R-2 occupancies consisting of sleeping units. For R-2 occupancies consisting of dwelling units, use Table 1021.2(1).

residential dwelling unit while others, such as those in Table 1021.2(1), apply only to Group R-2 dwelling units (not to Group R-2 sleeping units). One important aspect to note is that there are now two separate means of

Exceptions:

~~4. In Group R-2 and R-3 occupancies, one means of egress is permitted within and from individual dwelling units with a maximum occupant load of 20 where the dwelling unit is equipped throughout with an automatic sprinkler system in accordance with Sections 903.3.1.1 or 903.3.1.2.~~

Two exits, or exit access stairways or ramps providing access to exits, from any story or occupied roof shall be provided where one of the following conditions exists:

1. The occupant load or number of dwelling units exceeds one of the values in Table 1021.2(1) or 1021.2(2).
2. The exit access travel distance exceeds that specified in Table 1021.2(1) or 1021.2(2) as determined in accordance with the provisions of Section 1016.1.
3. Helistop landing areas located on buildings or structures shall be provided with two exits, or exit access stairways or ramps providing access to exits.

Exceptions:

1. Rooms, areas and spaces complying with Section 1015.1 with exits that discharge directly to the exterior at the level of exit discharge, are permitted to have one exit.
2. Exception not shown for clarity
3. Exception not shown for clarity
4. Exception not shown for clarity
5. Individual dwelling units in compliance with Section 1021.2.3.
6. Exception not shown for clarity
7. Exception not shown for clarity

1021.2.3 Single-Story or Multi-Story Dwelling Units. Individual single-story or multi-story dwelling units shall be permitted to have a single exit within and from the dwelling unit provided that all of the following criteria are met:

1. The dwelling unit complies with Section 1015.1 as a space with one means of egress and
2. Either the exit from the dwelling unit discharges directly to the exterior at the level of exit discharge, or the exit access outside the dwelling unit's entrance door provides access to not less than two approved independent exits.

Because the code was substantially reformatted in Section 1021, only a portion of the 2009 code text is shown. See 2009 IBC Section 1021.1 for comparison.

CHANGE SIGNIFICANCE: The requirements for residential dwelling units include a number of changes that affect both the egress requirements from

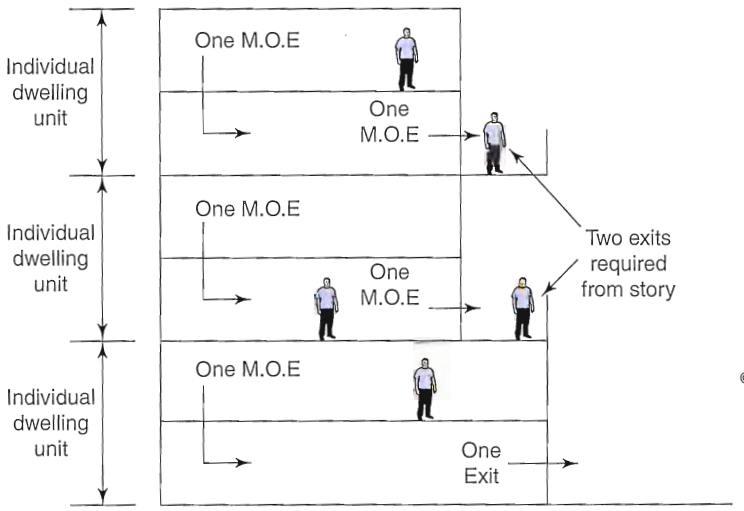
1021.2.3, Table 1021.2(1)

Exits from Dwelling Units

CHANGE TYPE: Modification

CHANGE SUMMARY: A new section clarifies when a single exit is permitted within or from an individual dwelling unit. Changes to Section 1021.2 and the tables will also provide a second option for compliance.

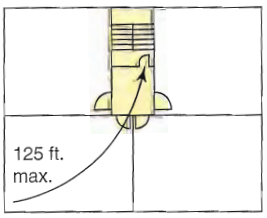
2012 CODE: ~~**1021.1**~~ **1021.2 Exits from Stories.** ~~All spaces within each story shall have access to the minimum number of approved independent exits as specified in Table 1021.1 based on the occupant load of the story. For the purposes of this chapter, occupied roofs shall be provided with exits as required for stories.~~



Single exit permitted within or from single-or multi-story dwelling unit if:
- Unit complies with 1015.1 as space with one means of egress, and
- Discharges directly to exterior at level of exit discharge, or
- Exit access outside unit provides access to not less than two exits

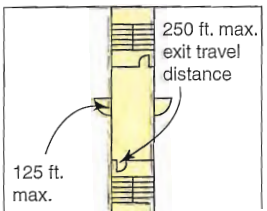
International Code Council®

Egress from multistory dwelling units



R-2 Dwelling unit
Basement, first, second, or third story-single exit permitted from story and unit

- Maximum of 4 units
- 125 ft. max. travel distance
- 20 occupants maximum per unit (1015.1)



Access to two or more exits from story (1021.2.3 item 2)
- 250 ft. maximum exit travel distance

Single exit within and from unit
- No limits on number of units on story
- 125 ft. maximum common path of travel (Table 1014.3)

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1013.3 continued

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Guard height for R-3 and within R-2 dwelling units

3.2. For occupancies in Group R-3, and within individual dwelling units in occupancies in Group R-2, where the top of the guard also serves as a handrail on the open sides of stairs, the top of the guard shall not be less than 34 inches (864 mm) and not more than 38 inches (965 mm) measured vertically from a line connecting the leading edges of the treads.

4.3. The guard height in assembly seating areas shall comply ~~be in accordance~~ with Section 1028.14.

5.4. Along alternating tread devices and ship ladders, guards whose top rail also serves as a handrail shall have height not less than 30 inches (762 mm) and not more than 34 inches (864 mm), measured vertically from the leading edge of the device tread nosing.

CHANGE SIGNIFICANCE: The minimum required guard height for certain residential occupancies has been reduced from 42 inches to 36 inches in height in order to coordinate with existing provisions in the IRC. The exception is limited only to those listed residential occupancies located no more than three stories above grade. Previously the IBC required a 42-inch guard height for all occupancies. The 42-inch height was selected because the center of gravity for the 95th percentile male population (and about 97 percent of the total population) is below that height, and therefore, it was deemed unlikely that an accidental fall would occur from simply leaning over the rail. Although the lower guard height will address a lower percentage of the population, the reduced height has historically been recognized as acceptable under the IRC.

The reduction in required guard height for the floors and landings in residential units will help reduce the situations where a handrail fitting or bending addressed in the new exceptions to Section 1012.2 are applied. See the discussion of Section 1012.2 for more information on transitions between handrails or between a handrail and a guard.

1013.3
Guard Height

CHANGE TYPE: Modification

CHANGE SUMMARY: The minimum required height for guards in Group R-3 occupancies and within individual Group R-2 dwelling units has been decreased from 42 inches to 36 inches.

2012 CODE: 1013.3 ~~1013.2~~ Height. Required guards shall not be less than 42 inches (1067 mm) high, measured vertically ~~above the~~ as follows:

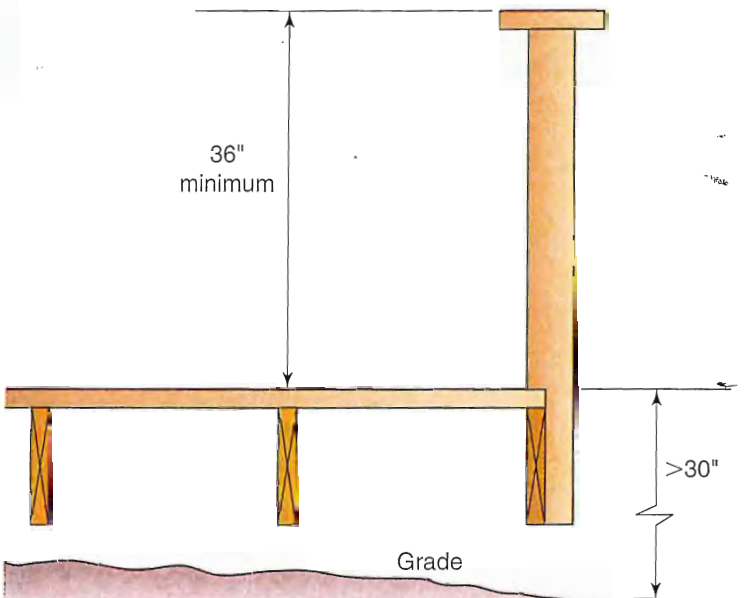
1. From the adjacent walking surfaces. ~~adjacent fixed seating or~~
2. On stairs, from the line connecting the leading edges of the tread ~~treads~~ nosings, and
3. On ramps, from the ramp surface at the guard.

Exceptions:

1. For occupancies in Group R-3 not more than three stories above grade in height and within individual dwelling units in occupancies in Group R-2 not more than three stories above grade in height with separate means of egress, required guards shall not be less than 36 inches (914 mm) in height measured vertically above the adjacent walking surfaces or adjacent fixed seating.

2. ~~1.~~ For occupancies in Group R-3, and within individual dwelling units in occupancies in Group R-2, guards on the open sides of stairs shall have a height not less than 34 inches (864 mm) measured vertically from a line connecting the leading edges of the treads.

1013.3 continues



1013.1 1013.8 continued

of grade and specifically allows for windows to be used for emergency escape and rescue. Opening control devices allow for normal operation to result in a 4 inch maximum opening, thus meeting the requirements of the last sentence in the base paragraph, but can be released to allow the window to be fully opened in order to comply with the emergency escape provisions of Section 1029.2. The window control devices and their operation are regulated by the new Section 1013.8.1 to ensure they can serve both the fall protection concerns as well as the escape and rescue opening functions.

The 4-inch opening size limitation specified in Exception 2 is consistent with the guard provisions of Section 1013.4. Although not stated directly within the exception, the requirements of Exception 2 are limited to windows or portions of windows where the opening is located between the floor surface and 36 inches in height above the floor surface. Due to the height limitations within the base paragraph of Section 1013.8, any opening that above the 36-inch height would not be regulated by the 4-inch limitation.

Exceptions:

1. ~~Openings that are~~ Operable windows where the sill portion of the opening is located more than 75 feet (22.86 m) above the finished grade or other surface below and that are provided with window ~~guards~~ fall prevention devices that comply with ASTM F 2006 ~~or F 2090~~.
2. Windows whose openings will not allow a 4-inch (102-mm) diameter sphere to pass through the opening when the window is in its largest opened position.
3. Openings that are provided with window fall prevention devices that comply with ASTM F2090.
4. Windows that are provided with window opening control devices that comply with Section 1013.8.

1013.8.1 Window Opening Control Devices. Window opening control devices shall comply with ASTM F 2090. The window opening control device, after operation to release the control device allowing the window to fully open, shall not reduce the minimum net clear opening area of the window unit to less than the area required by Section 1029.2.

CHANGE SIGNIFICANCE: The fall protection requirements related to low-height window sills have been relocated from Chapter 14 to Section 1013. In addition, the minimum height of the window sill at which a guard is not required has been revised from 24 inches to 36 inches. The 36-inch sill height was chosen to reduce the ability of a child to climb onto the sill and thus enabling them to fall through the opening. While the 24-inch height was above the center of gravity for most children under 4½ years of age, the lower height was easily climbed by most standing children.

The modified Exception 1 makes two changes that better coordinate the code with the scope of the standard addressing window fall prevention devices. Most notable will be the fact that the exception is now limited to only those operable windows that are located more than 75 feet above grade. This revision is coordinated with the scoping provisions found within the ASTM F2006 standard itself. Section 1.2 of the standard states, "This safety specification applies only to window fall prevention devices that are to be used on windows that are not intended for escape (egress) and rescue (ingress)." Further, Section 1.3 states, "This safety specification applies only to devices intended to be applied to windows installed at heights of more than 75 above ground level in multiple-family dwelling buildings. This safety specification is not intended to apply to windows below 75 feet because all windows below 75 feet that are operable could be used as a possible secondary means of escape."

Users will also notice that the ASTM F2090 standard that was previously referenced has been deleted and is now addressed in a new Exception 3. With the revised height limitation in Exception 1 and the fact that emergency escape and rescue openings are not required above 75 feet, the ASTM F2090 standard is no longer applicable. ASTM F 2090 includes window fall prevention devices (the new Exception 3) and win-

1013.1, 1013.8

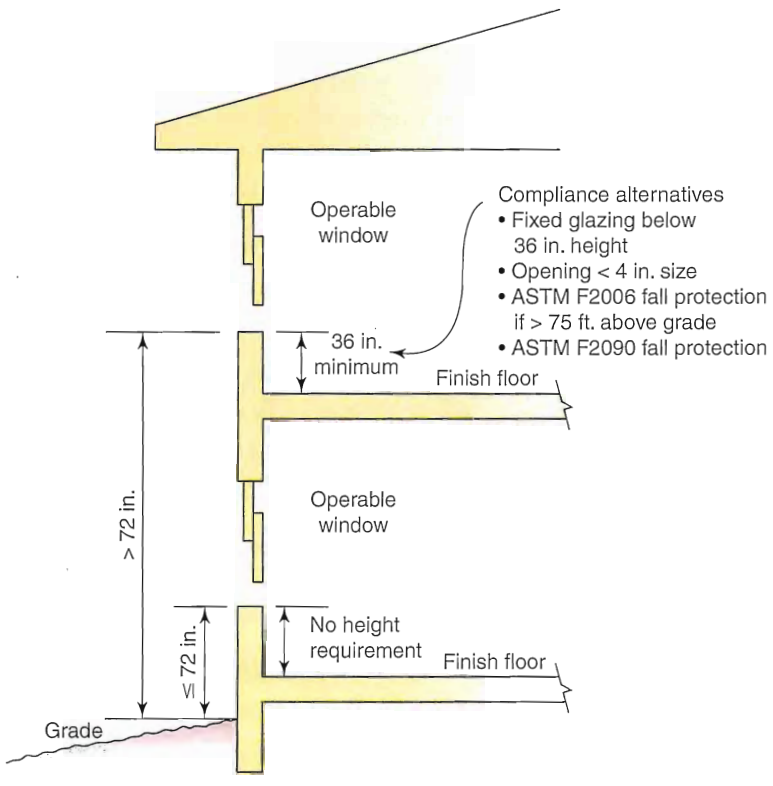
Guards at Operable Windows

CHANGE TYPE: Modification

CHANGE SUMMARY: The guard requirements for operable windows having a sill height more than 72 inches above the finished grade have been relocated from Chapter 14 to the general guard provisions of Chapter 10 and the minimum window sill height at which a guard is not required has been increased from 24 inches to 36 inches.

2012 CODE: **1013.1 General.** Guards shall comply with the provisions of Sections 1013.2 through 1013.7. Operable windows with sills located more than 72 inches (1.83 m) above finished grade or other surface below shall comply with Section 1013.8.

1013.8 ~~1405.13.2~~ Window Sills. In Occupancy Groups R-2 and R-3, one- and two-family and multiple-family dwellings, where the opening of the sill portion of an operable window is located more than 72 inches (1829 mm) above the finished grade or other surface below, the lowest part of the clear opening of the window shall be at a height not less than ~~24 inches (610 mm)~~ 36 inches (915 mm) above the finished floor surface of the room in which the window is located. ~~Glazing between the floor and a height of 24 inches (610 mm) shall be fixed or have openings through which a 4-inch (102 mm) diameter sphere cannot pass.~~ Operable sections of windows shall not permit openings that allow passage of a 4-inch (102-mm) diameter sphere where such openings are located within 36 inches (915 mm) of the finished floor.



(114 mm) at or below the handrail height. Projections into the required width shall not be limited above the minimum headroom height required in Section ~~1009.2~~ 1009.5. Projections due to intermediate handrails shall not constitute a reduction in the egress width.

CHANGE SIGNIFICANCE: A minimum cross-section dimension has previously not been specified for Type I handrails that were not circular. A circular cross-section has historically been limited to a 1¼-inch minimum, but a minimum dimension has not been required of other handrail shapes, resulting in the acceptance of rails that may not allow a secure grip. The human hand gets its most secure grip on handrail cross sections that allow the hand to fit comfortably around the rail and do not require a pinching grip. While a handrail shape such as a ⅜-inch by 2-inch tube will fall within the code's previously specified dimensional requirements, the ability to grip the rail would be severely limited if the 2-inch dimension was oriented vertically.

While the same shaped section turned horizontally would be more comfortable and accommodating to the hand and grip of most users, there was no requirement that restricted the orientation to the horizontal position. In addition, the limited depth of the member would affect many users who tried to grasp it.

This requirement for a 1-inch minimum cross section when combined with the maximum dimension and the specified perimeter range will provide a shape that is more comfortable and accommodating to the hand's natural grasping shape. The 1-inch dimension was selected because it will allow the use of the maximum 2-inch cross section in one direction combined with the 1-inch dimension on the perpendicular axis and not exceed the maximum allowed 6¼-inch perimeter limitation.

The revisions to the projection provisions are intended to clarify the code's application and provide for more consistent enforcement. One change coordinates with the code language limiting the projection depth "at and below the handrail height." Because the item that protrudes the farthest may be a handrail, baluster, stringer, or an element of trim that is below the handrail, the provision now applies the limit to the "side" of the stair or ramp and is not limited to the handrail itself.

In addition, it has been clarified that an intermediate handrail on a stair or in an aisle is to be considered as a permitted projection and not as a reduction in the required egress width. For example the 48-inch aisle stairway required by Section 1028.9.1 that has a 2-inch-wide intermediate handrail would be viewed as providing 48 inches of egress width even though the aisle is arranged to provide 23 inches of clear width between the handrail and seating on both sides with the other 2 inches occupied by the handrail.

1012.3.1, 1012.8

Handrail Graspability and Projections

CHANGE TYPE: Modification

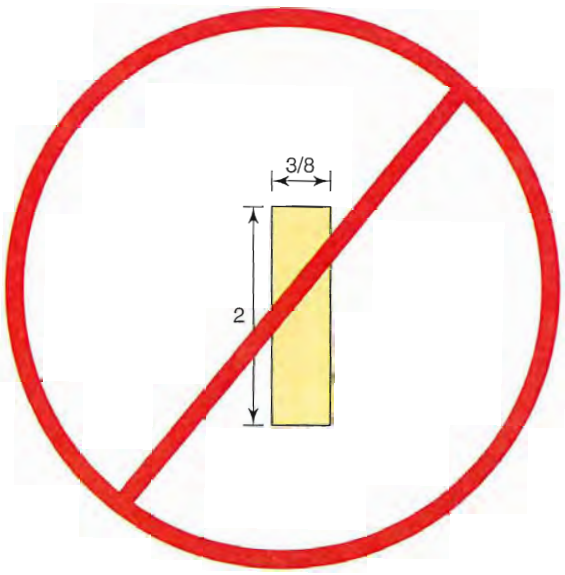
CHANGE SUMMARY: A minimum cross-section dimension has now been established for the graspability of noncircular Type I handrails.

2012 CODE: 1012.3 Handrail Graspability. All required handrails shall comply with Section 1012.3.1 or shall provide equivalent graspability.

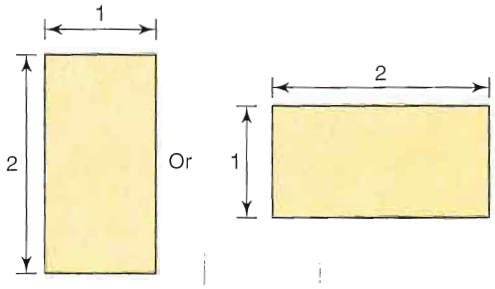
> **Exception:** In Group R-3 occupancies, within dwelling units in Group R-2 occupancies, and in Group U occupancies that are accessory to a Group R-3 occupancy or accessory to individual dwelling units in Group R-2 occupancies, handrails shall be Type I in accordance with Section 1012.3.1, Type II in accordance with Section 1012.3.2, or shall provide equivalent graspability.

1012.3.1 Type I. Handrails with a circular cross section shall have an outside diameter of at least 1¼ inches (32 mm) and not greater than 2 inches (51 mm). When the handrail is not circular, it shall have a perimeter dimension of at least 4 inches (102 mm) and not greater than 6¼ inches (160 mm) with a maximum cross-section dimension of 2¼ inches (57 mm) and minimum cross-section dimension of 1 inch (25 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).

1012.8 Projections. On ramps, the clear width between handrails shall be 36 inches (914 mm) minimum. Projections into the required width of stairways and ramps at each ~~handrail~~ side shall not exceed 4½ inches



Not permitted



Perimeter dimension
- 4 in. minimum
- 6¼ in. maximum

Cross section
- 1 in. minimum

transition between flights, transition at winder treads, transition from handrail to guard, or when used at the start of a flight, the handrail height at the fittings or bendings shall be permitted to exceed the maximum height.

CHANGE SIGNIFICANCE: Fittings such as easings and gooseneck risers are commonly used features intended to provide rail continuity at locations where a straight transition is not possible. Incorporating such features is one means of complying with the provisions of Section 1012.4 (Continuity) and is now fairly common architectural and construction practice, especially within residential occupancies. The inclusion of the two new exceptions allows for a more stylized handrail design and permits the handrail heights on a flight of stairs to vary and exceed the height maximums at these transitions. The code previously has always required a "uniform" height for the handrail.

Depending on the proposed handrail height and guard height, the application of the permitted variation will probably be more common in residential occupancies at the locations mentioned in Exception 2. This is due to the fact that guard height on the open side of a stairway can be reduced down to handrail height. Therefore, if the combined handrail/guard on the stair were built at a 34-inch height, a transition would be needed to match up with a 36-inch minimum height guard on the landing. However, it should also be pointed out that if the combination handrail/guard on a stairway was built to a height of 36 inches or 38 inches, it could match up with a guard of a similar height at a landing, and there would be no need for the transition or the use of the exception. With the inclusion of a new Exception 1 in Section 1013.3, the lower guard height for specific residential occupancies will reduce the number of situations where these transitions may be needed. Please see the discussion addressing Section 1013.3 for additional commentary related to this change.

The need for these transition pieces is less of an issue for railings in commercial occupancies because the IBC requires a minimum 42-inch guard height on the open side of a stair as well as a 34 to 38-inch handrail height. Because separate handrails and guards are being provided, the need to transition from one height to another is less of an issue. A 42-inch minimum guard on a stair will easily match up with a similar height guard on a floor or landing without any transition being needed for the handrail.

These transitions are especially common where the handrail transitions from one flight of stairs to another at a dog-leg or switch-back stair landing. Although handrails are not typically required at the landing, the mandate for handrail extensions or for handrail continuity often creates the need for some type of transition, especially at turns. Previously, the height of a continuous handrail at these landings was not regulated. Therefore, the height of the handrail could transition rather abruptly as it transitioned from one stair flight to the next at the landing. The use of the new exceptions will permit a more gradual variation in the height even though it will allow for portions of the handrail to exceed the normal 38-inch maximum height—the belief being that a "continuous" handrail is more important than staying within the height limitation.

Exception 2 will differ from Exception 1 because it is limited to the

International Code Council®

Transition from handrail to guard

1012.2
Handrail Height

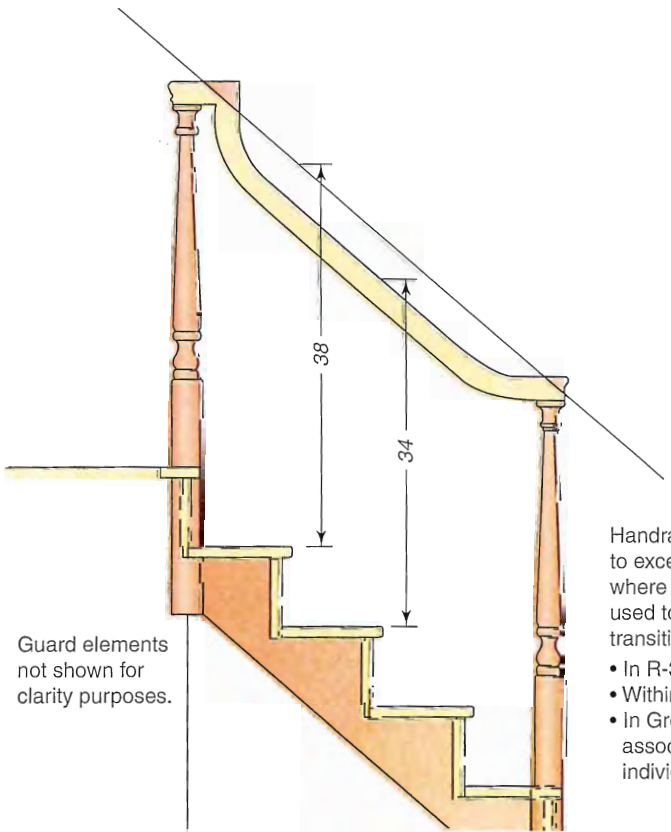
CHANGE TYPE: Modification

CHANGE SUMMARY: Transition pieces of a continuous handrail are now permitted to exceed the maximum permitted handrail height.

2012 CODE: **1012.2 Height.** Handrail height, measured above stair tread nosings or finish surface of ramp slope, shall be uniform, not less than 34 inches (864 mm) and not more than 38 inches (965 mm). Handrail height of alternating tread devices and ship ladders, measured above tread nosings, shall be uniform, not less than 30 inches (762 mm) and not more than 34 inches (864 mm).

Exceptions:

1. When handrail fittings or bendings are used to provide continuous transition between flights the fittings or bendings shall be permitted to exceed the maximum height.
2. In Group R-3 occupancies, within dwelling units in Group R-2 occupancies, and in Group U occupancies that are associated with a Group R-3 occupancy or associated with individual dwelling units in Group R-2 occupancies, when handrail fittings or bendings are used to provide continuous



To illustrate the need for a comprehensive revision, consider a two-story building that has one enclosed exit stairway and one open (unenclosed) stairway serving the second floor, which is required to have at least two exits. Because the open stairway did not meet the definition for an "exit," technically only one "exit" is provided from the second story even though the second stairway is permitted to be unenclosed. In the same example, the correct means of measuring exit access travel distance was possibly confusing depending on whether or not the open stairway was considered as an "exit" stairway or an "exit access" stairway from the story.

Code users should be aware of these changes because they will affect means of egress terminology. In addition, modifications result in a number of substantial revisions to Sections 1009, 1010, 1016, 1021, and 1022 as well as sections in Chapters 4, 7, and 8, the IFC and IMC. It should be noted that these revisions are primarily a clarification and are intended to provide consistency throughout the code. The new and revised definitions and those sections that were revised within the code are based on the following concepts:

- All stairs within a building are elements of the means of egress system and must comply with Chapter 10.
- Unenclosed stairways are not considered as an *exit*.
- All exit stairways, to qualify as *exits*, must be enclosed with a fire-resistance-rated enclosure consisting of exit stair shafts and passageways based on the previous exit enclosure provisions.
- All stairways that are permitted to be open, or are not required stairways for egress purposes, are *exit access stairways*.
- *Exit access stairways* must be enclosed with fire-resistance-rated enclosures based on shaft provisions or may be open in accordance with exceptions based on the previous code exceptions.
- Exit access travel distance is measured from an entrance to an *exit*.
- Exit access travel distance includes the travel distance on an *exit access stairway*.
- Entrances to exits on each story are not mandatory and access to exits on other stories is permissible within certain limitations.

serve only the parking garage are not required to be enclosed.

7. Stairways serving outdoor facilities where all portions of the means of egress are essentially open to the outside are not required to be enclosed.
8. Exit access stairways serving stages, platforms, and technical production areas in accordance with Sections 410.6.2 and 410.6.3 are not required to be enclosed.
9. Stairways are permitted to be open between the balcony, gallery, or press box and the main assembly floor in occupancies such as theaters, places of religious worship, auditoriums, and sports facilities.
10. In Group I-3 occupancies, exit access stairways constructed in accordance with Section 408.5 are not required to be enclosed.

1010.1 Scope. The provisions of this section shall apply to ramps used as a component of a means of egress.

Exceptions:

1. Other than ramps that are part of the accessible routes providing access in accordance with Sections 1108.2 through 1108.2.4 and 1108.2.6, ramped aisles within assembly rooms or spaces shall conform with the provisions in Section 1028.11.
2. Curb ramps shall comply with ICC A117.1.
3. Vehicle ramps in parking garages for pedestrian exit access shall not be required to comply with Sections ~~1010.3~~ 1010.4 through ~~1010.9~~ 1010.10 when they are not an accessible route serving accessible parking spaces, other required accessible elements, or part of an accessible means of egress.

1010.2 Enclosure. All interior exit ramps shall be enclosed in accordance with the applicable provisions of Section 1022. Exit access ramps shall be enclosed in accordance with the provisions of Section 1009.3 for enclosure of stairways.

CHANGE SIGNIFICANCE: Although generally considered as a clarification of existing requirements, the multiple changes regarding interior stairways and ramps will provide for consistent application of the code requirements. Because so many code sections are affected by this change, including the revision of some of the basic means of egress terminology, it is important that code users are aware of the revisions even if they do not result in major technical changes.

Historically, the IBC has allowed the limited use of unenclosed exit stairs in a manner that has resulted in inconsistent interpretations. During previous code development cycles, numerous code changes were submitted, with some incorporated into the code, in order to clarify the intent and application of specific provisions. This new revision is considered as a comprehensive change that addresses the entire egress system and how unenclosed stairs affect issues such as exit versus exit access, travel distance measurements, contribution to the minimum number of required exits, etc.

INTERIOR EXIT STAIRWAY. An exit component that serves to meet one or more means of egress design requirements, such as required number of exits or exit access travel distance, and provides for a protected path of egress travel to the exit discharge or public way.

1009.1 General. Stairways serving occupied portions of a building shall comply with the requirements of this section.

1009.2 Interior Exit Stairways. Interior exit stairways shall lead directly to the exterior of the building or shall be extended to the exterior of the building with an exit passageway conforming to the requirements of Section 1023, except as permitted in Section 1027.1.

1009.2.1 Where Required. Interior exit stairways shall be included, as necessary, to meet one or more means of egress design requirements, such as required number of exits or exit access travel distance.

1009.2.2 Enclosure. All interior exit stairways shall be enclosed in accordance with the provisions of Section 1022.

1009.3 Exit Access Stairways. Floor openings between stories created by exit access stairways shall be enclosed.

Exceptions:

1. In other than Group I-2 and I-3 occupancies, exit access stairways that serve, or atmospherically communicate between, only two stories are not required to be enclosed.
2. Exit access stairways serving and contained within a single residential dwelling unit or sleeping unit in Group R-1, R-2, or R-3 occupancies are not required to be enclosed.
3. In buildings with only Group B or M occupancies, exit access stairway openings are not required to be enclosed provided that the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, the area of the floor opening between stories does not exceed twice the horizontal projected area of the exit access stairway, and the opening is protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13.
4. In other than Groups B and M occupancies, exit access stairway openings are not required to be enclosed provided that the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, the floor opening does not connect more than four stories, the area of the floor opening between stories does not exceed twice the horizontal projected area of the exit access stairway, and the opening is protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13.
5. Exit access stairways within an atrium complying with the

1009, 1010, 202

Interior Stairways and Ramps

CHANGE TYPE: Clarification

CHANGE SUMMARY: Revisions have been made throughout the code to coordinate the provisions for unenclosed interior stairways and ramps that can be used as a portion of the means of egress.

2012 CODE:

202 Definitions.

EXIT. That portion of a means of egress system ~~which is separated from other interior spaces of a building or structure by fire-resistance-rated construction and opening protectives as required to provide a protected path of egress travel~~ between the exit access and the exit discharge or public way. Exits components include exterior exit doors at the level of exit discharge, ~~vertical exit enclosures~~ interior exit stairways, interior exit ramps, exit passageways, exterior exit stairways~~,~~ and exterior exit ramps and horizontal exits.

EXIT ACCESS RAMP. An interior ramp that is not a required interior exit ramp.

EXIT ACCESS STAIRWAY. An interior stairway that is not a required interior exit stairway.

~~**EXIT ENCLOSURE.** An exit component that is separated from other interior spaces of a building or structure by fire-resistance-rated construction and opening protectives, and provides for a protected path of egress travel in a vertical or horizontal direction to the exit discharge or the public way.~~

INTERIOR EXIT RAMP. An exit component that serves to meet one or more means of egress design requirements, such as required number of exits or exit access travel distance, and provides for a protected path of egress travel to the exit discharge or public way.

1008.1.2
Door Swing

CHANGE TYPE: Clarification

CHANGE SUMMARY: The occupant load used to determine the door swing requirement is not to be based on an assigned or distributed occupant load, but on the entire occupant load of the space served by the door.

2012 CODE: 1008.1.2 Door Swing. Egress doors shall be of the pivoted or side-hinged swinging.

Exceptions: (no changes to exceptions)

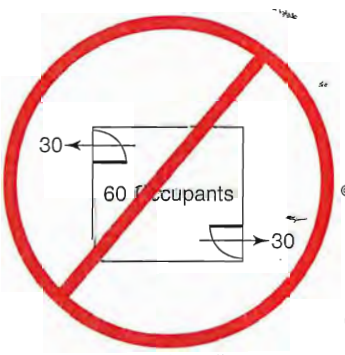
Doors shall swing in the direction of egress travel where serving a room or area containing an occupant load of 50 or more persons or a Group H occupancy.

CHANGE SIGNIFICANCE: The provision addressing door swing has been clarified to recognize that the total occupant load of the space is to be considered in the regulation of door swing direction. If the occupant load of the room or area is 50 or more persons, the egress doors must swing in the direction of travel. The previous language had occasionally been viewed as allowing a distributed or tributary occupant load to be used for determining the door swing. The additional text clarifies that it is not the code's intent to allow a distributed occupant load to be used for the determination of these basic minimum requirements.

To illustrate the difference in application, consider a space with an occupant load of 60 people and two egress doors serving the area. The total occupant load of 60 should be considered when deciding that the doors serve an occupant load of 50 or more and need to swing in the direction of travel. It is not intended that the 60 occupants be distributed to the two doors so that each door is viewed as only serving 30 people and therefore able to swing against the direction of egress travel.

Most code users will see this as a clarification and not a technical modification. This new language reaffirms the long-standing intent and practice for this door swing requirement.

Doors required to swing in the direction of egress travel



A distributed or tributary occupant load is not used for determining door

1005 continued

- Section 1005.4 replaces the last sentence of the previous code's Section 1005.1, and notes that once a minimum capacity is required along a means of egress, it must be provided along the entire path of egress travel.
- Section 1005.5 is consistent with the fourth sentence of the previous code's Section 1005.1.
- The "egress convergence" provisions from Section 1004.5 can now be found in Section 1005.6. This is basically an issue of egress capacity/width and is more appropriately located here, instead of within the code section regulating occupant load.
- Revisions have also been made in Sections 3404 and 3412 related to reduced egress width factors.

1005.4 Continuity. The capacity of the means of egress required from any story of a building shall not be reduced along the path of egress travel until arrival at the public way.

1005.5. Distribution of Egress Capacity. Where more than one exit, or access to more than one exit, is required, the means of egress shall be configured such that the loss of any one exit, or access to one exit, shall not reduce the available capacity to less than 50 percent of the required capacity.

~~**1004.5**~~ **1005.6 Egress Convergence.** Where the means of egress from stories above and below converge at an intermediate level, the capacity of the means of egress from the point of convergence shall not be less than the sum of the required capacities for the two adjacent stories.

Provisions in 2009 IBC Sections 1005.2 and 1005.3 regulating permissable encroachment of doors also have been reformatted as new Section 1005.7.

CHANGE SIGNIFICANCE: The multiple requirements related to egress width that were previously contained in a single paragraph in Section 1005.1 have been reorganized and clarified, and the related provisions from Section 1004.4 and 1004.5 have been relocated to a more logical location with the other egress width/capacity provisions.

In addition, the reduced egress width factors for sprinklered buildings that had been in the 2000 through 2006 IBC but were removed in the 2009 edition have been reintroduced. The exceptions allow for use of reduced width factors for sprinklered buildings but only where an emergency voice/communications alarm system (EV/ACS) is provided for the building.

The EV/ACS system provides the ability to communicate instructions to the occupants that could facilitate evacuation or relocation during a fire or other emergency. This additional information and direction could lead to more efficient use of the egress system. Studies have shown that most people do not react to an initial alarm; therefore, requiring a voice alarm will increase safety by providing occupants with additional information about the emergency and evacuation.

The following list will help guide code users in finding the new location of the previous requirements and illustrate the editorial nature of this revision:

- Section 1005.1 provides a new charging paragraph and clarifies that it applies to all portions of the egress system.
- Section 1005.2 replaces the second sentence of the previous code's Section 1005.1 and notes that minimum width requirements for means of egress components may be specified in other locations in the code.
- Section 1005.3 provides the egress width factors in subsections that deal with the various types of components. Note the new exceptions in Sections 1005.3.1 and 1005.3.2 for sprinklered buildings that allow for a reduction in the minimum required calculated width.
- The provisions of the former Section 1004.4 have been incorporated

1005 continued

~~occupant for stairways and by 0.2 inch (5.08 mm) per occupant for other egress components. The width shall not be less than specified elsewhere in this code. Multiple means of egress shall be sized such that the loss of any one means of egress shall not reduce the available capacity to less than 50 percent of the required capacity. The maximum capacity required from any story of a building shall be maintained to the termination of the means of egress.~~

Exception: ~~Means of egress complying with Section 1028.~~

1005.1 General. All portions of the means of egress system shall be sized in accordance with this section.

Exception: Means of egress complying with Section 1028.

1005.2 Minimum Width Based on Component. The minimum width, in inches, of any means of egress components shall not be less than that specified for such component elsewhere in this code.

1005.3 Required Capacity Based on Occupant Load. The required capacity, in inches, of the means of egress for any room, area, space, or story shall not be less than that determined in accordance with the following:

1005.3.1 Stairways. The capacity, in inches, of means of egress stairways shall be calculated by multiplying the occupant load served by such stairway by a means of egress capacity factor of 0.3 inches (7.62 mm) per occupant. Where stairways serve more than one story, only the occupant load of each story considered individually shall be used in calculating the required capacity of the stairways serving that story.

Exception: For other than Group H and I-2 occupancies, the capacity, in inches, of means of egress stairways shall be calculated by multiplying the occupant load served by such stairway by a means of egress capacity factor of 0.2 inches (5.1 mm) per occupant in buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 and an emergency voice/alarm communication system in accordance with Section 907.5.2.2.

1005.3.2 Other Egress Components. The capacity, in inches, of means of egress components other than stairways shall be calculated by multiplying the occupant load served by such component by a means of egress capacity factor of 0.2 inches (5.08 mm) per occupant.

Exception: For other than Group H and I-2 occupancies, the capacity, in inches, of means of egress components other than stairways shall be calculated by multiplying the occupant load served by such component by a means of egress capacity factor of 0.15 inches (3.8 mm) per occupant in buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1

1005
Means of Egress Capacity Determination

CHANGE TYPE: Modification

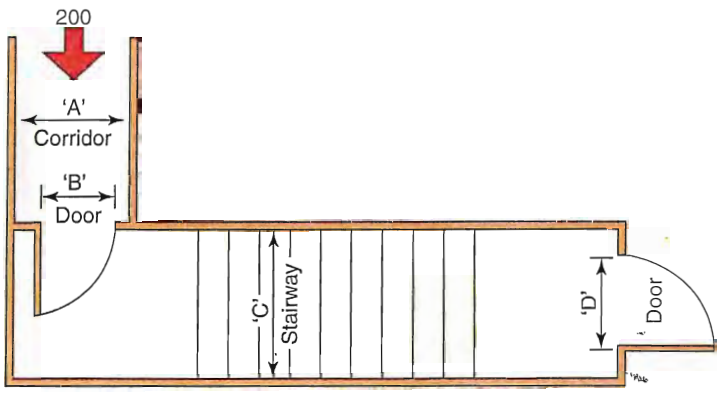
CHANGE SUMMARY: Reduced exit width factors have been established for sprinklered buildings provided with an emergency voice/alarm communication system, and the exit width/capacity requirements are now presented in a more logical and organized layout.

2012 CODE: ~~**1004.4 Exiting From Multiple Levels.** Where exits serve more than one floor, only the occupant load of each floor considered individually shall be used in computing the required capacity of the exits at that floor, provided that the exit capacity shall not decrease in the direction of egress travel.~~

~~**1004.5 Egress Convergence.** Where means of egress from floors above and below converge at an intermediate level, the capacity of the means of egress from the point of convergence shall not be less than the sum of the two floors.~~

~~**1005.1 Minimum Required Egress Width.** The means of egress width shall not be less than required by this section. The total width of means of egress in inches (mm) shall not be less than the total occupant load served by the means of egress multiplied by 0.3 inch (7.62 mm) per~~

1005 continues



Example : Assuming exit is serving 200 people

Component	Min width based on component (1005.2)	Min width based on occupant load (1005.3)	
		General[1]	Sprinklered building with EV/ACS[2]
Corridor 'A'	44"	40"	30"
Door 'B'	32"	40"	30"
Stairway 'C'	44"	60"	40"
Door 'D'	32"	40"	30"

1. Building without sprinkler system or EV/ACS; (also includes

908.7 continued

Chapter 35

NFPA. 720-2005, *Standard for the Installation of Carbon Monoxide (CO) Warning Equipment in Dwelling Units*

UL. 2034-2008, *Standard for Single and Multiple Station Carbon Monoxide Alarms*

CHANGE SIGNIFICANCE: Section 908.7 contains new requirements for carbon monoxide detectors in all residential (Group R) and institutional (Group I) occupancies. These provisions apply to new construction, and a similar requirement was added into the IFC to deal with existing buildings.

Carbon monoxide (CO) detectors were first required by the 2009 IRC for all one- and two-family dwellings. Technical data in a 1998 article published by the *Journal of the American Medical Association (JAMA)* was the basis of the decision to first mandate CO detectors. This particular paper stated that approximately 2100 deaths occur annually as a result of CO poisoning. That annual number is based on the findings of a paper prepared by the U.S. Department of Health, Centers for Disease Control and Prevention (CDC).[1] The referenced paper documented epidemiological research by two CDC physicians who examined 56,133 death certificates over a 10-year period. When the researchers excluded suicides, homicides, structure fires, and deaths resulting from CO poisoning in motor vehicles, the death rate steadily decreased for the sample period, from a value of 1513 people in 1979 to 878 in 1988.

Section 908.7 now requires the installation of a CO alarm in any new Group I or R occupancy when it contains a fuel-burning appliance or it has an attached garage. CO alarms are not required in open or enclosed parking garages as defined by the IBC. The exception indicates a single-station CO alarm is not required in each sleeping or dwelling unit where they are located more than one story above or below the floor or level housing the fuel-burning appliance or an attached garage and where there are no ducts or ventilation shafts that connect between the unit and the fuel-burning appliance or attached garage. However, in such a building, a common-area CO detection system is required. Such a system would be required to comply with the requirements of NFPA 72 and NFPA 720, *Standard for the Installation of Carbon Monoxide (CO) Warning Equipment in Dwelling Units,* including the installation of listed detectors and occupant notification devices.

CO alarms installed in accordance with the IBC are listed in accordance with UL 2034, *Standard for Single and Multiple Station Carbon Monoxide Alarms*. They are designed to initiate an audible alarm when the level of CO is below that which can cause a loss of the ability to react to the dangers of CO exposure.

Unless listed as low-power wireless, CO alarms require a primary and secondary power supply. The primary power supply is utility power, and secondary power supply is typically a battery. NFPA 720 requires a CO alarm outside of each sleeping unit in the immediate vicinity of the bedroom and on every occupiable level of a dwelling, including basements. CO alarms are not required in attics or crawl spaces. When a combination CO/smoke alarm is provided, the fire alarm signal takes precedence over any other alarm signals. NFPA 720 requires the CO alarm be capable of transmitting a distinct audible signal that is different than the smoke alarm signal.

In jurisdictions adopting the 2012 IFC, retroactive provisions in IFC Secion 1103.9 are applicable to existing buildings classified as Group I or R.

CHANGE TYPE: Addition

CHANGE SUMMARY: In new and existing buildings, carbon monoxide (CO) alarms are now required in Group R and I occupancies with fuel-burning appliances or attached garages.

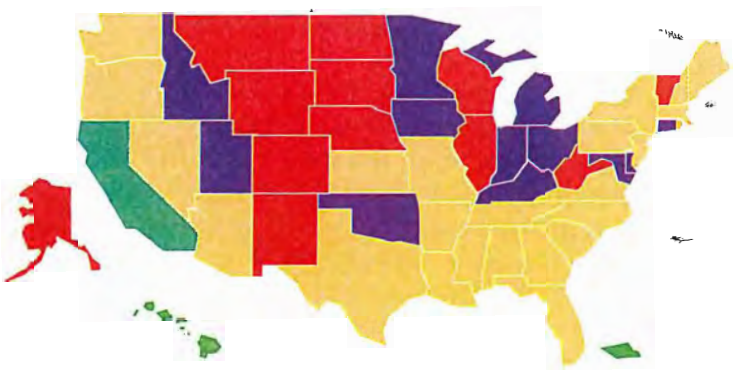
2012 CODE: **908.7 Carbon Monoxide Alarms.** Group I or R occupancies located in a building containing a fuel-burning appliance or a building which has an attached garage shall be equipped with single-station carbon monoxide alarms. The carbon monoxide alarms shall be listed as complying with UL 2034 and be installed and maintained in accordance with NFPA 720 and the manufacturer's instructions. An open parking garage, as defined in Chapter 2, or enclosed parking garage ventilated in accordance with Section 404 of the *International Mechanical Code* shall not be considered an attached garage.

Exception: Sleeping units or dwelling units which do not themselves contain a fuel-burning appliance or have an attached garage, but which are located in a building with a fuel-burning appliance or an attached garage, need not be equipped with single-station carbon monoxide alarms provided that:

1. The sleeping unit or dwelling unit is located more than one story above or below any story that contains a fuel-burning appliance or an attached garage.
2. The sleeping unit or dwelling unit is not connected by ductwork or ventilation shafts to any room containing a fuel-burning appliance or to an attached garage.
3. The building is equipped with a common-area carbon monoxide alarm system.

908.7.1 Carbon Monoxide Detection Systems. Carbon monoxide detection systems, that include carbon monoxide detectors and audible notification appliances—installed and maintained in accordance with this section for carbon monoxide alarms and NFPA 720 shall be permitted. The carbon monoxide detectors shall be listed as complying with UL 2075.

908.7 continues



< 30 deaths /100,000 residents

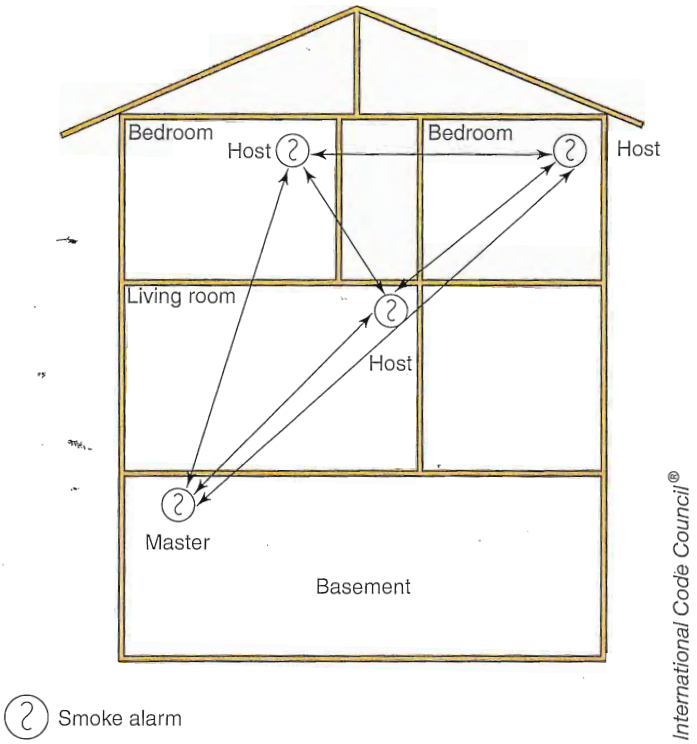
30-59 deaths /100,000 residents

908.7

Carbon Monoxide Alarms

Carbon monoxide alarm *(Courtesy of UTC Fire and Home Security, Mebane NC)*

907.2.11.3 continued



Smoke alarm location and interconnection

function in accordance with NFPA 72. The response time between a smoke alarm's activation and the transmission of a signal that causes the interconnected alarms to activate cannot exceed 20 seconds.

NFPA 72 requires that wireless low-power smoke alarms be capable of reliably communicating at a distance of 100 feet inside dwellings. The particular test method specified in NFPA 72 is based on the system's ability to attenuate (transmit and receive) a wireless radio-frequency signal inside of a Type V building with four walls and two floors constructed of wood, gypsum wallboard, and plywood and a floor covered with tile. In systems where smoke and carbon monoxide alarms are wirelessly interconnected, NFPA 72 requires the fire alarm signal take precedence over other alarm signals. The wireless smoke alarm that initiates an alarm signal must be manually reset to silence the audible alarm signal. Finally, a failure of any "guest" alarm cannot cause the loss of signal to other transceivers on the wirelessly monitored circuit. Depending on the design and listing, a single "host" smoke alarm may be capable of serving 12 to 18 "guest" smoke or CO alarms.

CHANGE TYPE: Modification

CHANGE SUMMARY: The smoke alarm interconnection requirements are now applicable to Group I-1 occupancies and include allowances for use of wireless alarms.

2012 CODE: 907.2.11.3 Interconnection. Where more than one smoke alarm is required to be installed within an individual dwelling unit or sleeping unit in Group ~~R-1, R-2, R-3 or R-4~~ R or I-1 occupancies, the smoke alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.

CHANGE SIGNIFICANCE: The addition of the Group I-1 occupancy classification helps coordinate the IBC provisions with requirements that have previously existed within both the IFC and the *International Existing Building Code* (IEBC). In addition, the provisions now recognize the use of listed wireless smoke alarms. Listed wireless alarms are now permitted to substitute for wired interconnection of the smoke alarms in both new and existing construction. Some building officials have previously accepted these wireless alarms as acceptable alternatives because they met the intent of ensuring that all of the alarms would sound if one detector were activated. It is now clear that listed wireless smoke alarms do comply with the code.

In addition to this change in the IBC, similar requirements can now be found in the IRC, IFC, and IEBC for both new and existing buildings to allow the installation of wireless smoke alarms. All wireless smoke alarms are listed to UL 217, *Single and Multiple Station Smoke Alarms,* and are classified by NFPA 72 as low-power systems.

All of the devices available in the marketplace utilize a single smoke alarm that serves as the "host" device that is wirelessly connected to the "guest" smoke alarms in the dwelling and sleeping spaces. The master smoke alarm may be wired to a 120-volt AC branch circuit, or it may be battery powered. In IBC-regulated new construction, the "host" device is required to be wired into a branch circuit receiving electrical energy from a commercial source (see Section 907.2.11.4). Wiring is no longer required to interconnect the additional "guest" smoke alarms. The "guest" smoke alarms are battery powered.

NFPA 72 Section 23.18 requires the "host" device supervise all the "guest" smoke alarms. Required supervisory signals include loss or depletion of battery power in the "guest" smoke alarms and the integrity of the signal frequency and path interconnecting all of the devices. Before a battery reaches a power level that can render a smoke alarm inoperable, or in the event of a failure of the communications path, NFPA 72 requires that an audible and visual supervisory signal be transmitted and annunciated so it can be identified and repaired. NFPA 72 specifies a maximum

907.2.11.3

Wireless Interconnection of Smoke Alarms

Wireless smoke alarm *(Courtesy of BRK Electronics, Aurora IL)*

903.2.11.1.3 continued before commencing the application of water. Basements almost always contain building load-bearing elements so a fire involving this area can adversely affect structural stability when the area is involved in fire.

One concern during interior firefighting operations is obstruction of fire streams. Obstructions such as walls or partitions may prevent the application of water onto the area of fire involvement. The installation of an automatic sprinkler system in basements over 1500 square feet in floor area is now required when obstructions such as walls, partitions or similar elements are introduced which could obstruct the application of hose streams. It should be noted that whether the wall contains door openings or not has no effect on the application of the provision. While some code requirements such as exit access travel distance (Section 1016) and the location of Class II standpipes (Section 905.5) allow measuring along an available route through the building and through doors, the presence of doorways has no bearing on the code's application. Because a wall of any size has the potential to "restrict the application of water," the building official should be consulted if the design indicates anything other than a wide-open, unfurnished space and sprinklers are not intended to be installed.

903.2.11.1.3
Sprinkler Protection for Basements

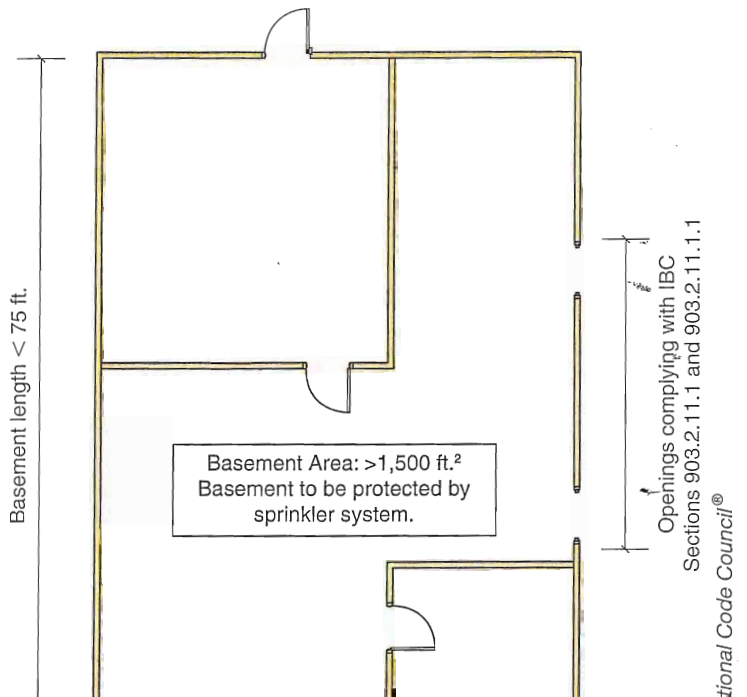
CHANGE TYPE: Modification

CHANGE SUMMARY: Basements provided with walls, partitions, or fixtures that can obstruct water from hose streams now require automatic sprinkler protection.

2012 CODE: 903.2.11.1.3 Basements. Where any portion of a basement is located more than 75 feet (22 860 mm) from openings required by Section 903.2.11.1, or where walls, partitions, or other obstructions are installed that restrict the application of water from hose streams, the basement shall be equipped throughout with an approved automatic sprinkler system.

CHANGE SIGNIFICANCE: Interior structural firefighting is a high-risk operation for firefighters. Numerous complications can arise when commencing an interior fire attack, including (but not limited to), problems with the water supply, protective clothing, breathing apparatus, or the structure. One area of buildings that can complicate interior firefighting is basements. IBC Section 202 defines a basement as a *story that is not a story above grade plane.* Basements can be partially or completely underground. Basements present some of the more challenging complications for firefighters because entering the area is analogous to entering a building through the chimney of a fireplace. All of the heat will collect at the highest point, which can be the entry doorway into the basement, so firefighters must push their way through these fire gases

903.2.11.1.3 continues



903.2.4, 903.2.7, 903.2.9 continued

regardless of fire area size. The provision was not tied to the amount or height of furniture storage and it was unclear whether the requirement could be applied to bedding such as mattresses or box springs. Mattresses and box springs are not considered to be "upholstered furniture" under current Consumer Products Safety Commission regulations found in 16 CFR Part 1633, which is a performance standard that measures the ignition resistance of mattresses. Therefore, further refinement was deemed necessary for the requirement to be effective.

New limits have now been established for the presence of upholstered furniture and mattresses in Group F-1, M, and S-1 occupancies. Sections 903.2.4 and 903.2.9 addressing Group F-1 and Group S-1 occupancies, respectively, now establish a threshold of 2500 square feet for the storage or manufacturing of upholstered furniture and mattresses. In Group M occupancies, Section 903.2.7 establishes a threshold of 5000 square feet. These floor area values are arbitrary but are intended to reduce the burden on the regulated businesses while providing reasonable thresholds as to when automatic sprinkler protection is required.

The requirements in Section 903.2.4, 903.2.7, and 903.2.9 are tied to the floor area devoted to the manufacture, display, or storage of upholstered furniture rather than building fire area. Jurisdictions may want to develop some type of policy on these provisions because the exceptions all are tied to the area "used for" manufacturing, display, sale, or storage of the upholstered furniture or mattresses. The code does not clearly state how the storage or display area's size and quantity of the materials are to be measured. For example, can the occupancy have multiple areas within it, provided each area is below the size threshold, or would a single sofa in a large retail store trigger the requirements? Using a Group M occupancy in a nonsprinklered 11,000-square-foot space as an example, is it permissible to divide the display and storage of upholstered furniture or mattresses into areas of 4,900 square feet, each separated by exit access aisles and consider that each area is beneath the 5,000-square-foot threshold? Or, on the other hand, could a single piece of upholstered furniture in the store trigger the requirement because the store itself is over the area limitation? Jurisdictions should consider these scenarios and develop a policy to address how the floor area and quantity of the materials will be measured for the purpose of applying these requirements to determine when automatic sprinkler protection is required.

Another consideration when applying these provisions is the height of storage. Upholstered furniture or mattresses are commonly classified as high-hazard commodities in accordance with IFC Chapter 32 because they commonly are composed of large amounts of expanded Group A plastics. If the height of storage exceeds 6 feet and the area of storage exceeds 500 square feet in buildings accessible to the public or 2500 square feet in buildings that are not accessible to the public, IFC Table 3206.2 requires automatic sprinkler protection designed and installed in accordance with Section 903.3.1.1.

CHANGE TYPE: Modification

CHANGE SUMMARY: Automatic sprinkler systems are now required in occupancies where upholstered furniture or mattresses are manufactured, stored, or displayed.

903.2.4, 903.2.7, 903.2.9

Furniture Storage and Display in Group F-1, M, and S-1 Occupancies

2012 CODE: 903.2.4 Group F-1. An automatic sprinkler system shall be provided throughout all buildings containing a Group F-1 occupancy where one of the following conditions exists:

1. A Group F-1 fire area exceeds 12,000 square feet (1115 m^2).
2. A Group F-1 fire area is located more than three stories above grade plane.
3. The combined area of all Group F-1 fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m^2).
4. A Group F-1 occupancy used for the manufacture of upholstered furniture or mattresses exceeds 2,500 square feet (232 m^2).

903.2.7 Group M. An automatic sprinkler system shall be provided throughout buildings containing a Group M occupancy where one of the following conditions exists:

1. A Group M fire area exceeds 12,000 square feet (1115 m^2).
2. A Group M fire area is located more than three stories above grade plane.
3. The combined area of all Group M fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m^2).
4. A Group M occupancy area used for the display and sale of upholstered furniture or mattresses exceeds 5,000 square feet (464 m^2).

903.2.9 Group S-1. An automatic sprinkler system shall be provided throughout all buildings containing a Group S-1 occupancy where one of the following conditions exists:

1. A Group S-1 fire area exceeds 12,000 square feet (1115 m^2).
2. A Group S-1 fire area is located more than three stories above grade plane.
3. The combined area of all Group S-1 fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m^2).
4. A Group S-1 fire area used for the storage of commercial trucks or buses where the fire area exceeds 5,000 square feet (464 m^2).
5. A Group S-1 occupancy used for the storage of upholstered furniture or mattresses exceeds 2,500 square feet (232 m^2).

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Storage area containing upholstered furniture

Exception: Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, Class II materials are permitted in any area where Class I materials are required and materials complying with DOC FF-1 "pill test" (CPSC 16 CFR, Part 1630) or with ASTM D 2859 are permitted in any area where Class II materials are required.

CHANGE SIGNIFICANCE: Primarily, this revision will clarify how the "critical radiant flux" requirements are to be applied to floor finishes in rooms or spaces that are not separated from corridors by full-height partitions. Looking at the wording that has been deleted in Section 804.4 will show that for "rooms or spaces not separated from corridors by full-height partitions extending from the floor to the underside of the ceiling," they were expected to comply with the requirements of the previously existing Section 804.4.1. However, once a user looked at Section 804.4.1, that text did not distinguish how the spaces that were open to the corridor were regulated because the provisions only addressed exit enclosures, exit passageways, and corridors. The new language clarifies that the rooms or spaces that are not separated from the corridor need to meet the same requirements as those for the corridor. From a flame spread requirement standpoint, it is logical that these open rooms or spaces need to meet the same requirements as the corridors from which they are not separated.

These revisions do not have as broad an application as what it may seem when first reading the requirements. Based on the scoping of Section 804.1 and the exception to that section, it is clear that "traditional-type" floor finishes are not regulated and that the requirements only apply to materials that are comprised of fibers. Traditional finish floors and floor coverings, such as wood flooring and resilient floor coverings, have not proved to present an unusual hazard and are known to pass the "pill test"; they are thus exempted by the exception in Section 804.1.

Within the United States, the revisions to this section will not change the way the provisions are enforced or impose any additional requirements. All carpets and carpet-like floor materials have been regulated by the federal government and have been required to comply with the pill test since the 1970s. Therefore, all U.S. carpeting materials are tested and regulated through this process. The revisions to this section have added a referenced standard, ASTM D 2859, that is an equivalent test standard and could be used internationally where the pill test may not be used.

804.4

Interior Floor Finish Requirements

CHANGE TYPE: Clarification

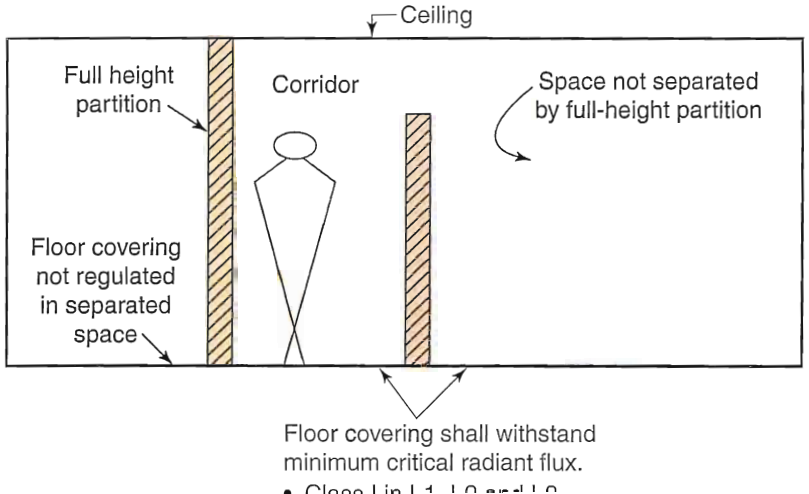
CHANGE SUMMARY: Where fibrous floor finishes are used, it has been clarified that rooms or spaces that are not separated from the corridor by full-height walls must meet the same requirements as the corridor regarding floor finish material.

2012 CODE: **804.4 Interior Floor Finish Requirements.** Interior floor covering materials shall comply with Sections 804.4.1 and 804.4.2, and interior floor finish materials shall comply with Section 804.4.2. ~~In all occupancies, interior floor finish and floor covering materials in exit enclosures, exit passageways, corridors and rooms or spaces not separated from corridors by full-height partitions extending from the floor to the underside of the ceiling shall withstand a minimum critical radiant flux as specified in Section 804.4.1.~~

~~**804.4.1 Minimum Critical Radiant Flux.** Interior floor finish and floor covering materials in exit enclosures, exit passageways and corridors shall not be less than Class I in Groups I-1, I-2 and I-3 and not less than Class II in Groups A, B, E, H, I- 4, M, R-1, R-2 and S. In all areas, floor covering materials shall comply with the DOC FF-1 "pill test" (CPSC 16 CFR, Part 1630).~~

804.4.1 Test Requirement. In all occupancies, interior floor covering materials shall comply with the requirements of the DOC FF-1 "pill test" (CPSC 16 CFR, Part 1630) or with ASTM D 2859.

804.4.2 Minimum Critical Radiant Flux. In all occupancies, interior floor finish and floor covering materials in enclosures for stairways and ramps, exit passageways, corridors, and rooms or spaces not separated from corridors by partitions extending from the floor to the underside of the ceiling shall withstand a minimum critical radiant flux. The minimum critical radiant flux shall not be less than Class I in Groups I-1, I-2, and I-3 and not less than Class II in Groups A, B, E, H, I- 4, M, R-1, R-2, and S.



716.6.4 continued

~~TABLE 715.5.4 Limiting Sizes Of Wired Glass Panels~~

~~Opening Fire-Protection Rating~~	~~Maximum Area (Square Inches)~~	~~Maximum Height(Inches)~~	~~Maximum Width (Inches)~~
~~3 hours~~	~~0~~	~~0~~	~~0~~
~~1½-hour doors in exterior walls~~	~~0~~	~~0~~	~~0~~
~~1 and 1½ hours~~	~~100~~	~~33~~	~~10~~
~~¾ hours~~	~~1,296~~	~~54~~	~~54~~
~~20 minutes~~	~~Not Limited~~	~~Not Limited~~	~~Not Limited~~
~~Fire window assemblies~~	~~1,296~~	~~54~~	~~54~~

~~**715.5.5 Nonwired glass.**~~ **716.6.4 Glass and Glazing.** Glazing ~~other than wired glass~~ in fire window assemblies shall be fire-protection-rated glazing installed in accordance with and complying with the size limitations set forth in NFPA 80.

CHANGE SIGNIFICANCE: Where glazing occurs in walls that require openings to have a fire-protection rating, such glazing (fire windows) must be tested in accordance with either NFPA 257, *Standard for Fire Test for Window and Glass Block Assemblies*, or UL 9, *Fire Tests of Window Assemblies*. Other than fire-resistance-rated glazing, the only glazing permitted without such a fire-protection rating has historically been wired glass installed within a steel frame in accordance with specific prescriptive provisions established by the code. The allowance for the use of wired glass without compliance with the appropriate test standards has been removed, along with the companion Table 715.5.4, which addressed the maximum size of wired glass panels. Specific reference to the use of wired glass in fire window assemblies has also been deleted from NFPA 80, *Fire Doors and Other Opening Protectives,* which regulates the installation and size limitations of such assemblies. With the removal of Exception 1 to Section 715.5, all glazing in fire-window assemblies must now be fire protection rated, including wired glass.

The use of traditional wired glass has been prohibited for some time in fire doors because it does not meet the CPSC safety glazing requirements of IBC Section 2406.1. Table 715.5.4 has been confusing to many code users because it appears to prescribe permitted size limits for wired glass in doors which are no longer allowed of any significant size. The only accepted application for wired glass is in fire assemblies in nonhazardous locations, and it was determined that a table was not needed to prescribe those size limitations.

716.6.4

Wired Glass in Fire Window Assemblies

CHANGE TYPE: Deletion

CHANGE SUMMARY: The allowance for the use of wired glass without compliance with the appropriate test standards has been deleted.

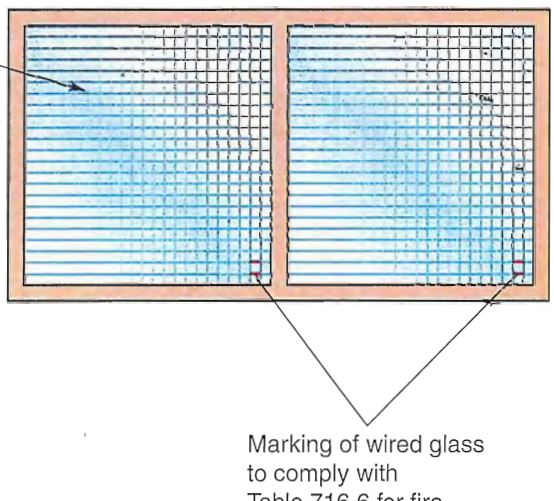
2012 CODE: ~~**715.5**~~ **716.6 Fire-Protection-Rated Glazing.** Glazing in fire window assemblies shall be fire-protection rated in accordance with this section and Table 716.6. Glazing in fire door assemblies shall comply with Section 716.5.8. Fire-protection-rated glazing in fire window assemblies shall be tested in accordance with and shall meet the acceptance criteria of NFPA 257 or UL 9. Fire-protection-rated glazing shall also comply with NFPA 80. Openings in non-fire-resistance-rated exterior wall assemblies that require protection in accordance with Section 705.3, 705.8, 705.8.5, or 705.8.6 shall have a fire-protection rating of not less than ¾ hour. Fire protection-rated glazing in 0.5-hour fire-resistance-rated partitions is permitted to have a 0.33-hour fire-protection rating.

~~Exceptions:~~

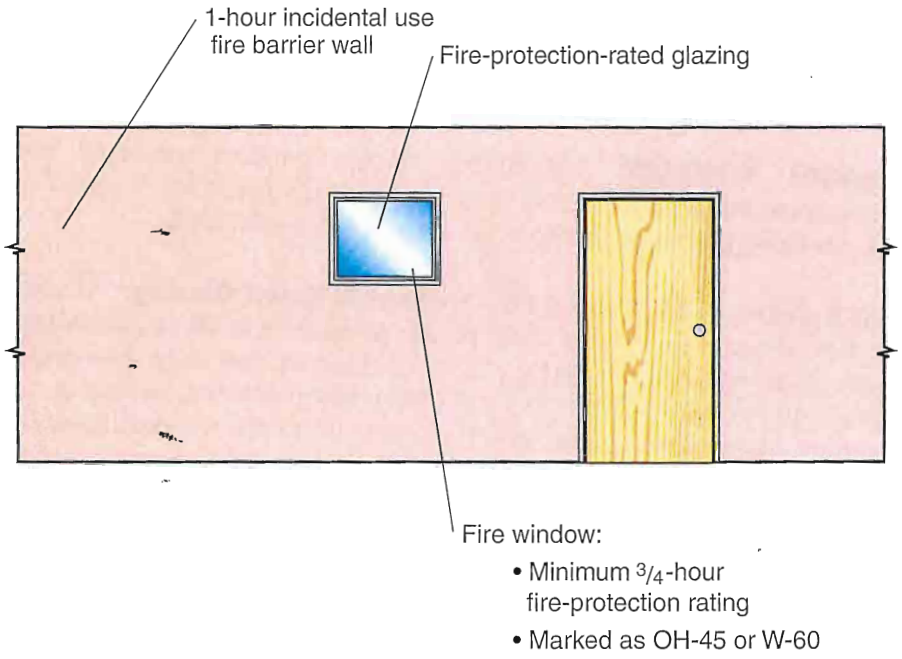
~~1. Wired glass in accordance with Section 715.5.4.~~

~~**715.5.4 Wired glass.** Steel window frame assemblies of 0.125-inch (3.2 mm) minimum solid section or of not less than nominal 0.048-inch-thick (1.2 mm) formed sheet steel members fabricated by pressing, mitering, riveting, interlocking or welding and having provision for glazing with ¼-inch (6.4 mm) wired glass where securely installed in the building construction and glazed with ¼-inch (6.4 mm) labeled wired glass shall be deemed to meet the requirements for a ¾-hour fire window assembly. Wired glass panels shall conform to the size limitations set forth in Table 715.5.4.~~

716.6.4 continues



716.6 continued



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Fire window in incidental-use fire barrier wall

CHANGE SIGNIFICANCE: In many situations, it is necessary to provide glazed openings in fire-resistance-rated walls. Fire window assemblies satisfy this need as opening protectives in fire partitions, smoke barriers, exterior walls, and specified fire barriers. Table 716.6 has historically identified the minimum fire-protection rating required for fire windows based upon the type of wall assembly and the required wall assembly rating. The table now also identifies the marking required on the fire-rated glazing for acceptance in specified applications. By inserting the marking information into Table 716.6, it is intended to provide building and fire code officials with easy access to all of the information needed when inspecting fire window installations, including required marking designations.

As part of the table's expansion, the allowance for 3/4-hour fire windows in fire barriers utilized as incidental use separations and occupancy separations has been relocated from the text of the IBC. In addition, fire window requirements for ½-hour fire-resistance-rated exterior walls have been included, however the IBC currently has no requirement for the use of such walls.

Table 716.6

Fire-Protection-Rated Glazing

CHANGE TYPE: Clarification

CHANGE SUMMARY: In addition to fire window assembly fire-protection ratings, Table 716.6 now identifies the markings required on the fire-rated glazing for acceptance in specified applications.

2012 CODE: ~~715.5~~ 716.6 Fire-Protection-Rated Glazing. Glazing in fire window assemblies shall be fire-protection rated in accordance with this section and Table 716.6. Glazing in fire door assemblies shall comply with Section 716.5.8. Fire-protection-rated glazing in fire window assemblies shall be tested in accordance with and shall meet the acceptance criteria of NFPA 257 or UL 9. Fire-protection-rated glazing shall also comply with NFPA 80. Openings in nonfire-resistance-rated exterior wall assemblies that require protection in accordance with Section 705.3, 705.8, 705.8.5, or 705.8.6 shall have a fire-protection rating of not less than ¾ hour. Fire protection-rated glazing in 0.5-hour fire-resistance-rated partitions is permitted to have a 0.33-hour fire-protection rating.

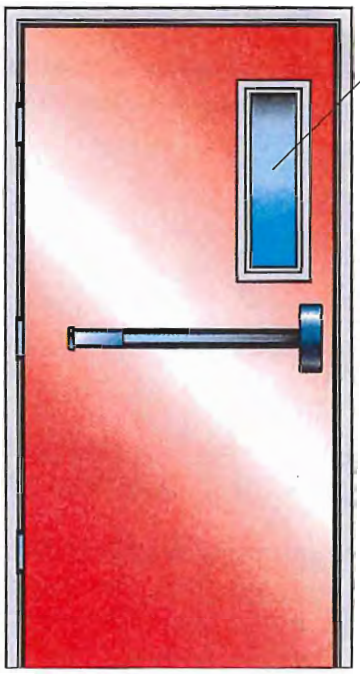
Exceptions:

2. ~~Fire protection-rated glazing in 0.5-hour fire-resistance-rated partitions is permitted to have an 0.33-hour fire-protection rating.~~

716.6 continues

TABLE ~~715.5~~ 716.6 Fire Window Assembly Fire-Protection Ratings

Type of Wall Assembly	Required Wall Assembly Rating (Hours)	Minimum Fire Window Assembly Rating (Hours)	Fire-Rated Glazing Marking
Interior walls			
Fire walls	All	NP[a]	W-xxx[b]
Fire barriers	>1	NP[a]	W-xxx[b]
	1	NP[a]	W-xxx[b]
Incidental-use areas (707.3.6)	1	¾	OH-45 or W-60
Mixed-occupancy separations (707.3.8)			
Fire partitions	1	¾	OH-45 or W-60
	0.5	⅓	OH-20 or W-30
Smoke barriers	1	¾	OH-45 or W-60
Exterior walls	>1	1½	OH-90 or W-XXX[b]
	1	¾	OH-45 or W-60
	0.5	⅓	OH-20 or W-30
Party wall	All	NP	Not applicable



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Marking of fire-rated glazing in fire door

Both fire-resistance-rated glazing and fire-protection-rated glazing must be appropriately identified for verification of its appropriate application. These markings will establish compliance with hose-stream and temperature rise requirements, while also identifying the minimum assembly rating in minutes. It is not unusual for such glazing to be marked to indicate a higher degree of protection than mandated by the code. A new provision clarifies that the use of glazing marked to indicate a higher level of compliance is permitted for use where such compliance is not required.

Table 716.3 has been added to define and relate the various test standards for fire-rated glazing to the designations used to mark such glazing. The marking of fire-rated glazing has been simplified by deleting the "NH" (not hose stream tested) and NT (not temperature rise tested) designations, because these designations correspond with test standards, not end uses. The table reflects the continued use of the designations "W," "OH," "D," "DT," "DH," and "XXX" as markings for fire-rated glazing. Tables 716.5 and 716.6 set forth the markings required for acceptance in specified applications.

716.3, 202

Marking of Fire-Rated Glazing Assemblies

CHANGE TYPE: Clarification

CHANGE SUMMARY: Table 716.3 has been added to define and relate the various test standards for fire-rated glazing, now defined in Chapter 2, to the designations used to mark such glazing.

2012 CODE:

202 Definitions.

Fire-Rated Glazing. Glazing with either a fire protection rating or a fire resistance rating.

716.3 Marking Fire-Rated Glazing Assemblies. Fire-rated glazing assemblies shall be marked in accordance with Tables 716.3, 716.5, and 716.6.

716.3.1 Fire-Rated Glazing That Exceeds the Code Requirements. Fire-rated glazing assemblies marked as complying with hose stream requirements (H) shall be permitted in applications that do not require compliance with hose stream requirements. Fire-rated glazing assemblies marked as complying with temperature rise requirements (T) shall be permitted in applications that do not require compliance with temperature rise requirements. Fire-rated glazing assemblies marked with ratings (XXX) that exceed the ratings required by this code shall be permitted.

TABLE 716.3 Marking Fire-Rated Glazing Assemblies

Fire Test Standard	Marking	Definition Of Marking
ASTM E 119 or UL 263	W	Meets wall assembly criteria.
NFPA 257 or UL 9	OH	Meets fire window assembly criteria including the hose stream test.
NFPA 252 or UL 10B or UL 10C	D	Meets fire door assembly criteria.
	H	Meets fire door assembly "Hose Stream" test.
	T	Meets 450° F temperature rise criteria for 30 minutes
	XXX	The time in minutes of the fire resistance or fire protection rating of the glazing assembly

CHANGE SIGNIFICANCE: Fire separation elements such as fire barriers and fire walls will often include glazing in some form, such as glazed wall assemblies, fire windows, and/or glazed fire doors. A definition of "fire-rated glazing" has been added to Chapter 2 that encompasses both types of such glazing addressed by the code: fire-resistance-rated glazing and fire-protection-rated glazing. Fire-resistance-rated glazing, introduced in Section 703.6, must be tested in accordance with ASTM E 119 or UL 263 as a wall assembly. Fire-protection-rated glazing, established for use by

712 continued

SECTION 713
SHAFT ENCLOSURES

713.1 General. The provisions of this section shall apply to shafts required to protect openings and penetrations through floor/ceiling and roof/ceiling assemblies. Exit access stairways and exit access ramps shall be protected in accordance with the applicable provisions of Section 1009. Interior exit stairways and interior exit ramps shall be protected in accordance with the requirements of Section 1022.

713.2 Construction. Shaft enclosures shall be constructed as fire barriers in accordance with Section 707 or horizontal assemblies in accordance with Section 711, or both.

(remainder of section remains relatively unchanged from 2009 IBC Section 708)

CHANGE SIGNIFICANCE: In multi-story buildings, the upward transmission of fire, smoke, and toxic gases through openings in the floor/ceiling assemblies continues to be a hazard of the highest degree. Historically, the provisions of the code intended to address such concerns have primarily been located under the requirements for shaft enclosures. The fundamental premise has been that a shaft enclosure is mandated to protect openings within a floor/ceiling assembly. Other methods of protection were simply identified as exceptions to the shaft enclosure approach. The code has been reformatted in a manner that now places the emphasis on the presence of vertical openings, while identifying the use of shaft enclosures as one of many protective measures that can be utilized to address the concern.

The criteria for shaft enclosures have been maintained as Section 713 for those situations where a shaft enclosure is used as the desired method of opening protection. Limited technical changes were made to the shaft enclosure provisions.

712
Vertical Openings

CHANGE TYPE: Clarification

CHANGE SUMMARY: A significant reformatting in Chapter 7 now places the emphasis on the presence of vertical openings rather than on shaft enclosures, recognizing that the use of shaft enclosures is just one of many acceptable protective measures that can be utilized to address the hazards related to vertical openings.

2012 CODE:

SECTION ~~708~~ 712
~~SHAFT ENCLOSURES~~ VERTICAL OPENINGS

~~708.1~~ 712.1 General. The provisions of this section shall apply to the vertical opening applications listed in Sections 712.1.1 through 712.1.18. ~~shafts required to protect openings and penetrations through floor/ceiling and roof/ceiling assemblies. Shaft enclosures shall be constructed as fire barriers in accordance with Section 707 or horizontal assemblies in accordance with Section 712, or both~~.

~~708.2 Shaft Enclosure Required.~~ ~~Openings through a floor ceiling assembly shall be protected by a shaft enclosure complying with this section.~~

Exceptions: (Exceptions 1 through 16 have been reformatted as Sections 712.1.2 through 712.1.18 with limited editorial changes.)

712.1.1 Shaft Enclosures. Vertical openings contained entirely within a shaft enclosure complying with Section 713 shall be permitted.

712 continues

fire barrier and a non-fire-resistance-rated roof assembly now allows for a reduced degree of protection.

The two conditions of top-of-wall joints at fire barriers are now addressed differently based upon the type of floor or roof construction involved. Where a fire barrier intersects with a floor or a fire-resistance-rated roof assembly above, the joint must continue to comply with the provisions of Section 715 addressing fire-resistant joint systems. However, a reduced degree of joint protection is now afforded where a fire barrier intersects with a non-fire-resistance-rated roof assembly. The void at the joint need only be an approved material that is securely installed and capable of retarding the passage of fire and hot gases. It is important to note that the allowance for use of an approved material rather that a complying fire-resistant joint system is not applicable where the joint occurs at a non-fire-resistance-rated floor assembly.

707.8, 707.9

Intersections of Fire Barriers at Roof Assemblies

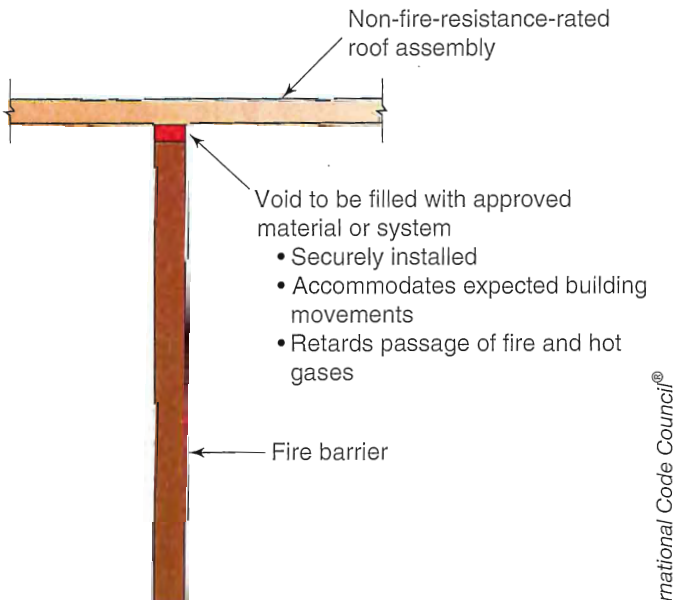
CHANGE TYPE: Modification

CHANGE SUMMARY: The void at the intersection between a fire barrier and a nonfire-resistance rated roof assembly now need only be protected with an approved material rather than a fire-resistant joint system.

2012 CODE: **707.8 Joints.** Joints made in or between fire barriers and joints made at the intersection of fire barriers with the underside of ~~the~~ a fire-resistance rated floor or roof sheathing, slab, or deck above, and the exterior vertical wall intersection shall comply with Section 715.

707.9 Voids at Intersections. The voids created at the intersection of a fire barrier and a non-fire-resistance-rated roof assembly shall be filled. An approved material or system shall be used to fill the void, shall be securely installed in or on the intersection for its entire length so as not to dislodge, loosen, or otherwise impair its ability to accommodate expected building movements and to retard the passage of fire and hot gases.

CHANGE SIGNIFICANCE: A fire barrier is one of several specific elements established in the IBC to provide a fire-resistance-rated separation of adjacent spaces to safeguard against the spread of fire and smoke. Limited to fire-resistance-rated wall assemblies, fire barriers must extend from the floor to the bottom of the floor or roof sheathing, deck, or slab directly above. This high degree of required continuity minimizes the potential for fire spread from one area to another over the top of the wall. Historically, where a head-of-wall or similar joint was created at the intersection of the fire barrier and the floor or roof sheathing, deck, or slab above, a fire-resistant joint system complying with ASTM E 1966 or UL 2079 has been required. New language addressing the void at the intersection between a



and Fire Barrier Walls. This standard addresses a number of criteria for double fire walls, including fire-resistance rating, connections, and structural support. In order to meet the minimum fire-resistance rating for a fire wall as set forth in IBC Table 706.4, each individual wall of a double fire wall assembly is permitted to be reduced to 1 hour less than the minimum required rating for a single fire wall. For example, where IBC Table 706.4 requires the use of a minimum 3-hour fire wall, two 2-hour fire-resistance-rated (double) fire walls can be utilized. Similarly, two 3-hour fire walls in a double wall system can be considered as a single 4-hour fire wall, and two 1-hour fire walls used as a double wall qualify as a single 2-hour fire wall.

Because the intended goal of fire wall construction is to allow collapse of a building on either side of the fire wall while maintaining an acceptable level of fire separation, the only connection permitted by NFPA 221 between the two walls that make up the double fire wall is the flashing, if provided. Illustrated in the explanatory material to the standard, the choice of flashing methods must provide for separate flashing sections in order to maintain a complete physical separation between the walls. Each individual wall of the double wall assembly must be supported laterally without any assistance from the adjoining building. In addition, a minimum clear space between the two walls is recommended by NFPA 221 in order to allow for thermal expansion between unprotected structural framework, where applicable, and the wall assemblies that make up the double fire wall.

706.2
Double Fire Walls

CHANGE TYPE: Addition

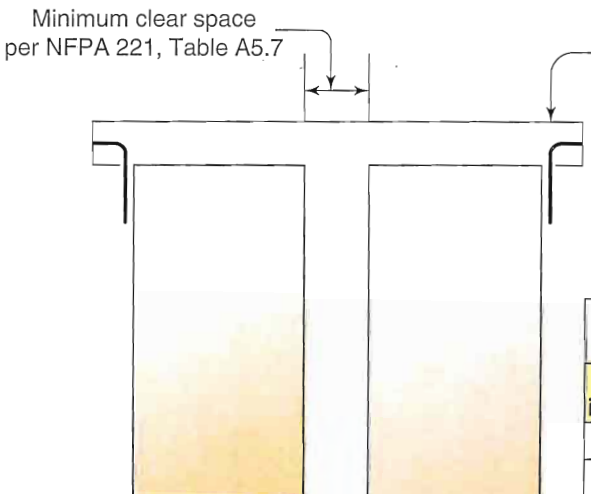
CHANGE SUMMARY: In order to satisfy the intended objective of structural stability, the use of a double fire wall complying with NFPA 221 is now permitted as an alternative to a single fire wall.

2012 CODE: **706.2 Structural Stability.** Fire walls shall have sufficient structural stability under fire conditions to allow collapse of construction on either side without collapse of the wall for the duration of time indicated by the required fire-resistance rating or shall be constructed as double fire walls in accordance with NFPA 221.

CHANGE SIGNIFICANCE: Fire walls are fire-resistance-rated building elements constructed within a structure that are utilized to create two or more smaller-area buildings. Each portion of the structure so separated may be considered a separate and unique building for all purposes of the code. One of the key criteria to the design and construction of a fire wall is that it performs structurally under fire conditions in a manner that will maintain the integrity of the fire separation. A new allowance permits the use of a double fire wall in lieu of a single fire wall that satisfies the intended objective of structural stability.

Double fire walls are simply two back-to-back walls, each having an established fire-resistive rating. While acceptable for use in a new structure, double fire walls are most advantageous where an addition is being constructed adjacent to an existing building and the intent is to regulate the addition as a separate building under the fire wall provisions. The exterior wall of the existing building, if compliant, can be utilized as one wall of the double wall system, with the new wall of the addition providing the second wall.

Double fire wall assemblies are to comply with the applicable provisions of NFPA 221, *Standard for High Challenge Fire Walls, Fire Walls,*



Minimum fire wall rating (in hours)	
Rating of individual walls	Total double wall rating
3	4
2	3

703.7 continued

CHANGE SIGNIFICANCE: The integrity of fire and/or smoke separation walls is subject to compromise during the life of a building. During maintenance and remodel activities, it is not uncommon for new openings and penetrations to be installed in a fire separation wall without the recognition that the integrity of the construction must be maintained or that some type of fire or smoke protective is required. Provisions mandating the appropriate identification of such walls under certain conditions have been modified to better ensure that tradespeople, maintenance workers, and inspectors will recognize the required level of protection that must be maintained.

It is intended that the identification marks be located in areas not visible to the general public. Specific locations set forth in the provisions indicate that the identification is to be provided above any lay-in panel ceiling or similar concealed space that is deemed to be accessible. In addition to previous requirements for locating the identifying markings at maximum 30-foot intervals, it is now also necessary that such markings be provided no more than 15 feet from the end of each wall requiring such identification. This additional requirement increases the possibility that the identifying markings will be visible during any work on the wall assemblies. The minimum required letter height has also been increased from ½ inch to 3 inches to make the markings much more visible. In addition, a minimum stroke width has been established at ⅜ inch and the lettering must be of a color that contrasts with its background. All of the code modifications are intended to increase the possibility that the identification of the information will be achieved.

The requirements apply to all wall assemblies where openings or penetrations are required to be protected. This would include exterior fire-resistance-rated walls as well as fire walls, fire barriers, fire partitions, smoke barriers, and smoke partitions.

703.7

Identification of Fire and Smoke Separation Walls

CHANGE TYPE: Modification

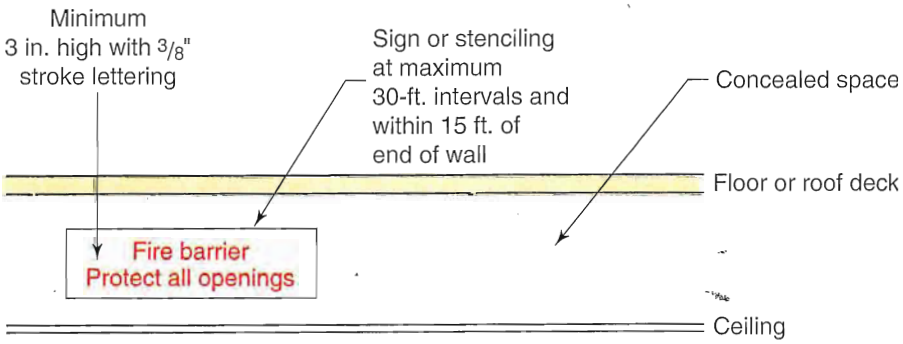
CHANGE SUMMARY: The size and location of identifying markings required on vertical fire assemblies in accessible above-ceiling spaces have been modified to increase the potential for such markings to be seen.

2012 CODE: 703.7 Marking and Identification. Fire walls, fire barriers, fire partitions, smoke barriers, and smoke partitions or any other wall required to have protected openings or penetrations shall be effectively and permanently identified with signs or stenciling. Such identification shall:

1. Be located in accessible concealed floor, floor/ceiling, or attic spaces
2. Be located within 15 feet (4572 mm) of the end of each wall and ~~repeated~~ at intervals not exceeding 30 feet (9144 mm) measured horizontally along the wall or partition
3. Include lettering not less than ~~0.5 inch (12.7 mm)~~ 3 inches (76 mm) in height with a minimum ⅜-inch (9.5-mm) stroke in a contrasting color incorporating the suggested wording: "FIRE AND/OR SMOKE BARRIER—PROTECT ALL OPENINGS" or other wording.

Exception: Walls in Group R-2 occupancies that do not have a removable decorative ceiling allowing access to the concealed space.

703.7 continues



~~**R903.5.2 Severe Hail Exposure.** One or more hail days with hail diameters larger than or equal to 2.0 inches (51 mm) in a 20-year period.~~

CHANGE SIGNIFICANCE: The provisions prohibiting a second layer of asphalt shingles in designated areas of moderate or severe hail exposure first appeared in the 2006 IRC. The hail exposure map and definitions for severe and moderate hail exposure accompanied this change and applied only to asphalt shingles in Item 4 of Section R907.3. The intent was to reduce damage and insurance losses by limiting the overall thickness of multiple layers of asphalt shingles. Additional layers create a softer substrate for the weather layer and increase the severity of damage in a hail storm. All of these provisions related to hail have been removed from the 2012 IRC. The requirements were thought to be overly conservative because they were based on a 20-year occurrence and did not provide any significant benefit to the homeowner. Proponents of the change also stated that there was no substantiating data to justify inclusion of the requirements related to hail exposure. The performance requirement for providing a base that is not deteriorated and provides satisfactory support for additional roofing material was deemed adequate and preferable to hail exposure requirements for asphalt shingles.

When the code requires tear-off of the old roofing material before installing the new roof, the addition of Exception 4 clarifies that an adhered ice barrier does not need to be removed. Removal of a self-adhered ice barrier membrane results in damage to the roof sheathing. In this application, the code allows for an additional layer of self-adhered underlayment to be applied over the existing membrane before applying the new roofing material.

R907.3

Recovering versus Replacement of Roofing

International Code Council®

Reroofing

CHANGE TYPE: Modification

CHANGE SUMMARY: The hail exposure map, related definitions, and the limitations on reroofing in hail zones have been deleted from the code. A new exception clarifies that the reroofing provisions do not require the removal of self-adhered ice barrier underlayment.

2012 CODE: **R907.3 Recovering Versus Replacement.** New roof coverings shall not be installed without first removing all existing layers of roof coverings where any of the following conditions exist:

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. ~~For asphalt shingles, when the building is located in an area subject to moderate or severe hail exposure according to Figure R903.5.~~

Exceptions:

1. Complete and separate roofing systems, such as standing-seam metal roof systems, that are designed to transmit the roof loads directly to the building's structural system and that do not rely on existing roofs and roof coverings for support, shall not require the removal of existing roof coverings.
2. Installation of metal panel, metal shingle, and concrete and clay tile roof coverings over existing wood shake roofs shall be permitted when the application is in accordance with Section R907.4.
3. The application of new protective coating over existing spray polyurethane foam roofing systems shall be permitted without tear-off of existing roof coverings.
4. Where the existing roof assembly includes an ice barrier membrane that is adhered to the roof deck, the existing ice barrier membrane shall be permitted to remain in place and covered with an additional layer of ice barrier membrane in accordance with Section R905.

~~**R903.5 Hail Exposure.** Hail exposure, as specified in Sections R903.5.1 and R903.5.2, shall be determined using Figure R903.5.~~
~~Hail Exposure Map~~

~~**R903.5.1 Moderate Hail Exposure.** One or more hail days with hail diameters larger than 1.5 inches (38 mm) in a 20-year period.~~

in one clear sentence followed by the exceptions permitting a reduction in the net ventilating area. The minimum ventilating amounts remain the same—a net free vent area of 1/150 of the vented space with a reduction to 1/300 of the vented space when complying with one of two criteria. There are changes to the exceptions, though. Previously, the ventilating area could be cut in half if a Class I or Class II vapor retarder was installed on the ceiling of the conditioned space. The change recognizes that application of a vapor retarder in warm climates creates moisture problems and should not be allowed. For reducing the net vent area, the new language in the first exception limits the use of the vapor retarder to cold climates: Climate Zones 6, 7, and 8. The revised text also changes the term "vapor barrier" to the correct, defined term "vapor retarder."

The second exception changes the ratio requirements for dividing the ventilation between roof vents and soffit or eave vents. The code has always recognized the improved effectiveness of cross ventilation in moving air through an attic space to reduce moisture content and prevent condensation within the space. Previously, the code prescribed the roof vents to supply a minimum of 50% and not more than 80% of the total required vent area, with the balance supplied by soffit vents. Cross ventilation is most effective when the required amount of venting is split approximately equal for upper and lower vent locations. The revised language requires no less than 40% and no more than 50% of the total required vent area to be supplied by the upper vents. The upper vents are no longer required to be at least 3 feet above the eave vents. Because this measurement is taken vertically, the 3-foot separation may be difficult to achieve with low-slope roofs. The code now requires that the upper vents be located no more than 3 feet below the ridge unless obstructions make this location infeasible.

The last part of the revisions to attic ventilation clarifies that vents must be installed in accordance with the manufacturer's installation instructions and must provide weather protection as prescribed in Chapters 7 and 9. Use of the term "ventilators" is not meant to imply that mechanical or wind-driven ventilators are required. In this context, "ventilators" refers to any type of approved vent, such as conventional ridge, roof, and soffit vents.

R806 continued

R806.2 Minimum Vent Area. The ~~total~~ minimum net free ventilating area shall ~~not~~ be ~~less than~~ 1/150 of the area of the vented space ~~ventilated except that reduction of the total area to 1/300 is permitted provided that at least 50 percent and not more than 80 percent of the required ventilating area is provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet (914 mm) above the eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents. As an alternative, the net free cross-ventilation area may be reduced to 1/300 when a Class I or II vapor barrier is installed on the warm-in-winter side of the ceiling~~.

Exceptions: The minimum net free ventilation area shall be 1/300 of the vented space provided one or more of the following conditions are met:

1. In climate zones 6, 7, and 8 a Class I or Class II vapor retarder is installed on the warm-in-winter side of the ceiling.
2. At least 40 percent and not more than 50 percent of the required ventilating area is provided by ventilators located in the upper portion of the attic or rafter space. Upper ventilators shall be located no more than 3 feet (914 mm) below the ridge or highest point of the space, measured vertically, with the balance of the required ventilation provided by eave or cornice vents. Where the location of wall or roof framing members conflicts with the installation of upper ventilators, installation more than 3 feet (914 mm) below the ridge or highest point of the space shall be permitted.

R806.3 Vent and Insulation Clearance. Where eave or cornice vents are installed, insulation shall not block the free flow of air. A minimum of a 1-inch (25 mm) space shall be provided between the insulation and the roof sheathing and at the location of the vent.

R806.4 Installation and Weather Protection. Ventilators shall be installed in accordance with manufacturer's installation instructions. Installation of ventilators in roof systems shall be in accordance with the requirements of Section R903. Installation of ventilators in wall systems shall be in accordance with the requirements of Section R703.1.

CHANGE SIGNIFICANCE: Attic ventilation serves to prevent moisture build-up and condensation within attic spaces. In certain warm, dry climates, experience has shown that attics without ventilation do not experience the detrimental effects of moisture. The IRC now specifically allows the building official to determine if attic ventilation is required based on the local climate. Although the building official has authority under Section R104.10 to grant modifications to the code and authority under Section R104.11 to approve alternative methods and materials that satisfy the intent and purpose of the code, this new exception is specific to attic ventilation requirements.

In Section R806.2, the long paragraph describing the options for determining the amount of ventilation required was deemed awkward and difficult to understand. This section has been revised to place the general rule

R806
Roof Ventilation

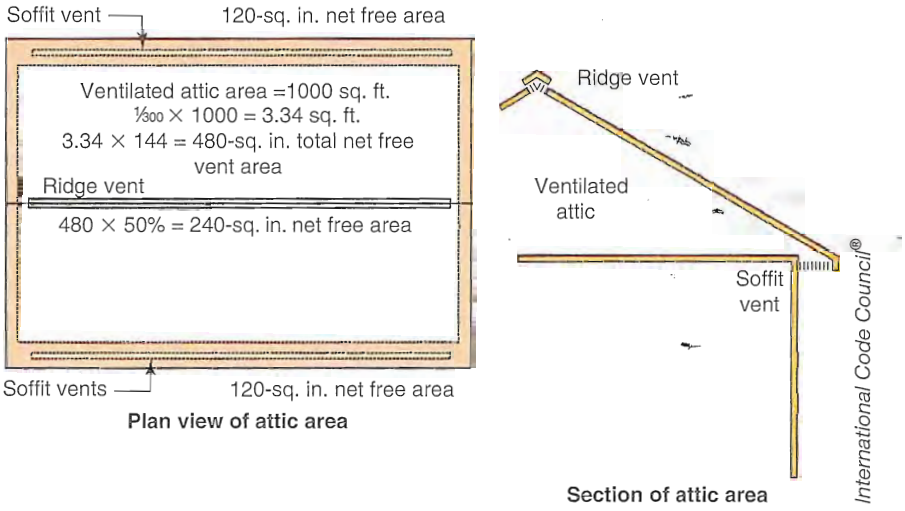
CHANGE TYPE: Modification

CHANGE SUMMARY: The code now provides an option to omit attic ventilation where climate and experience demonstrate it is not necessary. The provisions for minimum vent area have been revised by placing two exceptions after the general rule to clarify the meaning. The exception for reducing the ventilation area when a vapor retarder is installed on the ceiling now only applies to cold-weather climates. The reduction in vent area based on cross ventilation now requires no less than 40% and no more than 50% (previously 50% and 80%) of the required ventilating area to be placed in the upper portion of the roof and no more than 3 feet below the ridge. The requirement for the upper vents to be at least 3 feet above the eave vents has been removed.

2012 CODE: **R806.1 Ventilation Required.** Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain or snow. Ventilation openings shall have a least dimension of 1/16-inch (1.6 mm) minimum and 1/4-inch (6.4 mm) maximum. Ventilation openings having a least dimension larger than 1/4 inch (6.4 mm) shall be provided with corrosion-resistant wire cloth screening, hardware cloth, or similar material with openings having a least dimension of 1/16-inch (1.6 mm) minimum and 1/4-inch (6.4 mm) maximum. Openings in roof framing members shall conform to the requirements of Section R802.7. Required ventilation openings shall open directly to the outside air.

Exception: Attic ventilation shall not be required when determined not necessary by the code official due to atmospheric or climatic conditions.

R806 continues



Roof ventilation

R802.11 continued

the truss design drawings. While truss roof systems have an engineered design in jurisdictions that require the practice, in regions where there is no requirement for an engineered design, the uplift value on the individual truss design drawings may not necessarily reflect an accurate evaluation of all site, wind, and building conditions. Therefore, the option of using Table R802.11 has been retained for trusses.

The three options provided for selecting a connection to resist uplift for manufactured trusses are:

- Truss design drawings
- Table R802.11
- An engineered approach

Table R802.11 in the previous edition of the IRC had not been updated for some time and was considered to be overly conservative for many typical houses. The uplift loads were based on low-slope (4:12 pitch or less) roofs and did not account for the reduction in uplift loads that occur on higher-slope (5:12 pitch or greater) roofs or on hip roofs in accordance with ASCE 7. Table R802.11 has been replaced with a new Table based on Table 2.2A of the *Wood Frame Construction Manual* (WFCM), which is based on the ASCE 7-05 wind load provisions. In addition to providing values for both Wind Exposure Categories B and C, the new table expands upon both the existing IRC table and the WFCM table by incorporating values for high-slope roofs. These factors were derived using the ASCE 7 wind provisions and the calculation method used to develop Table 2.2A of the WFCM. When the roof slope is 5:12 or greater, footnote e provides a further reduction for hip roofs because hips roofs have demonstrated improved performance in high-wind events.

In addition to improving the understanding and accuracy of the provisions, the changes intend to encourage designers and builders to use hip roofs and high-slope roofs. Because these types of roofs perform better than low-slope roofs in high-wind events, uplift loads are appropriately reduced and may avoid triggering manufactured uplift connector requirements.

CHANGE SIGNIFICANCE: The IRC prescribes minimum roof-to-wall connections to resist wind uplift forces. These provisions have been the subject of much debate through several code development cycles. In particular, code users have expressed confusion in determining when a manufactured truss or rafter connector was required instead of conventional toe-nail connections in accordance with Table R602.3(1) because the code did not clearly establish a threshold or trigger point. In addition, the manufactured truss provisions required connectors to provide uplift resistance of not less than 175 pounds and in accordance with the truss design drawings, which limited flexibility in satisfying the uplift criteria and did not mesh with the roof tie-down provisions. The prescriptive connection values in Table R802.11 were based on low-slope roofs and Wind Exposure Category B only and were considered outdated and overly conservative, adding to the difficulty in accurately complying with the performance provisions for a complete load path. Section R802.11 has been completely revised to address these concerns and to provide accurate uplift loads in a tabular format.

Where rafter or truss spacing does not exceed 24 inches on center, the prescriptive connection requirements (toenailing) of Table R602.3(1) are permitted to be used under either of the following conditions:

- Where the uplift force does not exceed 200 pounds, or
- Where the roof pitch is 5:12 or greater and all of the following criteria are met:
  - 90-mph wind speed
  - Wind Exposure Category B
  - Maximum building width of 32 feet
  - Maximum roof overhang of 24 inches

In the first condition, the 200-pound maximum capacity for conventional rafter-to-wall or truss-to-wall connections using toe-nails is based largely on capacities calculated from AF&PA's *National Design Specification (NDS) for Wood Construction*. The applicable uplift force for a particular installation may be determined from Table R802.11.

When either of the conditions above is satisfied, an engineered connector may be used but is not required. In this case, for a conventional framing connection, Table R602.3(1) requires the rafter or truss to be toe nailed to the top plate with three 16d box nails or three 10d common nails. Two toe nails are placed on one side and one on the other side of the truss or rafter. When the uplift force exceeds 200 pounds and the building does not meet all of the criteria of the second condition above, then an engineered clip or strap connector is required. The rated capacity of the connector must meet or exceed the wind uplift value. These new provisions set an objective trigger point at which engineered metal ties or straps are required and resolve the concerns regarding the ambiguity and inconsistency of previous requirements.

The provisions for truss-to-wall connections have been removed from Section R802.10 and all connection requirements to resist wind uplift forces have been consolidated in Section R802.11. The code now provides flexibility in choosing the method for determining connection requirements for trusses and does not require use of the uplift value in

R802.11 continues

R802.11 continued

		Exposure C							
		Basic Wind Speed (MPH)							
Rafter or Truss Spacing	Roof Span (feet)	85 Roof Pitch		90 Roof Pitch		100 Roof Pitch		110 Roof Pitch	
		<5:12	≥5:12	<5:12	≥5:12	<5:12	≥5:12	<5:12	≥5:12
12" o.c.	12	94	82	114	99	157	137	206	179
	18	120	104	146	127	204	177	268	233
	24	146	127	179	156	251	218	330	287
	28	164	143	201	175	283	246	372	324
	32	182	158	224	195	314	273	414	360
	36	200	174	246	214	346	301	456	397
	42	227	197	279	243	394	343	520	452
	48	254	221	313	272	441	384	583	507
16" o.c.	12	125	109	152	132	209	182	274	238
	18	160	139	194	169	271	236	356	310
	24	194	169	238	207	334	291	439	382
	28	218	190	267	232	376	327	495	431
	32	242	211	298	259	418	364	551	479
	36	266	231	327	284	460	400	606	527
	42	302	263	372	324	524	456	691	601
	48	338	294	416	362	587	511	775	674
24" o.c.	12	188	164	228	198	314	273	412	358
	18	240	209	292	254	408	355	536	466
	24	292	254	358	311	502	437	660	574
	28	328	285	402	350	566	492	744	647
	32	364	317	448	390	628	546	828	720
	36	400	348	492	428	692	602	912	793
	42	454	395	558	485	786	684	1040	905
	48	508	442	626	545	882	767	1166	1014

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mph = 0.447 m/s, 1 pound = 0.454 kg.

a. The uplift connection forces are based on a maximum 33 foot mean roof height and Wind Exposure Category B or C. For Exposure D, the uplift connection force shall be selected from the Exposure C portion of the Table using the next highest tabulated basic wind speed. The Adjustment Coefficients in Table R301.2(3) shall not be used to multiply the above forces for Exposures C and D or for other mean roof heights.

b. The uplift connection forces include an allowance for roof and ceiling assembly dead load of 15 psf.

c. The tabulated uplift connection forces are limited to a maximum roof overhang of 24 inches.

d. The tabulated uplift connection forces shall be permitted to be multiplied by 0.75 for connections not located within 8 feet of building corners.

e. For buildings with hip roofs with 5:12 and greater pitch, the tabulated uplift connection forces shall be permitted to be multiplied by 0.70. This reduction shall not be combined with any other reduction in tabulated forces.

f. For wall-to-wall and wall-to-foundation connections, the uplift connection force shall be permitted to be reduced by 60 plf for each full wall above.

g. Linear interpolation between tabulated roof spans and wind speeds shall be permitted.

h. The tabulated forces for a 12" on center spacing shall be permitted to be used to determine the uplift load in pounds per linear foot.

~~c. The uplift connection requirements include an allowance for 10 pounds of dead load.~~
~~d. The uplift connection requirements do not account for the effects of overhangs. The magnitude of the above loads shall be increased by adding the overhang loads found in the table. The overhang loads are also based on framing spaced 24 inches on center. The overhang loads given shall be multiplied by the overhang projection and added to the roof uplift value in the table.~~
~~e. The uplift connection requirements are based on wind loading on end zones as defined in Figure 6-2 of ASCE 7. Connection loads for connections located a distance of 20% of the least horizontal dimension of the building from the corner of the building are permitted to be reduced by multiplying the Table connection value by 0.7 and multiplying the overhang load by 0.8.~~
~~f. For wall-to-wall and wall-to-foundation connections, the capacity of the uplift connector is permitted to be reduced by 100 pounds for each full wall above. (For example, if a 600-pound rated connector is used on the roof framing, a 500-pound rated connector is permitted at the next floor level down).~~

TABLE R802.11 Rafter or Truss Uplift Connection Forces from Wind (pounds per connection)

		Exposure B							
		Basic Wind Speed (MPH)							
		85		90		100		110	
Rafter or Truss Spacing	Roof Span (feet)	Roof Pitch		Roof Pitch		Roof Pitch		Roof Pitch	
		<5:12	≥5:12	<5:12	≥5:12	<5:12	≥5:12	<5:12	≥5:12
12″ o.c.	12	47	41	62	54	93	81	127	110
	18	59	51	78	68	119	104	165	144
	24	70	61	93	81	145	126	202	176
	28	77	67	104	90	163	142	227	197
	32	85	74	115	100	180	157	252	219
	36	93	81	126	110	198	172	277	241
	42	105	91	143	124	225	196	315	274
	48	116	101	159	138	251	218	353	307
16″ o.c.	12	63	55	83	72	124	108	169	147
	18	78	68	103	90	159	138	219	191
	24	93	81	124	108	193	168	269	234
	28	102	89	138	120	217	189	302	263
	32	113	98	153	133	239	208	335	291
	36	124	108	168	146	264	230	369	321
	42	139	121	190	165	299	260	420	365
	48	155	135	212	184	335	291	471	410
24″ o.c.	12	94	82	124	108	186	162	254	221
	18	117	102	155	135	238	207	329	286
	24	140	122	186	162	290	252	404	351
	28	154	134	208	181	326	284	454	395
	32	170	148	230	200	360	313	504	438
	36	186	162	252	219	396	345	554	482
	42	209	182	285	248	449	391	630	548
	48	232	202	318	277	502	437	706	614

continued

R802.11 continues

R802.11 continued

R802.11 Roof Tie-down.

R802.11.1 Uplift Resistance. Roof assemblies shall have uplift resistance in accordance with Sections R802.11.1.2 and R802.11.1.3 ~~which are subject to wind uplift pressures of 20 pounds per square foot (960 Pa) or greater shall have roof rafters or trusses attached to their supporting wall assemblies by connections capable of providing the resistance required in Table R802.11. Wind uplift pressures shall be determined using an effective wind area of 100 square feet (9.3 m2) and Zone 1 in Table R301.2(2), as adjusted for height and exposure per Table R301.2(3).~~

~~A continuous load path shall be designed to transmit the uplift forces from the rafters or trusses to the foundation.~~

Where the uplift force does not exceed 200 pounds, rafters and trusses spaced not more than 24 inches (610 mm) on center shall be permitted to be attached to their supporting wall assemblies in accordance with Table R602.3(1).

Where the basic wind speed does not exceed 90 mph, the wind exposure category is B, the roof pitch is 5:12 or greater, and the roof span is 32 feet (9754 mm) or less, rafters and trusses spaced not more than 24 inches (610 mm) on center shall be permitted to be attached to their supporting wall assemblies in accordance with Table R602.3(1).

R802.11.1.2 Truss Uplift Resistance. Trusses shall be attached to supporting wall assemblies by connections capable of resisting uplift forces as specified on the truss design drawings. Uplift forces shall be permitted to be determined as specified by Table R802.11, if applicable, or as determined by accepted engineering practice.

R802.11.1.3 Rafter Uplift Resistance. Individual rafters shall be attached to supporting wall assemblies by connections capable of resisting uplift forces as determined by Table R802.11 or as determined by accepted engineering practice. Connections for beams used in a roof system shall be designed in accordance with accepted engineering practice.

~~**TABLE R802.11 Required Strength Of Truss Or Rafter Connections To Resist Wind Uplift Forces[a,b,c,e,f] (Pounds per connection)**~~

~~Basic Wind Speed (mph) (3-second gust)~~	~~Roof Span (feet)~~							~~Overhangs[d] (pounds/ foot)~~
	~~12~~	~~20~~	~~24~~	~~28~~	~~32~~	~~36~~	~~40~~	
~~85~~	~~72~~	~~120~~	~~145~~	~~169~~	~~193~~	~~217~~	~~241~~	~~38.55~~
~~90~~	~~91~~	~~151~~	~~181~~	~~212~~	~~242~~	~~272~~	~~302~~	~~43.22~~
~~100~~	~~131~~	~~216~~	~~262~~	~~305~~	~~349~~	~~393~~	~~436~~	~~53.36~~
~~110~~	~~175~~	~~292~~	~~351~~	~~409~~	~~467~~	~~526~~	~~584~~	~~64.56~~

~~For SI: 1 inch = 25.4 mm, 1 foot = 305 mm, 1 mph = 0.447 m/s, 1 pound/foot = 14.5939 N/m, 1 pound = 0.454 kg.~~

~~a. The uplift connection requirements are based on a 30 foot mean roof height located in Exposure B. For Exposures C and D and for other mean roof heights, multiply the above loads by the Adjustment Coefficients in Table R301.2(3).~~

~~b. The uplift connection requirements are based on the framing being spaced 24 inches on center. Multiply by 0.67 for framing spaced 16 inches on center and multiply by 0.5 for framing spaced 12 inches on center.~~

continued

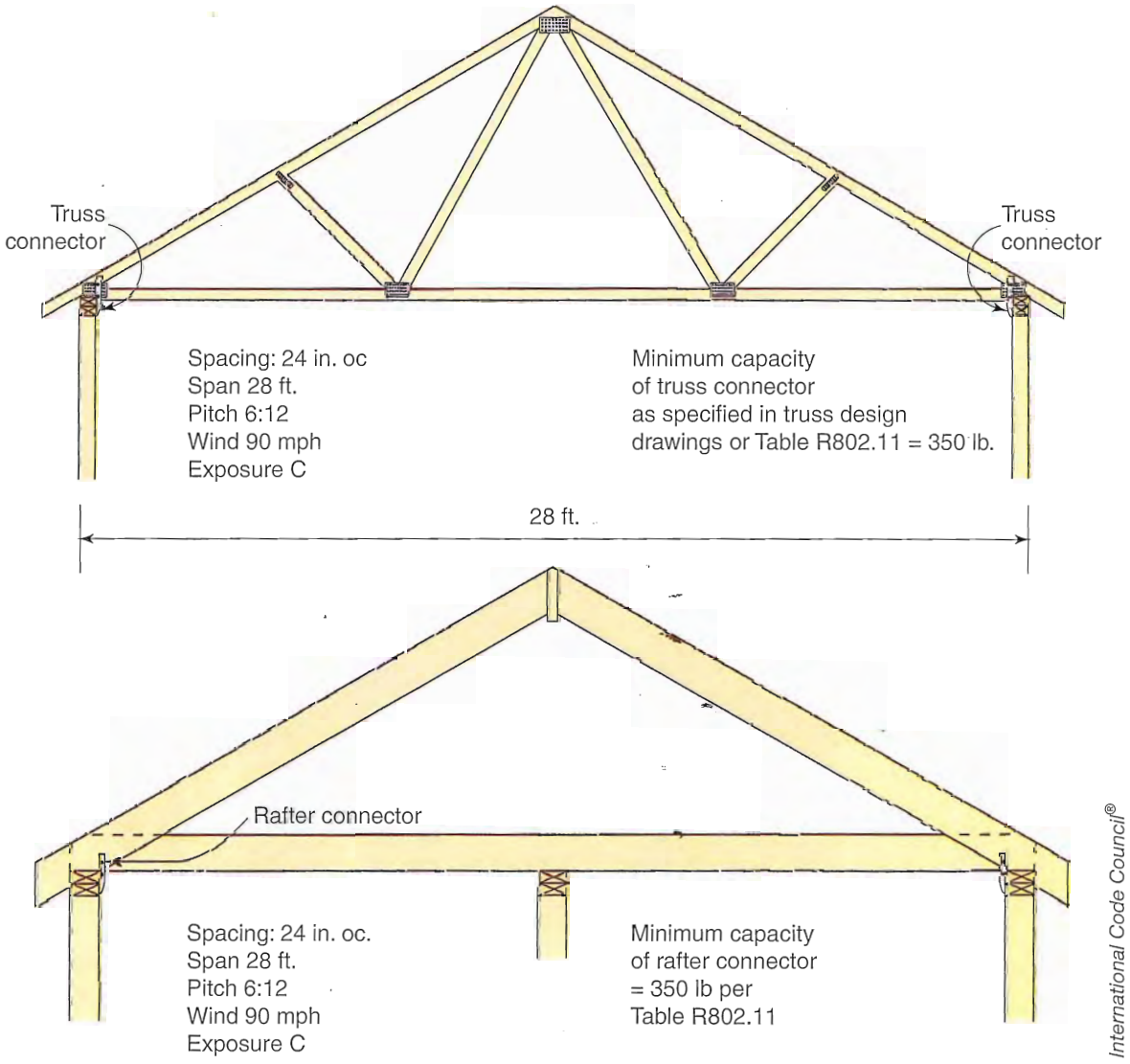
CHANGE TYPE: Modification

R802.11
Roof Uplift Resistance

CHANGE SUMMARY: The provisions for roof connections to resist wind uplift forces have been updated to current standards and simplified for ease of use. Table R802.11 has been replaced to provide accurate values for both low- and high-slope roofs in Wind Exposure Categories B and C.

2012 CODE: **R802.10.5 Truss to Wall Connection.** ~~Trusses shall be connected to wall plates by the use of *approved* connectors having a resistance to uplift of not less than 175 pounds (779 N) and shall be installed in accordance with the manufacturer's specifications. For roof assemblies subject to wind uplift pressures of 20 pounds per square foot (960 Pa) or greater, as established in Table R301.2(2), adjusted for height and exposure per Table R301.2(3), see section R802.11.~~

R802.11 continues



Rafter or truss connectors required for uplift forces greater than 200 pounds when located in Wind Exposure Category C.

R501.3 continued

4. Wood floor assemblies using dimension lumber or structural composite lumber equal to or greater than 2-inch by 10-inch nominal dimension, or other approved floor assemblies demonstrating equivalent fire performance.

CHANGE SIGNIFICANCE: Installation of ½-inch gypsum board, ⅝-inch wood structural panel, or other approved material is now required on the underside of floor assemblies of dwelling units and accessory buildings constructed under the IRC. The change addresses concerns for firefighter safety and incidents of injury or death to firefighters while fighting residential fires due to the collapse of floors. The application of gypsum wallboard or other approved material intends to provide some protection to the floor system against the effects of fire and delay collapse of the floor. This provision primarily is aimed at light-frame construction consisting of I-joists, manufactured floor trusses, cold-formed steel framing, and other materials and manufactured products considered most susceptible to collapse in a fire.

There are a number of exceptions to this new rule. Solid-sawn lumber and structural composite lumber perform fairly well in retaining adequate strength under fire conditions. Therefore, floors framed with nominal 2 x 10s or larger of these materials are exempt from this section's fire protection requirements. Similarly, if sprinklers are installed to protect the space below the floor assembly, additional protection is not required. Crawlspaces without storage or fuel-fired appliances are not considered to contain sufficient fuel load to present an undue hazard to floor collapse. The code also exempts small areas of ceiling, such as may occur in a utility room in a basement, from the fire protection requirements, provided the space is not open to other portions of the floor system. Therefore, fireblocking is required to isolate the unprotected area from the protected area of the floor system.

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Open web floor trusses require a fire protection membrane applied to the underside.

CHANGE TYPE: Addition

CHANGE SUMMARY: With some exceptions, the code now requires ½-inch gypsum board or equivalent material to be applied to the underside of floor assemblies in buildings regulated by the IRC.

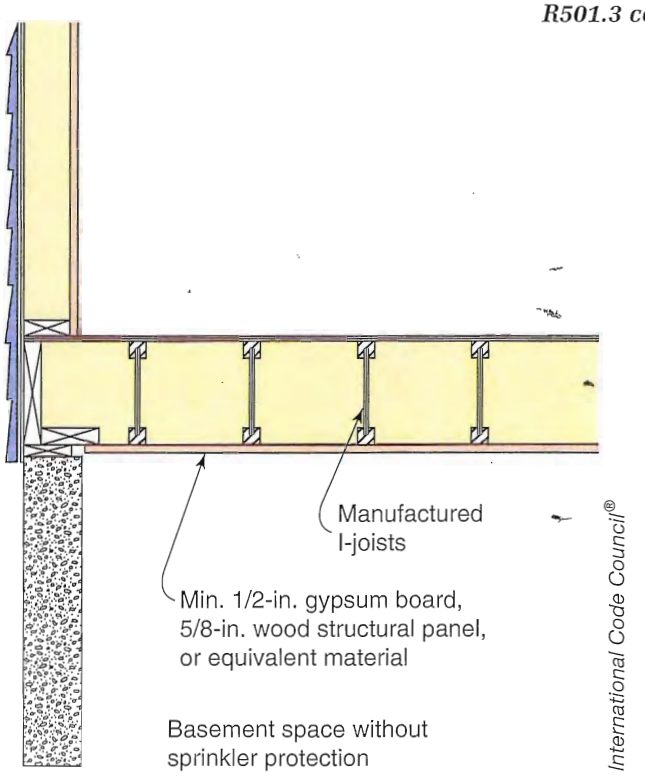
R501.3
Fire Protection of Floors

2012 CODE: **R501.3 Fire Protection of Floors.** Floor assemblies, not required elsewhere in this code to be fire resistance rated, shall be provided with a ½-inch gypsum wallboard membrane, ⅝-inch wood structural panel membrane, or equivalent on the underside of the floor framing member.

Exceptions:

1. Floor assemblies located directly over a space protected by an automatic sprinkler system in accordance with Section P2904, NFPA13D, or other approved equivalent sprinkler system.
2. Floor assemblies located directly over a crawl space not intended for storage or fuel-fired appliances.
3. Portions of floor assemblies can be unprotected when complying with the following:
   - 3.1 The aggregate area of the unprotected portions shall not exceed 80 square feet per story
   - 3.2 Fire blocking in accordance with Section R302.11.1 shall be installed along the perimeter of the unprotected portion to separate the unprotected portion from the remainder of the floor assembly.

R501.3 continues



Fire protection of floors

R405.1 continued

2 inches (51 mm) of washed gravel or crushed rock at least one sieve size larger than the tile joint opening or perforation and covered with not less than 6 inches (152 mm) of the same material.

Exception: A drainage system is not required when the foundation is installed on well-drained ground or sand-gravel mixture soils according to the Unified Soil Classification System, Group I Soils, as detailed in Table R405.1.

CHANGE SIGNIFICANCE: Adequate foundation drainage prevents water intrusion and damage to below-grade spaces in dwellings, typically basements, which are often used as living space. The code requires foundation drainage to discharge to an approved drainage system. To function properly, drain pipe must remain reasonably free of silt and fine debris that may slow or stop the effective flow of ground water in the system. Continuous perforated plastic drain piping is a common material used for foundation drainage systems. For an added measure of protection against introduction of fine debris into the pipe, the code now requires this type of drain pipe to be surrounded with an approved filter material, often referred to in the industry as a sock. As an alternative, the approved filter membrane material may be placed to cover the required washed gravel or crushed rock placed over the perforated drain pipe, similar to the provision for gravel or crushed stone drains.

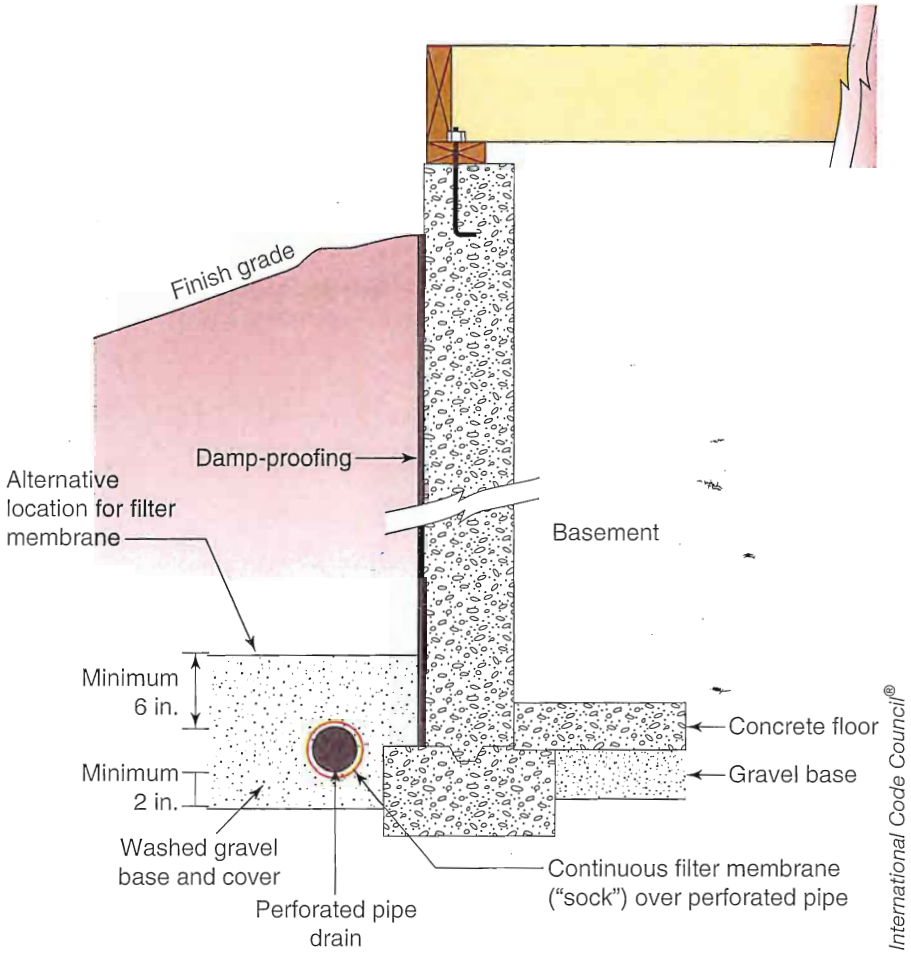
R405.1
Foundation Drainage

CHANGE TYPE: Modification

CHANGE SUMMARY: A filter membrane is now required for perforated foundation drains.

2012 CODE: **R405.1 Concrete or Masonry Foundations.** Drains shall be provided around all concrete or masonry foundations that retain earth and enclose habitable or usable spaces located below grade. Drainage tiles, gravel or crushed stone drains, perforated pipe or other approved systems or materials shall be installed at or below the area to be protected and shall discharge by gravity or mechanical means into an approved drainage system. Gravel or crushed stone drains shall extend at least 1 foot (305 mm) beyond the outside edge of the footing and 6 inches (152 mm) above the top of the footing and be covered with an approved filter membrane material. The top of open joints of drain tiles shall be protected with strips of building paper.. Perforated drains shall be surrounded with an approved filter membrane or the filter membrane shall cover the washed gravel or crushed rock covering the drain. ~~and the d~~ Drainage tiles or perforated pipe shall be placed on a minimum of

R405.1 continues



Filter membrane required for perforated pipe foundation drain.

R310.2.2

Window Well Drainage

International Code Council®

A window well serving an emergency escape and rescue opening requires provisions for drainage.

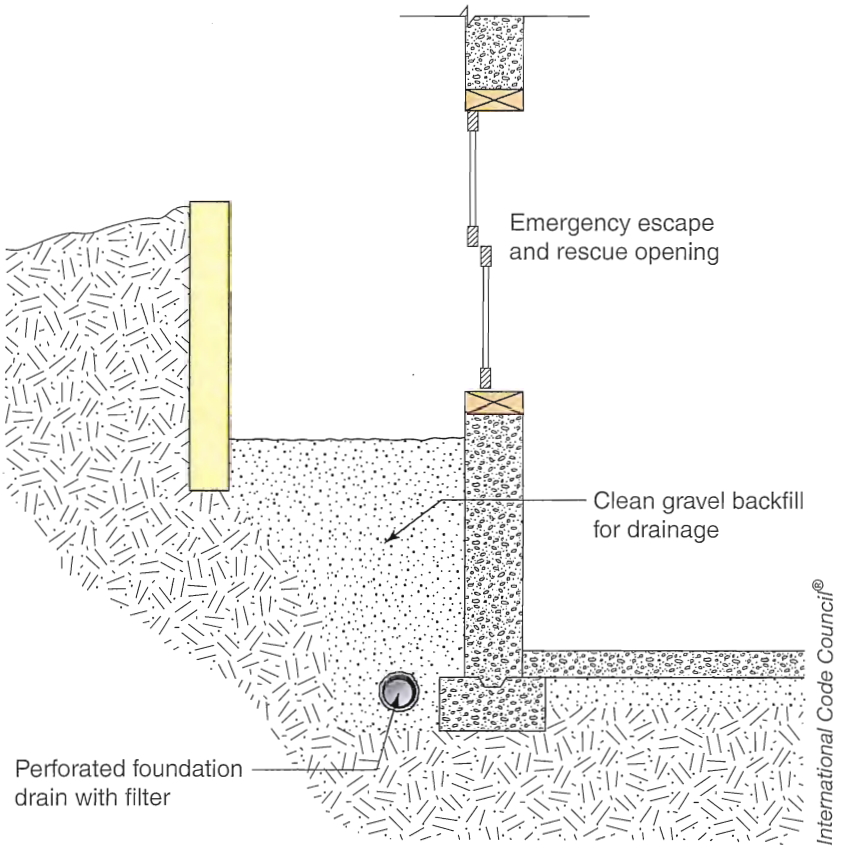
CHANGE TYPE: Addition

CHANGE SUMMARY: Except for locations with well-drained soils, window wells serving emergency escape and rescue openings now require a means to drain surface water to the foundation drainage system.

2012 CODE: **R310.2.2 Drainage.** Window wells shall be designed for proper drainage by connecting to the building's foundation drainage system required by Section R405.1 or by an approved alternate method.

> **Exception:** A drainage system for window wells is not required when the foundation is on well-drained soil or sand-gravel mixture soils according to the United Soil Classification System, Group I Soils, as detailed in Table R405.1.

CHANGE SIGNIFICANCE: Depending on climate and soil conditions, window wells may retain significant amounts of water with the potential to damage building components, including sheathing, siding, framing, and windows. Saturation and flooding of a window well also may cause water intrusion into concealed or living spaces of the home, causing property damage or an unhealthy living environment. Unless the ground consists of well-drained soils or a sand-gravel mixture, Section R310 now requires window wells serving emergency escape and rescue openings to be designed to direct surface water to the foundation drainage system.



Drainage for a window well serving an emergency escape and rescue opening.

CHANGE SIGNIFICANCE: The IRC is now more specific in describing the method for measuring the maximum sill height of an emergency escape and rescue opening. The maximum height remains unchanged at 44 inches and typically is only of concern when a window is serving this function, rather than a door, and typically in a basement installation. Previously, the measurement was taken from the floor to the top of the window sill. Not all window installations have a sill in the traditional sense of the word, and the measurement has been taken to any flat surface at the base of the window, whether it was finish drywall, trim, or an extension of the window frame. In some cases, windows have a stop, channel, or weather strip that extends above the surface of the sill, though this extension rarely exceeds ½ inch. The previous language was considered ambiguous and was perceived as causing inconsistency in the application of the code provision. The new language clearly prescribes the method of measurement from the finished floor to the bottom of the clear opening and intends to offer a higher level of precision in verifying compliance with this code provision. In the case of a stop or extension above the sill, the measurement is taken to the top of the stop or extension.

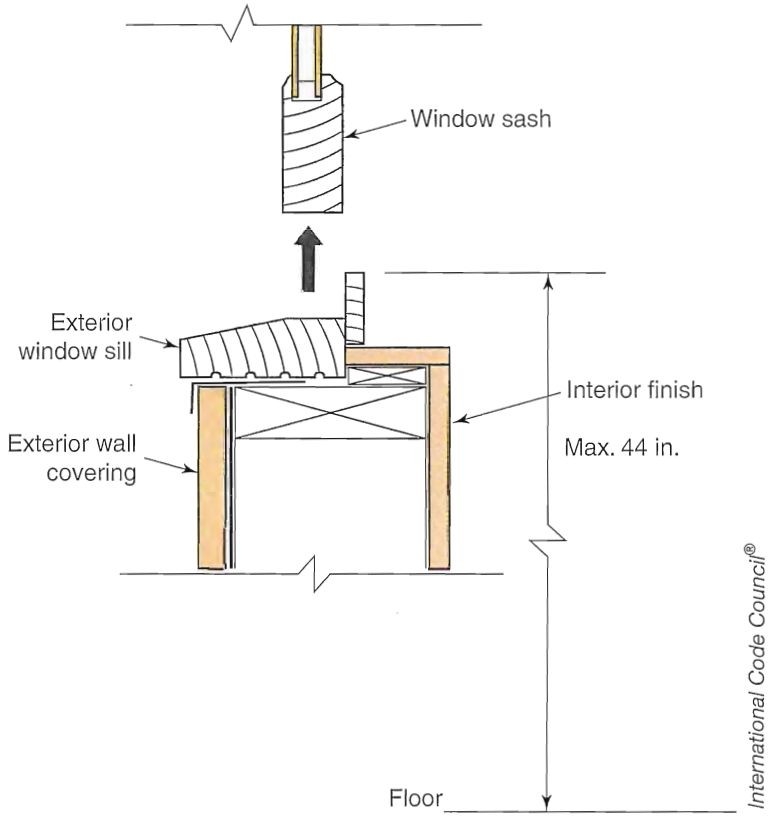
R310.1

Emergency Escape and Rescue Openings

CHANGE TYPE: Clarification

CHANGE SUMMARY: The maximum sill height for an emergency escape and rescue opening is now measured from the finished floor to the bottom of the clear opening.

2012 CODE: **R310.1 Emergency Escape and Rescue Required.** Basements, habitable attics and every sleeping room shall have at least one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room. Where emergency escape and rescue openings are provided they shall have a sill height of not more than 44 inches (1118 mm) measured from the finished floor to the bottom of the clear opening ~~above the floor~~. Where a door opening having a threshold below the adjacent ground elevation serves as an emergency escape and rescue opening and is provided with a bulkhead enclosure, the bulkhead enclosure shall comply with Section R310.3. The net clear opening dimensions required by this section shall be obtained by the normal operation of the emergency escape and rescue opening from the inside. Emergency escape and rescue openings with a finished sill height below the adjacent ground elevation shall be provided with a window well in accordance with Section R310.2. Emergency escape and rescue openings shall open directly into a public way, or to a yard or court that opens to a public way.



The maximum sill height for emergency escape and rescue openings is measured from the floor to the bottom of the clear opening.

CHANGE SIGNIFICANCE: In residential occupancies, the greatest risk for a fall into glazing causing injury occurs at the bottom of stairways, and the code has always defined the locations adjacent to bottom landings as hazardous locations. These provisions have undergone modification to clarify their intent and application, and provide consistency with the other safety glazing provisions. Item 8 in the list of hazardous locations related to glazing becomes Subsection R308.4.7 in the 2012 IRC. The title of this subsection clarifies that it is glazing adjacent to the bottom landing that is being regulated, not glazing adjacent to the stairway. Similar to the stairway provisions in the previous item, the exception is more appropriately located in the main rule of this subsection. Previously, the rule stated that the glazing (other than safety glazing) required installation at least 60 inches above the walking surface. Exception 2 to the rule allowed installations less than 60 inches above the walking surface without requiring safety glazing provided a solid wall or panel protected the glazing to a height of 34 to 36 inches. The intent was that a window installed in a wall with the bottom exposed edge of the glazing at least 34 inches above the walking surface was not considered to be in a hazardous location. Because the standard installation is a window that is installed in a wall, the exception becomes the rule for the 2012 edition of the IRC. The references to stairways in Subsection R308.4.7 (previously item 8) have been deleted. Subsection R308.4.6 contains information related to glazing near stairways, and it was not thought necessary to repeat the requirements in the subsequent subsection. The previous range of 34 to 36 inches shown in the exception intended to correspond to the minimum heights of handrails and guards, respectively, but implied to some that there was a maximum height limit. A range of dimensions is confusing in this case, and the code now sets a minimum height of 36 inches to correspond to the guard requirements. Therefore, where the bottom exposed edge of the glazing adjacent to the landing is less than 36 inches above the walking surface and the glazing is within 60 inches of the bottom stair nosing, it is considered a hazardous location and safety glazing is required. Conversely, satisfying either of the following conditions means the glazing at the bottom landing is not considered to be in a hazardous location and therefore does not require safety glazing:

- The bottom exposed edge of the glazing is 36 inches or greater above the walking surface.
- The glazing is greater than 60 inches from the nosing of the bottom tread of the stairway measured horizontally.

The modified provisions for glazing near a bottom landing differ from those for glazing adjacent to stairways in one significant way. Glazing adjacent a stairway that is less than 36 inches above the tread may be protected by a single rail meeting the prescribed load and dimension requirements or be protected by a guard. When so protected, the glazing is not considered to be in a hazardous location and does not require safety glazing. This exception does not apply to glazing near a bottom landing. To eliminate the need for safety glazing requires both a guard and a horizontal clearance of 18 inches between the guard and the glazing. The 18-inch requirement has been deleted from the provisions related to glazing at the side of a stairway.

Revision of these provisions clarifies the meaning, provides objectively measurable dimensions, and brings consistency to the application of glazing requirements in the vicinity of the landing at the bottom of stairways.

R308.4.7

Glazing Adjacent to the Bottom Stair Landing

CHANGE TYPE: Modification

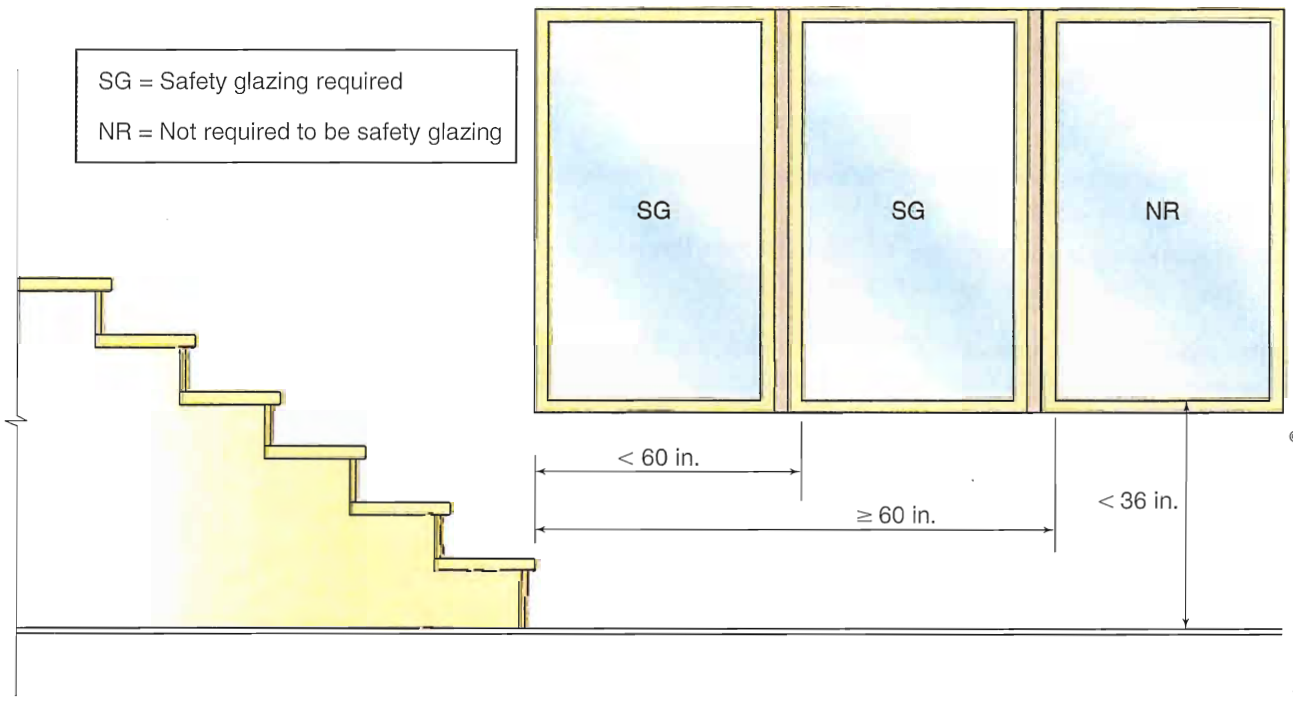
CHANGE SUMMARY: The provisions for glazing installed near the landing at the bottom of a stairway have been revised to clarify the application. The threshold for the minimum height above the walking surface is now 36 inches for determining that the glazing is not in a hazardous location.

2012 CODE: ~~8.~~ **R308.4.7 Glazing Adjacent to the Bottom Stair Landing.** Glazing adjacent to ~~stairways within 60 inches (1524 mm) horizontally of the bottom tread of a stairway in any direction when the exposed surface of~~ the landing at the bottom of a stairway where the glazing is less than ~~60~~ 36 inches (~~1524~~ 914 mm) above the ~~nose of the tread~~ landing and within 60 inches (1524 mm) horizontally of the bottom tread shall be considered a hazardous location.

Exceptions: The glazing is protected by a guard complying with Section R312 and the plane of the glass is more than 18 inches (457 mm) from the guard.

~~1. The side of the stairway has a guardrail or handrail, including balusters or in-fill panels, complying with Sections R311.7.6 and R312 and the plane of the glass is more than 18 inches (457 mm) from the railing; or~~

~~2. When a solid wall or panel extends from the plane of the adjacent walking surface to 34 inches (864 mm) to 36 inches (914 mm) above the walking surface and the construction at the top of that wall or panel is capable of withstanding the same horizontal load as a guard.~~



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Glazing adjacent to the bottom landing of a stairway.

R308.4 continued

Exceptions:

1. Decorative glazing.
2. When there is an intervening wall or other permanent barrier between the door and the glazing.
3. Glazing in walls on the latch side of and perpendicular to the plane of the door in a closed position.
4. ~~Glazing adjacent to a door where~~ Where access through the door is to a closet or storage area 3 feet (914 mm) or less in depth. Glazing in this application shall comply with Section R308.4.3.
5. Glazing that is adjacent to the fixed panel of patio doors.

~~3.~~ **R308.4.3 Glazing in Windows.** Glazing in an individual fixed or operable panel that meets all of the following conditions shall be considered a hazardous location:

~~3.1.~~ 1. The exposed area of an individual pane is larger than 9 square feet (0.836 m^2); and

~~3.2.~~ 2. The bottom edge of the glazing is less than 18 inches (457 mm) above the floor; and

~~3.3.~~ 3. The top edge of the glazing is more than 36 inches (914 mm) above the floor; and

~~3.4.~~ 4. One or more walking surfaces are within 36 inches (914 mm), measured horizontally and in a straight line, of the glazing.

Exceptions:

1. Decorative glazing.
2. When a horizontal rail is installed on the accessible side(s) of the glazing 34 to 38 inches (864 to 965) above the walking surface. The rail shall be capable of withstanding a horizontal load of 50 pounds per linear foot (730 N/m) without contacting the glass and be a minimum of 1½ inches (38 mm) in cross sectional height.
3. Outboard panes in insulating glass units and other multiple glazed panels when the bottom edge of the glass is 25 feet (7620 mm) or more above grade, a roof, walking surfaces, or other horizontal [within 45 degrees (0.79 rad) of horizontal] surface adjacent to the glass exterior.

~~4.~~ **R308.4.4 Glazing in Guards and Railings.** ~~All glazing~~ Glazing in guards and railings, ~~regardless of area or height above a walking surface. Included are~~ including structural baluster panels and nonstructural in-fill panels, regardless of area or height above a walking surface shall be considered a hazardous location.

CHANGE SIGNIFICANCE: Reorganization of the safety glazing requirements results in provisions that are more user-friendly and intends to promote consistency in their application. Each hazardous location now has its own subsection number and title, making the applicable requirement easier to locate. Revisions to the text eliminate conflicts and ambiguous language, and bring the IRC provisions into agreement with the corresponding requirements of the IBC.

R308.4

Hazardous Locations for Glazing

CHANGE TYPE: Clarification

CHANGE SUMMARY: The provisions for hazardous locations related to the installation of glazing have been reorganized for ease of use and consistent application. Each item in the numbered list of hazardous locations has been placed in a separate subsection and given a descriptive title.

2012 CODE: **R308.4 Hazardous Locations.** The ~~following~~ locations specified in Sections R308.4.1 through R308.4.7 shall be considered specific hazardous locations for the purposes of glazing.

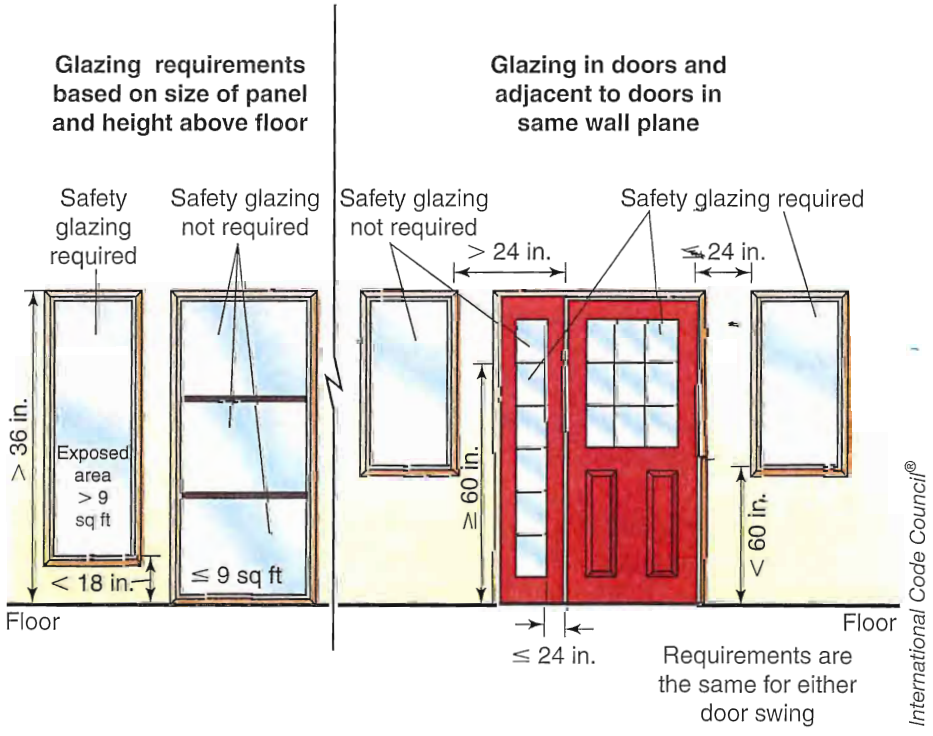
~~1.~~ **R308.4.1 Glazing in Doors.** Glazing in all fixed and operable panels of swinging, sliding, and bifold doors shall be considered a hazardous location.

Exceptions:

1. Glazed openings of a size through which a 3-inch diameter (76 mm) sphere is unable to pass.
2. Decorative glazing.

~~2.~~ **R308.4.2 Glazing Adjacent Doors.** Glazing in an individual fixed or operable panel adjacent to a door where the nearest vertical edge of the glazing is within a 24-inch (610 mm) arc of either vertical edge of the door in a closed position and ~~whose~~ where the bottom exposed edge of the glazing is less than 60 inches (1524 mm) above the floor or walking surface shall be considered a hazardous location.

R308.4 continues



Safety glazing locations

R302.5.1 continued

This new requirement intends to address concerns related to increased fuel loads and fire hazards located in a garage, toxic combustion by-products of fires originating in the garage, and elevated levels of carbon monoxide from the exhaust of vehicles operating in a garage. Functional self-closing devices assist in maintaining the door in a closed position when not in use and intend to help prevent the spread of fire or toxic gases from the garage to the dwelling unit. Proponents of this change did not consider the code-prescribed smoke alarms and carbon monoxide detectors in the dwelling unit as adequate safeguards to address these concerns and expected that the lack of self-closing devices contributed to doors frequently remaining open between the garage and residence, thereby creating a potential hazardous condition.

R302.5.1
Garage Opening Protection

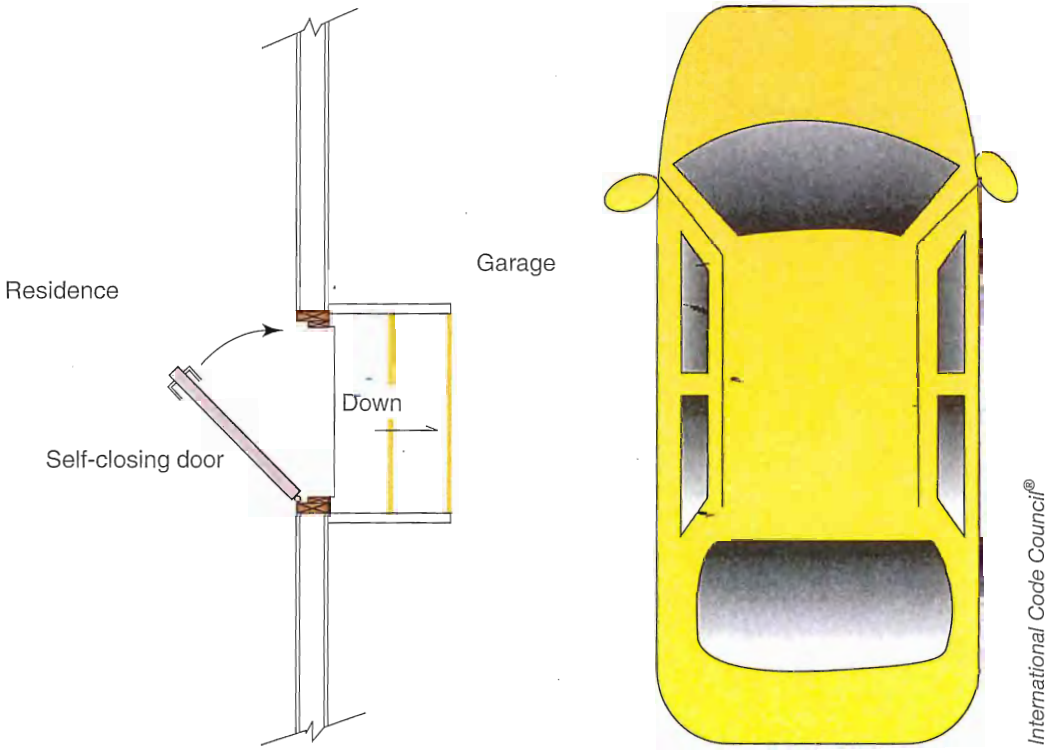
CHANGE TYPE: Modification

CHANGE SUMMARY: Doors between the garage and dwelling unit now require self-closing devices.

2012 CODE: R302.5.1 Opening Protection. 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 solid wood doors not less than 1⅜ inches (35 mm) in thickness, solid or honeycomb core steel doors not less than 1⅜-inches (35 mm) thick, or 20-minute fire-rated doors, equipped with a self-closing device.

CHANGE SIGNIFICANCE: The IRC has always required a minimum level of separation between a dwelling unit and an attached garage to provide some resistance to the spread of fire from the garage side. Typically, this requirement is satisfied with the application of regular ½-inch gypsum board on the garage side of the separation. A fire-resistant-rated wall or floor assembly is not required for this separation. Likewise, the code prescribes the minimum thickness and construction of any door that passes from the garage to the residence, but does not require a fire-resistant-rated door assembly. That is, only the door slab must meet the construction specifications, and the frame and hardware are not evaluated for fire resistance. New to the 2012 IRC, doors from the garage to the residence now require self-closing devices. These may be spring-loaded hinges, automatic closers, or other approved devices.

R302.5.1 continues



The door between a house and a garage is required to be self-closing.

FOR COUNCIL: January 13, 2014

SUBJECT: Suspension of Ordinances to Allow Consumption of Alcohol at Miller Park Pavilion on March 8, 2014

RECOMMENDATION/MOTION: That the Ordinance be passed.

STRATEGIC PLAN LINK: Goal 5. Great place – livable, sustainable City.

STRATEGIC PLAN SIGNIFICANCE: Objective 5d. Appropriate leisure and recreational opportunities responding to the needs of residents.

BACKGROUND: The Bloomington Liquor Commissioner Tari Renner called the Liquor Hearing to order to hear the request of Lola Jimoh and Felix Anaman to allow moderate consumption of alcohol at their March 8, 2014 wedding reception to be held at the Miller Park Pavilion. Present at the hearing were Liquor Commissioners Tari Renner, Geoffrey Tompkins and Jim Jordan; George Boyle, Asst. Corporation Counsel, Clay Wheeler, Asst. Police Chief, and Tracey Covert, City Clerk.

Commissioner Renner opened the liquor hearing and noted that no one was present to address this request.

Commissioner Tompkins recommended that City staff reach out and contact the bride and groom regarding this item. He added that based upon the information received the Commission should allow Commissioner Renner the discretion of placing this request before the Council at their February 24, 2014 meeting.

Commissioner Jordan concurred with Commissioner Tompkins' comments.

George Boyle, Asst. Corporation Counsel, addressed the Commission. He noted that Commissioner Renner had the authority to take this action.

The Commission directed Tracey Covert, City Clerk, to follow up with the requestors.

The wedding reception was scheduled for March 8, 2014 at the Miller Park Pavilion. There were 150 people on the guest list. Anticipated attendance at the wedding reception was 120. Famous Daves, 1603 Morrissey Dr., had been retained to cater the food and beverage service. Catered alcohol would be limited to beer and wine only. The reception was scheduled from 3:30 p.m. until 8:00 p.m.

COMMUNITY GROUPS/INTERESTED PERSONS CONTACTED: The Agenda for the February 11, 2014 Meeting of the Liquor Commission was placed on the City's web site. There also is a list serve feature for the Liquor Commission.

FINANCIAL IMPACT: None.

Respectfully submitted for Council consideration.

Prepared by: Tracey Covert, City Clerk

Recommended by:

David A. Hales
City Manager

Attachments: Attachment 1. Ordinance

Motion: That the Ordinance be passed.

Motion: _____ Seconded by: _____

	Aye	Nay	Other		Aye	Nay	Other
Alderman Black				Alderman Mwilambwe			
Alderman Fazzini				Alderman Sage			
Alderman Fruin				Alderman Schmidt			
Alderman Lower				Alderman Stearns			
				Mayor Renner			

ORDINANCE NO. 2014 -

AN ORDINANCE SUSPENDING PORTIONS OF SECTION 701 OF CHAPTER 31 AND SECTION 26(d) OF CHAPTER 6 OF THE BLOOMINGTON CITY CODE FOR A WEDDING RECEPTION AT MILLER PARK PAVILION

WHEREAS, Lola Jimoh and Felix Anaman are planning to hold their wedding reception at the Miller Park Pavilion from 3:30 p.m. to 8:00 p.m. on March 8, 2014; and

WHEREAS, Lola Jimoh and Felix Anaman have requested permission from the City to serve beer and wine during this event; and

WHEREAS, in order to legally possess alcohol in a City Park, Section 701(a), (b) and (c) of Chapter 31 of the Bloomington City Code, which prohibits the drinking, selling and possessing alcohol beverages with the City parks and Section 26(d) of Chapter 6 of the Bloomington City Code, which prohibits possession of open alcohol on public property must be suspended;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BLOOMINGTON, ILLINOIS;

Section 1: That Sections 701(a), (b) and (c) of Chapter 31 and Section 26(d) of Chapter 6 of the Bloomington City Code, 1960, as amended, are suspended for the duration of the wedding reception at the Miller Park Pavilion on March 8, 2014 under the conditions set forth in the rental agreement.

Section 2: Except for the date of date set forth in Section 1 of this Ordinance, Sections 701(a), (b) and (c) of Chapter 31 and Section 26(d) of Chapter 6 of the Bloomington City Code, 1960, shall remain in full force and effect. Nothing in this Ordinance shall be interpreted as repealing said Sections 701(a), (b) and (c) of Chapter 31 and Section 26(d) of Chapter 6.

Section 3: This Ordinance shall be effective on the date of its passage and approval.

Section 4: This Ordinance is adopted pursuant to the home rule authority granted the City of Bloomington by Article VII, Section 6 of the 1960 Illinois Constitution.

PASSED this 24th day of February, 2014.

APPROVED this ___ day of February, 2014.

APPROVED:

Tari Renner
Mayor

ATTEST:

Tracey Covert
City Clerk

FOR COUNCIL: February 24, 2014

SUBJECT: Composition of the Citizen's Beautification Committee

RECOMMENDATION/MOTION: That the Text Amendment be approved and the Ordinance be passed.

STRATEGIC PLAN LINK: Goal 1. Financially sound City providing quality basic services.

STRATEGIC PLAN SIGNIFICANCE: Objective 1c. Engaged residents that are well informed and involved in an open governance process.

BACKGROUND: On January 13, 2014, the Council approved an Ordinance changing the term limits of all Boards and Commissions, except the Fireman's Pension Board, Police Pension Board, Housing Authority Board and Liquor Commission.

In amending Section 72 of Chapter 2 which relates to the Citizen's Beautification Committee, language pertaining to the composition of the Committee was mistakenly deleted. The following language was deleted in error – "Beginning November 1, 1984, the Committee shall consist of twelve (12) persons to be appointed by the Mayor with the consent of the City Council."

The Committee currently consists of twelve (12) members, not the original nine (9) referenced in the Section. This Ordinance corrects the drafting error.

COMMUNITY GROUPS/INTERESTED PERSONS CONTACTED: Not applicable.

Respectfully submitted for Council consideration.

Prepared by: Rosalee Dodson, Asst. Corporation Counsel

Review by: John Kennedy, Director of Parks & Recreation

Recommended by:

David A. Hales
City Manager

Attachment: Attachment 1. Ordinance

Motion: _____ Seconded by:

	Aye	Nay	Other		Aye	Nay	Other
Alderman Black				Alderman Mwilambwe			
Alderman Fazzini				Alderman Sage			
Alderman Fruin				Alderman Schmidt			
Alderman Lower				Alderman Stearns			
				Mayor Renner			

ORDINANCE 2014 -

AN ORDINANCE AMENDING CHAPTER 2 OF THE BLOOMINGTON CITY CODE RELATING TO THE CITIZEN'S BEAUTIFICATION COMMITTEE

BE IT ORDAINED BY THE CITY COUNCIL
OF THE CITY OF BLOOMINGTON, ILLINOIS:

SECTION 1. That Section 72 of Chapter 2 of the Bloomington City Code, 1960, as amended, be further amended as follows (additions are indicated by underlines; deletions indicated by strikeouts):

Chapter 2: Section 72: Citizen's Beautification Committee.

(a) Membership. The Committee shall consist of twelve (12) ~~nine (9)~~ persons to be appointed by the Mayor with the consent of the City Council. Effective May 1, 2014, a person appointed to the Committee shall serve a term of three (3) years. This term may be extended after the three (3) years for no more than two (2) additional three (3) year terms. Members of the Committee shall serve no more than three (3) consecutive three-year terms (a total of nine (9) years). Reappointment shall be at the discretion of the Mayor. The members of the Committee shall elect the Chairman and Vice-Chairman on an annual basis. All terms shall expire April 30th. (Ordinance No. 2014-04)

(b) Meetings. The Committee shall meet on a regular basis on a schedule to be determined by the members but not less than once per month. A regular place of meeting shall be established by the Committee members. The Chairman shall provide all members with a written agenda or notice of cancellation of these meetings not less than five (5) days in advance of the meeting. All meetings shall be open to the public.

(c) Duties and Functions. The Committee shall have as its duties and functions:

(1) To recommend to the City Council all programs of any description or variety calculated to enhance the appearance of the City of Bloomington, including but not limited to recommendations for priorities of City action, and changes in both the Bloomington city or other ordinances adopted by the City Council;

(2) To work with appropriate City personnel to establish means to elicit volunteer participation in beautification projects;

(3) To elicit citizen cooperation in carrying out beautification projects whether on a City wide or localized scale which involve landscaping on public or private property;

(4) To serve as an advisory body to the City Council and the City Manager and other city officials in developing plans for projects involving City beautification;

(5) To request, receive and utilize staff assistance from the City Administration to enable the Committee to carry out its responsibilities;

(6) To request, receive and utilize City funds to carry out its responsibilities if:

(a) such requests are submitted in writing to the City Manager; and

(b) such requests are approved by the City Council; and

(c) such requests are included in the City's annual budget and appropriation ordinance, and supplement thereto;

(7) To receive gifts and donations of any variety from other public or private groups or individuals, which gifts or donations would assist the Committee in carrying out its duties and functions. (Ordinance No. 1973-32)

SECTION 2. Except as provided herein, the Bloomington City Code, 1960, as amended shall remain in full force and effect.

SECTION 3. The City Clerk is hereby authorized to publish this ordinance in pamphlet form as provided by law.

SECTION 4. This ordinance shall be effective ten (10) days after the date of its publication.

SECTION 5. This ordinance is passed and approved pursuant to the home rule authority granted Article VII, Section 6 of the 1970 Illinois Constitution.

PASSED this 24th day of February, 2014.

APPROVED this _____ day of February, 2014.

APPROVED:

Tari Renner
Mayor

ATTEST:

Tracey Covert
City Clerk

FOR COUNCIL: February 24, 2014

SUBJECT: Community Garden Land Lease Agreement Renewal

RECOMMENDATION/MOTION: That the Land Lease Renewal Agreement with Sunrise Co. LLC, in the amount of $1.00 per year, be approved and the Mayor and City Clerk be authorized to execute the necessary documents.

STRATEGIC PLAN LINK: Goal 5. Great place – livable, sustainable City

STRATEGIC PLAN SIGNIFICANCE: Objective 5c. Incorporation of "Green Sustainable" concepts into City's development and plans, and 5d. Appropriate leisure and recreational opportunities responding to the needs of the residents.

BACKGROUND: For many years, the Parks, Recreation and Cultural Arts Department has managed a community gardens program. The program originated at Sunnyside Park, then moved to Rollingbrook Park, and for the last several years it has been located at the corner of Hershey Rd. and Ireland Grove Rd. An original lease agreement with Sunrise Co., LLC covered May 15, 2008 through October 31, 2009. Prior to that expiration date, a two-year lease amendment was approved on September 28, 2009 and again on October 10, 2011, which expired on October 31, 2013. Both parties are interested in renewing the lease for two (2) additional years to October 31, 2015 at the cost of $1.00 per year.

The Parks, Recreation and Cultural Arts Department is cooperating with the McLean County Wellness Coalition in developing the Action Communities for Health, Innovation and Environmental Change (ACHIEVE) program. The Community Garden program supports an important community level objective within the McLean County Wellness Coalition's Community Action Program by providing a means for affordable and healthy foods. Council adopted a Resolution supporting this program during its July 25, 2011 Meeting.

Park Maintenance stakes out boundaries to create thirty-seven (37) 30' x 30' garden plots, and eight (8) 30' x 15' plots, that are rented to citizens on an annual basis. Rentals are handled in the Parks, Recreation and Cultural Arts administrative offices on a first-come, first-served basis on or about April 1st of each year. Additional services provided by Park Maintenance include spring till to prepare plots for planting, water (paid for in the Park Maintenance budget), a portable toilet, and fall tilling after harvest. Renters are responsible for all other maintenance items for their plot. The 30' x 30' plots rent for $30 while 30' x 15' plots rent for $15 annually. All forty-five (45) plots are reserved almost every year.

COMMUNITY GROUPS/INTERESTED PERSONS CONTACTED: Sunrise Co., LLC.

FINANCIAL IMPACT: Funding for the lease is available in G14110-70990.

Annual Revenues	**$1,230.00**
Annual Expenses	
Grounds Maintenance	$1,937.41
City Water	$407.00
Portable Toilet Rental	$420.00
Total Annual Expenses	**$2,764.41**
Annual Subsidy Level	**($1,534.41)**

Respectfully submitted for Council consideration.

Prepared by: John R. Kennedy, Director of Parks, Rec & Cultural Arts

Reviewed by: Barbara J. Adkins, Deputy City Manager

Financial & budgetary review by: Chris Tomerlin, Budget Analyst
Carla A. Murillo, Budget Manager

Legal Review by: George D. Boyle, Assistant Corporation Counsel

Recommended by:

David A. Hales
City Manager

Attachment: Attachment 1. Agreement
Attachment 2. July 25, 2011 Resolution
Attachment 3. Arial photo

Motion: _____ Seconded by:

	Aye	Nay	Other		Aye	Nay	Other
Alderman Black				Alderman Mwilambwe			
Alderman Fazzini				Alderman Sage			
Alderman Fruin				Alderman Schmidt			
Alderman Lower				Alderman Stearns			
				Mayor Renner			

AGREEMENT BETWEEN SUNRISE CO. LLC, BLOOMINGTON, ILLINOIS AND THE CITY OF BLOOMINGTON, AN ILLINOIS HOME RULE MUNICIPAL CORPORATION FOR DEVELOPMENT OF A COMMUNITY GARDEN PROGRAM

This AGREEMENT is entered into on the date adjacent to each signature line hereinafter by and between SUNRISE CO. LLC, BLOOMINGTON, ILLINOIS (hereinafter called SUNRISE), and THE CITY OF BLOOMINGTON, an Illinois Home Rule Municipal Corporation (hereinafter called CITY).

Whereas, the CITY is a home rule unit of local government with authority to enter into agreements with other legal entities and,

Whereas SUNRISE is a Limited Liability Corporation chartered in the state of Illinois with authority to enter into agreements with units of local government and,

Whereas, the CITY and SUNRISE desire to enter into an agreement for the development and maintenance of a community garden project on SUNRISE property though it would be a project of the CITY; and

Whereas, it is in the best interest of the parties to jointly control and promote the community garden program of the CITY, preserve public funds, enhance recreational programs, and otherwise improve the
quality of life of the citizens served by the parties:

NOW, THEREFORE, in consideration of the mutual promises contained herein, it is agreed by and between the parties, as follows.

1. The CITY will maintain a community garden program site on the approximate north two (2) acres of property owned by SUNRISE located at the southwest intersection of Ireland Grove Road and Hershey Road, in the city of Bloomington, McLean County, Illinois. The CITY shall be responsible for clearing the property for the purpose of a community garden program, for providing parking for the participants in the program, and providing ingress and egress co the site all within the parameters of the City's Subdivision Ordinance requirements except that there shall be no hard or permanent surface to the
parking lot area.

2. All costs incident to maintaining the site for the community garden program, including providing a water supply for the participants in the program, shall be that of the CITY. SUNRISE does consent to allow the CITY to tap the existing water well on the land should the CITY so desire even though the well site may be beyond the boundaries of the community garden program site. The CITY agrees to provide a minimum of One Million Dollars Liability Policy naming SUNRISE either as a primary or additional insured, which endorsement shall not only include SUNRISE, but also its officers and employees.

3. This "lease agreement" shall begin the date of signature and run through October 31, 2015, at which time a year to year lease shall continue with written agreement from both parties received at least thirty (30) days prior to expiration. Payment for use of such property by the CITY to SUNRISE shall be the sum of One Dollar per year.

4. The CITY agrees to waive all claims against SUNRISE arising out of this Agreement or the condition of the land, and by signature hereto acknowledges the acceptance of the land in question in its present condition. The CITY further agrees to indemnify and defend SUNRISE from any and all claims arising out of the condition of said "community garden site," and further agrees to hold SUNRISE harmless from any damages as a result of injury to persons or property arising out of the use of said land by the CITY. SUNRISE agrees to promptly notify the CITY upon receipt of any claim or notice thereof by any person or persons for injury or property damage applicable to the CITY's use of said property. SUNRISE will cooperate with the CITY in the defense of any such claim.

5. Both parties maintain the right to assert any immunities the parties might have pursuant to the Illinois Tort Immunity Act in connection with any third party claim.

6. The CITY agrees to maintain the site which is the subject matter of this Agreement both during the "growing season" and thereafter so that same shall not be deemed a public nuisance.

IN NITNESS WHEREOF, the parties hereto have placed their hands and seals the date and year herein set forth.

By_____ Dated: _____, 2014

Mayor
City of Bloomington
109 E. Olive Street
Bloomington, IL 61701

By_____ Dated: _____, 2014

James A. Shirk
Sunrise Co. LLC
PO Box 1549
Bloomington, IL 61702

RESOLUTION NO. 2011 - 33

RESOLUTION REQUESTING SUPPORT OF MCLEAN COUNTY WELLNESS COALTION COMMUNITY ACTION PLAN AND COMMITTING THE CITY OF BLOOMINGTON TO WORK ON IMPROVING NUTRITION AND PHYSICAL ACTIVITY

WHEREAS, the City of Bloomington cares deeply about the health of its citizens, and

WHEREAS, 39.5% of McLean County adults are overweight and 22% of McLean County adults are obese; and 11.1% of McLean County youth are overweight (6^{th}-12^{th} grade) and 5.1% of McLean County youth are obese (6^{th}-12^{th} grade);

WHEREAS, obesity and overweight are primarily a consequence of poor nutrition and physical inactivity;

WHEREAS, improved nutrition and physical activity have benefits beyond weight control;

WHEREAS, the City of Bloomington recognizes that creating a sustainable community is necessary to ensure the long-term health and welfare of our citizenry as well as our continued economic development;

WHEREAS, conclusive evidence exists that a sustainable approach to physical activity and healthier foods, such as improvements to the "built environment" including, bike and pedestrian friendly streets, adequate public transportation, and access to healthier food choices are important public health issues. Active living and healthy eating can reduce the occurrence of obesity, many chronic diseases, and enhance psychological well-being;

WHEREAS, individual effort alone is insufficient to combat obesity's rising tide and significant societal and environmental changes are needed to support individual efforts to make healthier choices;

WHEREAS, the McLean County Wellness Coalition has developed a Community Action Plan, which aims to reduce chronic disease and improve the overall health of the community through the promotion and adoption of nutrition and physical activity systems, policy and environmental change;

NOW, THEREFORE, LET IT BE RESOLVED, that the City of Bloomington hereby recognizes that poor nutrition and lack of physical activity are serious threats to the health and well-being of adults, children, and families in Bloomington. In light of the foregoing considerations, the City of Bloomington makes obesity and overweight prevention a priority and continues to commit to improving nutrition and physical activity in its community. The city also commits to supporting the McLean County Wellness Coalition in their efforts to make the healthy choice the easy choice by improving healthy eating and active living in the home, school and childcare environments, workplace, healthcare settings, and the community.

ADOPTED by the City of Bloomington this 25th day of July, 2011

APPROVED:

Stephen F. Stockton
Mayor

ATTEST:

Tracey Covert
City Clerk

AGREEMENT BETWEEN SUNRISE CO. LLC, BLOOMINGTON, ILLINOIS AND THE CITY OF BLOOMINGTON, AN ILLINOIS HOME RULE MUNICIPAL CORPORATION FOR DEVELOPMENT OF A COMMUNITY GARDEN PROGRAM

This AGREEMENT is entered into on the date adjacent to each signature line hereinafter by and between SUNRISE CO. LLC, BLOOMINGTON, ILLINOIS (hereinafter called SUNRISE), and THE CITY OF BLOOMINGTON, an Illinois Home Rule Municipal Corporation (hereinafter called CITY).

Whereas, the CITY is a home rule unit of local government with authority to enter into agreements with other legal entities and,

Whereas SUNRISE is a Limited Liability Corporation chartered in the state of Illinois with authority to enter into agreements with units of local government and,

Whereas, the CITY and SUNRISE desire to enter into an agreement for the development and maintenance of a community garden project on SUNRISE property though it would be a project of the CITY; and

Whereas, it is in the best interest of the parties to jointly control and promote the community garden program of the CITY, preserve public funds, enhance recreational programs, and otherwise improve the quality of life of the citizens served by the parties:

NOW, THEREFORE, in consideration of the mutual promises contained herein, it is agreed by and between the parties, as follows.

1. The CITY will maintain a community garden program site on the approximate north two (2) acres of property owned by SUNRISE located at the southwest intersection of Ireland Grove Road and Hershey Road, in the city of Bloomington, McLean County, Illinois. The CITY shall be responsible for clearing the property for the purpose of a community garden program, for providing parking for the participants in the program, and providing ingress and egress co the site all within the parameters of the City's Subdivision Ordinance requirements except that there shall be no hard or permanent surface to the
parking lot area.

2. All costs incident to maintaining the site for the community garden program, including providing a water supply for the participants in the program, shall be that of the CITY. SUNRISE does consent to allow the CITY to tap the existing water well on the land should the CITY so desire even though the well site may be beyond the boundaries of the community garden program site. The CITY agrees to provide a minimum of One Million Dollars Liability Policy naming SUNRISE either as a primary or additional insured, which endorsement shall not only include SUNRISE, but also its officers and employees.

3. This "lease agreement" shall begin the date of signature and run through October 31, 2015, at which time a year to year lease shall continue with written agreement from both parties received at least thirty (30) days prior to expiration. Payment for use of such property by the CITY to SUNRISE shall be the sum of One Dollar per year.

4. The CITY agrees to waive all claims against SUNRISE arising out of this Agreement or the condition of the land, and by signature hereto acknowledges the acceptance of the land in question in its present condition. The CITY further agrees to indemnify and defend SUNRISE from any and all claims arising out of the condition of said "community garden site," and further agrees to hold SUNRISE harmless from any damages as a result of injury to persons or property arising out of the

use of said land by the CITY. SUNRISE agrees to promptly notify the CITY upon receipt of any claim or notice thereof by any person or persons for injury or property damage applicable to the CITY's use of said property. SUNRISE will cooperate with the CITY in the defense of any such claim.

5. Both parties maintain the right to assert any immunities the parties might have pursuant to the Illinois Tort Immunity Act in connection with any third party claim.

6. The CITY agrees to maintain the site which is the subject matter of this Agreement both during the "growing season" and thereafter so that same shall not be deemed a public nuisance.

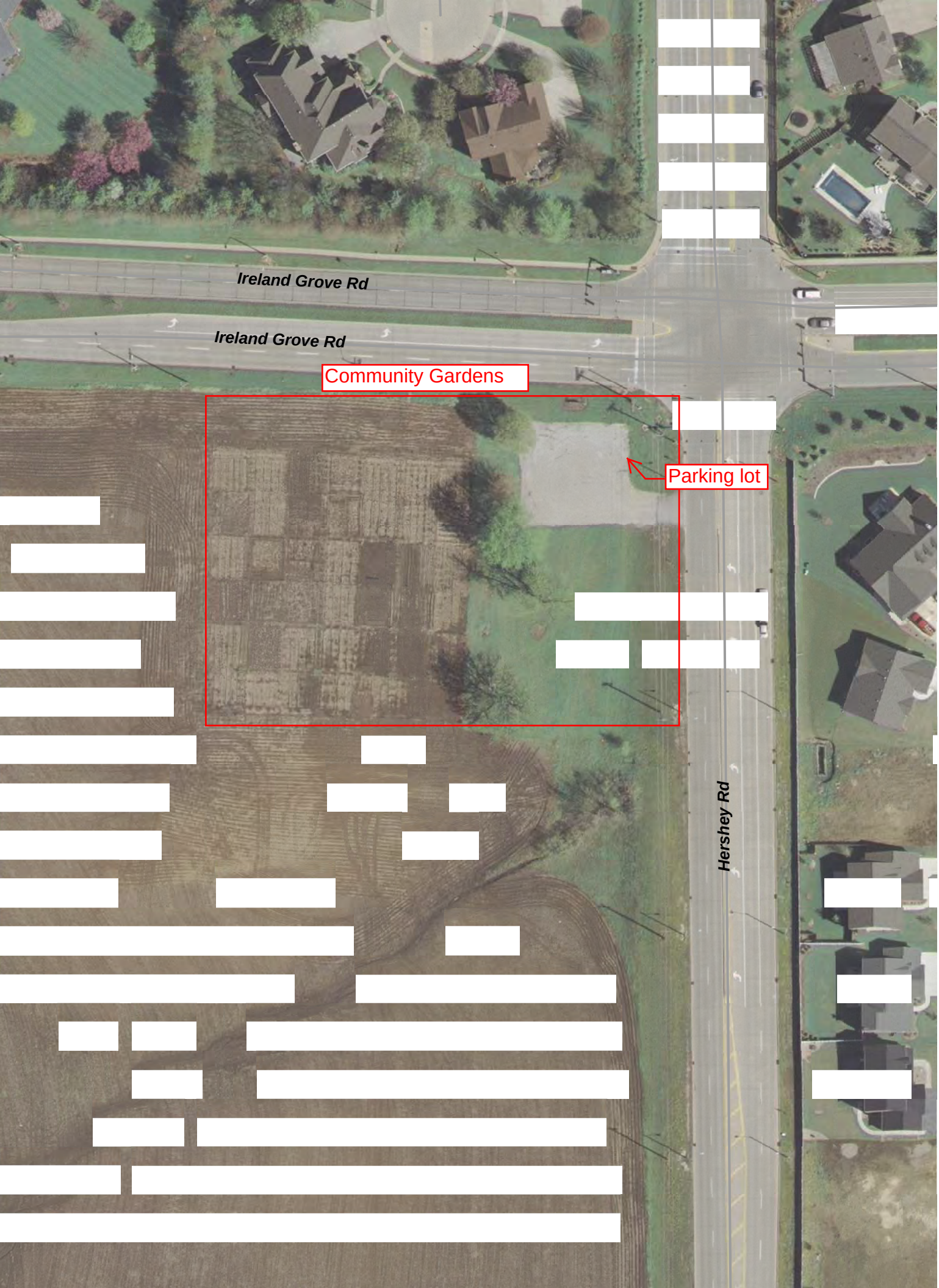
IN NITNESS WHEREOF, the parties hereto have placed their hands and seals the date and year herein set forth.

By_____ Dated: _____, 2014

Mayor
City of Bloomington
109 E. Olive Street
Bloomington, IL 61701

By_____ Dated: _____, 2014

James A. Shirk
Sunrise Co. LLC
PO Box 1549
Bloomington, IL 61702


Ireland Grove Rd
Ireland Grove Rd
Community Gardens
Parking lot
Hershey Rd

FOR COUNCIL: February 24, 2014

SUBJECT: Joint Bloomington-Normal RFP and Agreement for Solid Waste Disposal (landfill) Services

RECOMMENDATION/MOTION: That the RFP and Agreement for Solid Waste Disposal Services be awarded to Allied Waste Services (Republic) and the Mayor and City Clerk be authorized to execute the necessary documents.

STRATEGIC PLAN LINK: Goal 1. Financially sound City providing quality basic services.

STRATEGIC PLAN SIGNIFICANCE: Objective 1d. City services delivered in the most cost-effective, efficient manner, and 1e. Partnering with others for the most cost-effective service delivery.

BACKGROUND: Through intergovernmental cooperation, the City and Town of Normal jointly bid for landfill services and currently are under contract with Allied Waste Services (Republic), owner of the McLean County Landfill in west Bloomington. The contract expires Feb. 28, 2014, and is itself an extension of a contract that expired twelve months earlier. The cities jointly issued a Request for Proposals on January 7, 2014, and the deadline for companies submitting proposals was January 28, 2014. At the drafting of this memo, the matter was scheduled for the Normal Town Council's action agenda on February 17, 2014. The Normal Council memo is attached to this memo.

Duration: The Twin Cities seek a two-year agreement and an option for renewal in each of the five years after the two years elapse.

Current contract/company: Staff from the cities has been pleased with service under Allied (Republic) for the past six years. The current rate or tipping fee for Bloomington-Normal is $44.44 per ton. The following is a table showing the historical trend of the tipping fees over the past six years.

McLean County Landfill rates over six years	
March 1, 2008 -- February 28, 2009	$36.89 per ton
March 1, 2009 -- February 28, 2010	$38.36
March 1, 2010 -- February 28, 2011	$39.90
March 1, 2011-- February 29, 2012	$41.49
March 1, 2012 -- February 28, 2013	$43.15
March 1, 2013 -- February 28, 2014	$44.44

Allied further offers the convenience of location since the transfer station is on W. Washington in Bloomington. Not only is the landfill located here, but Allied provides a transfer station, which Normal and Bloomington operational staffs find advantageous. A transfer station is where the garbage trucks dump the refuse collected at the curb. The transfer station on West Washington Street has a concrete pad that addresses the previous operational concerns of the equipment getting stuck when dumping directly at the landfill. A transfer station must be

permitted through the Illinois Environmental Protection Agency (IEPA). Allied's transfer station is located next to the McLean County landfill. Twin City crews empty their loads at the transfer station, and Allied staff uses company equipment to move the materials from the transfer station into the landfill. This is a time benefit for municipal workers, reduces cities' truck maintenance and averts the potential of City and Town garbage trucks getting stuck while traveling within the landfill. Bloomington and Normal wish to avoid lengthy trips to dispose of garbage because of the time lost to productivity of workers in transit and because of the wear and tear that additional mileage causes. They also wish to have the use of a transfer station rather than having to drive municipal vehicles into a landfill. In addition, Allied has also been amenable to the cities' desire to retain the right to divert refuse elsewhere. Specifically, the cities would like to partner with private enterprise to recycle bulk waste, although up to now delays in permitting have prevented that from occurring.

Two Proposals

Two companies submitted proposals: Allied Waste Service (a Republic Services Company) and Area Disposal Service (which is also known as PDC/Area Disposal). Both have substantial experience and expertise in solid waste disposal.

Time Period	Base Rate (Dollars) Per Ton		After Hour Rate Per Person	
	Area	Allied	Area	Allied
3/1/14 to 2/29/16	33.65	46.46	No charge	22.24
3/1/16 to 2/28/17	35.00	48.55	No charge	23.25
3/1/17 to 2/28/18	35.90	50.01	No charge	23.95
3/1/18 to 2/28/19	36.80	51.51	No charge	24.67
3/1/19 to 2/29/20	37.97	53.06	No charge	25.41
3/1/20 to 2/28/21	39.17	54.65	No charge	26.17

(Note: Need for after hour or weekend service would primarily be in case of an emergency or disaster.)

Allied also submitted an alternative proposal with the following rates. The rates are lower while the duration of the contract is lessened compared to the proposal it made in compliance with the RFP.

Allied Alternative Rate Proposal	
Year One	$45.11
Year Two	$45.79
Year Three	$46.48
Year Four	$47.87
Year Five	$49.31

Location/cost issue

The Request for Proposals does not require a company to own a local landfill but did ask that the company have a transfer station within 10 miles of the core of the Twin Cities or be imminently planning to build one. Area/PDC does not meet that requirement. It estimates the distance from Main and Division streets to the Clinton Landfill at 28 miles. However, it also wrote in its proposal that the cities stood to save $500,000 over two years in tipping fees because of its low tipping fee.

Despite the lower tipping fee, staffs of the two cities have concerns about the prospect of driving the new automated trucks to Clinton to unload solid waste, which includes household trash and bulk. These concerns include cost of operations, loss of productivity and operations during inclement weather. The City does not currently have an IEPA permit that would allow it to dump the refuse and load it into a semi for transport to the Clinton landfill. The City contacted the IEPA to verify this was the case.

Fuel and maintenance: According to the Crystal Report, City recycling trucks cost $1.79 per mile for fuel and maintenance. Our new garbage trucks are the same model. That puts the cost to drive to the landfill, unload one truck and drive back at $100. This is apart from the wages, benefits and pensions of the drivers. It is unclear from the proposal whether the Clinton Landfill has a transfer station from where our trucks could drop their loads or whether City trucks would be required to drive into unpaved landfill areas. The trucks have a single drive axle with air tag axle and are not designed to operate off road. The travel also adds to accident exposure.

Time: For the Bloomington and Normal drivers, time on the road would result either in overtime or addition of trucks and employees. The Bloomington trucks cost $325,000 each. With our current back-loading, manual-collection trucks, it is common (perhaps three times a week) for a route driver to have to make two drops at the landfill in a given day. Staff is uncertain how often they will need to unload the new trucks; their compaction ability most likely will be different.

Weather: Weather presents another great concern. During inclement/bad weather (rainy, icy, snowy, windy and white-out conditions) travel along U.S. 51 to and from Clinton will cause time delays and increase accident exposure. There likely will be days in which the municipalities would be unable to dispose of their garbage because of disruptive road conditions, which would translate to the inability to collect garbage on certain days.

Capacity

Allied's McLean County Landfill, which opened in 1990, is nearing the limit of its capacity. The Illinois Environmental Protection Agency in its annual capacity report for 2013 listed the McLean County landfill as reaching capacity in 2017, assuming current level of usage. Theoretically, Allied could take the cities' garbage to another landfill after receiving it at its west-side transfer station, although the cities' are not aware of Allied's current strategy in handling local refuse if the landfill closes. This question was brought up in the pre-meeting for the RFP process and Allied did not provide a hard closure date. This is proprietary information that they do not have to provide.

Area is well situated in regard to capacity. It proposes to use the Clinton Landfill. Opened in 2009, its current life expectancy runs to 2063.

Scoring the proposals

Three Bloomington officials and two Normal officials reviewed the proposals and scored them independently. Scoring were Wayne Aldrich and Tom Ramirez from Normal and Jim Karch, Rob Henson and Jon Johnston from Bloomington. The scores were then compiled and averaged by Mr. Johnston, who is Bloomington Procurement Manager.

The scoring guide rated the two bidders on qualifications, experience, operation of a local "transfer facility," capacity to meet Bloomington-Normal needs, ability to meet billing requirements and cost proposal as it meets the municipal budgets. They further were rated on compliance with the Request for Proposals (RFP). The ratings of committee members were added and then averaged. Below is the score of the committee.

Company	Committee Tabulation
Allied Waste Services	94
Area Disposal Service	75

Recommendation

Based on the evaluation criteria included in the RFP, the selection committee recommends Republic Services, Inc. for the solid waste disposal contract. Republic currently operates the only licensed waste disposal facility that accepts municipal solid waste within the parameters stated in the RFP. The proposed fee per ton of $46.46 represents an average increase of 2.3% over the initial two-year contract period. This increase is consistent with the average annual increase of 3% since 1997.

The proposed contract was based on the past solid waste contracts and has been reviewed by both the Town of Normal and City of Bloomington Legal Departments and found to be acceptable.

This matter was scheduled for the Normal Town Council agenda on February 17, 2014. In accordance with the proposal, if either Council rejects the proposal, the other may proceed independently with the same proposed pricing.

COMMUNITY GROUPS/INTERESTED PERSONS CONTACTED: Town of Normal.

FINANCIAL IMPACT: Landfill costs are built into the Solid Waste budget under Landfill Fees (54404400-70650). Stakeholders may locate this in the FY 2014 Budget Book titled "Other Funds & Capital Improvement Program" on page 182.

Respectfully submitted for Council consideration.

Prepared by: Jim Karch, Director of Public Works

Reviewed by: Barbara J. Adkins, Deputy City Manager

Financial & budgetary review by: Chris Tomerlin, Budget Analyst
Carla A. Murillo, Budget Manager

Legal review by: George D. Boyle, Asst. Corporation Counsel

Recommended by:

David A. Hales
City Manager

Attachments: Attachment 1. Agreement
Attachment 2. Map

Motion: _____ Seconded by: _____

	Aye	Nay	Other		Aye	Nay	Other
Alderman Black				Alderman Mwilambwe			
Alderman Fazzini				Alderman Sage			
Alderman Fruin				Alderman Schmidt			
Alderman Lower				Alderman Stearns			
				Mayor Renner			

TOWN COUNCIL ACTION REPORT

February 11, 2014

Resolution Authorizing the Execution of an Agreement with American Disposal Services of Illinois, Incorporated d/b/a Republic Services – Bloomington Transfer Station for the Transfer and Disposal of Solid Waste Collected by the Town

PREPARED BY:	**Wayne Aldrich, Uptown Development Director**
REVIEWED BY:	**Mark R. Peterson, City Manager** **Steven. R. Mahrt, Corporation Counsel** **Tom Ramirez, Waste Removal Supervisor**
BUDGET IMPACT:	**The proposed contract rates take effect on March 1, 2014. Funding in the amount of $546,408 is budgeted in line item 001-7025-432.20-10 for the first two years of the contract. These amounts are based on historical averages of waste.**
STAFF RECOMMENDATION:	**Approval**
ATTACHMENTS:	**Proposed Resolution, Proposed Agreement**

BACKGROUND

Municipal Solid Waste is collected weekly from households in both the City of Bloomington and the Town of Normal. This waste includes automated trash collection and bulky waste that is currently deposited in a landfill.

Normal and Bloomington have jointly contracted with Republic Services of Bloomington, IL (also known as Allied Waste Services, American Disposal Services of Illinois, Inc., and Sexton) since 1997 for solid waste disposal. This contract has been extended several times by mutual agreement. The most recent extension will expire on February 28, 2014.

Republic Services owns and operates a licensed solid waste transfer facility located at 2112 West Washington Street in Bloomington. Normal and Bloomington public works crews deliver the waste to this local transfer facility. (Due to low ground clearance, the new municipal garbage trucks operated by both Bloomington and Normal are not suitable for direct dumping at a landfill. A transfer station with paved surfaces and designated dump areas is well-suited for city equipment.) The waste is then hauled by Republic from the transfer facility to its Livingston County Landfill in Pontiac or the McLean County Landfill in Bloomington.

To conform to current purchasing policies, the Town and City staff determined that it would be appropriate to solicit proposals for continued solid waste disposal services. A joint Request for Proposals (RFP) was prepared by the Town and City staff and issued by the City of Bloomington on January 7, 2014.

This RFP included the following general requirements/provisions:

1. Contractor will own/operate a licensed solid waste facility within ten (10) miles of the intersection of Main and Division Streets**.** This provision allows the city a local site for dumping waste, thus avoiding lengthy trips to a landfill located outside the community.

2. Two year agreement. Given that other options for our waste stream may exist in the next few years, a two year contract provides flexibility. The proposed term of the agreement would be automatically renewed for up to five (5) additional periods of one (1) year each unless either party gives a 90-day notice prior to expiration date

3. Contractor would accept all **or some** of the refuse collected. This allows the option to remove the bulky waste component from the landfill and recycle it as licensed vendors become available.

DISCUSSION/ANALYSIS

Two proposals were submitted by the due date of January 28, 2014: Republic Services (an Allied Waste Service Company) of Bloomington, Illinois and Area Disposal Service (which is also known as PDC) of Clinton, Illinois. Both have substantial experience and expertise in solid waste disposal.

The proposals were evaluated by a selection committee of the following members:

Jim Karch, City of Bloomington Public Works Director
Jon Johnston, City of Bloomington Procurement Manager
Rob Henson, City of Bloomington Waste Supervisor
Tom Ramirez, Town of Normal Waste Supervisor
Wayne Aldrich, Town of Normal Public Works Director

The scoring guide used by the selection committee rated the two bidders on qualifications, experience, cost proposal, and compliance with the Request for Proposals (RFP).

Cost Proposal

The proposed "tipping fees" proposed by each company are summarized in the table below. The tipping fee per ton submitted by Area Disposal is considerably less than the fees proposed by Republic. Although the proposed fees are less, Area does not meet the RFP requirement for a disposal facility within 10 miles of Main Street and Division Street. This would require the city to deliver the waste to Clinton and dump directly into a landfill, which is not feasible given the length of haul and the equipment limitations.

Time Period	Base Rate (Dollars) Per Ton		After Hour Rate Per Person	
	Area	Republic	Area	Republic
3/1/14 to 2/29/16	33.65	46.46	No charge	22.24
3/1/16 to 2/28/17	35.00	48.55	No charge	23.25
3/1/17 to 2/28/18	35.90	50.01	No charge	23.95
3/1/18 to 2/28/19	36.80	51.51	No charge	24.67
3/1/19 to 2/29/20	37.97	53.06	No charge	25.41
3/1/20 to 2/28/21	39.17	54.65	No charge	26.17

(Note: Need for after hour or weekend service would primarily be in case of an emergency or disaster.)

TOWN COUNCIL ACTION REPORT

Based on the evaluation criteria included in the RFP, the selection committee recommends Republic Services, Inc. for the solid waste disposal contract. Republic currently operates the only licensed waste disposal facility that accepts municipal solid waste within the parameters stated in the RFP. The proposed fee per ton of $46.46 represents an average increase of 2.3% over the initial two-year contract period. This increase is consistent with the average annual increase of 3% since 1997.

The proposed contract was based on the past solid waste contracts and has been reviewed by both the Town of Normal and City of Bloomington Legal Departments and found to be acceptable.

This matter is scheduled for the Bloomington City Council agenda on February 24, 2014. In accordance with the proposal, if either Council rejects the proposal, the other may proceed independently with the same proposed pricing.

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WASTE DISPOSAL AGREEMENT

This Agreement (the "Agreement") is made as of the 4th day of March 2014 by and between the City of Bloomington, Illinois, and the Town of Normal, Illinois, both Illinois home rule units of local government, (collectively "City"), and Republic/Allied ("Contractor").

Whereas, City requested proposals for the disposal of solid waste collected by City; and

Whereas Contractor submitted a proposal for the disposal of solid waste collected by City; and

Whereas City after reviewing all proposals submitted, determined that Contractor is best able to provide solid waste disposal services for City; and

Whereas the parties desire to reduce their understandings to writing; and

Now Therefore, in consideration of the terms, conditions, obligations and covenants contained herein the parties covenant and agree as follows:

SPECIFICATIONS:

1. Contractor will own/operate an appropriately licensed solid waste facility within a ten (10) mile radius of the intersection of Main and Division Streets, where the City of Bloomington and the Town of Normal adjoin, and accept Refuse for disposal with the exception of certain hazardous, special and other wastes as set forth later in this Agreement; and

2. The City will assume responsibility for the collection of Refuse generated within the City limits, and the City wishes to dispose of some or all of the Refuse generated within the City at the above referenced licensed solid waste facility.

3. **Performance by Contractor:**
   The performance and obligations of Contractor hereunder shall be termed the "Work", shall include the following:

   a. **Acceptance by Contractor:**
      For the Consideration set forth in Exhibit A, Contractor shall accept for disposal, at its licensed solid waste facility all Refuse, as defined by the Bloomington City Code and Normal Town Code (the "Refuse"), collected by the City, its agents and employees which the City shall transport to the licensed solid waste facility subject to the exceptions set forth hereafter. The parties recognize that City shall not be obligated, but may deliver, in its discretion, to Contractor a portion or all of its Refuse collected by City. The Refuse may include solid waste collected from City-owned buildings, public litter receptacles, and all other items of whatsoever kind or nature. The Refuse may not include hazardous wastes as defined by Federal law, special

wastes as defined by the State of Illinois, white goods, tires, landscape waste, lead/acid batteries, asbestos containing materials, or any other materials which at this time or in the future may not be disposed in transfer stations or sanitary landfills pursuant to Federal or State statutes, rules or regulations. ("Excepted Waste"). Contractor retains the right to Refuse or reject after acceptance any loads containing Excepted Waste.

b. **Compliance with Laws:**
Contractor shall, during the term of this contract or any extensions or renewals thereof, fully comply with all Federal, State and local laws, statues, ordinances, rules and regulations which in any manner control, affect or relate to the Work or the ownership, operation and/or maintenance of a licensed solid waste facility in the State of Illinois, its operating permit, and the performances, obligations, operations or conduct of the Work hereunder, including all laws, statutes, ordinances, rules and regulations which are subsequently enacted. City shall have the right to request and receive verification from Contractor of its compliance with the provisions of this paragraph; to the extent Contractor is reasonably able to provide such verifications.

c. **Permits and Licenses:**
Contractor shall obtain and maintain all permits, licenses and approvals required by any regulatory or statutory authority which are necessary for it to fully perform the Work, including those required to own, operate and/or maintain the licensed solid waste facility.

d. **Operating Time:**
Contractor shall accept Refuse from the City at the licensed solid waste facility during the following days and times:

Labor Day to Memorial Day (Except Christmas Day) –
Monday through Friday - 7:00 AM to 3:30 PM & Saturday – 7:30 AM to 11:30 AM

Memorial Day to Labor Day -
Monday through Friday - 6:00 AM to 3:30 PM & Saturday – 7:30 AM to 11:30 AM

The parties acknowledge that the following days are holidays for employees of the licensed solid waste facility:

New Year's Day
Martin Luther King Day
Good Friday
Memorial Day
July 4th
Labor Day
Veteran's Day
Thanksgiving Day
Friday After Thanksgiving
Christmas Eve Day

Christmas Day
New Year's Eve Day

e. **Continued Operation:**
During the entire term of this contract, Contractor will maintain a licensed solid waste facility within a ten (10) mile radius of the intersection of Main and Division Streets. If due to an emergency situation unforeseen by the Parties, Contractor cannot dispose of solid waste at a licensed solid waste facility within a ten mile radius of the intersection of Main and Division Streets, then Contractor shall make arrangements for lawful disposal of solid waste during the period of the emergency situation at no additional cost to City.

f. **Indemnification:**
Contactor agrees to indemnify and hold the City harmless from and against any loss, damage, or claim (including reasonable attorneys' fees) resulting from or arising out of the negligent acts or omissions of Contractor in the performance of its obligations under this agreement.

4. **Performance by the City:**

a. **Delivery by City:**
City will deliver for disposal at the licensed solid waste facility Refuse collected by the City, its agents and employees during the term of this agreement, provided however the quantity and type of Refuse delivered to Contractor shall be in the sole discretion of City. All or a portion of Refuse collected may be delivered.

b. **Permits and Licenses:**
City shall obtain and maintain all permits, licenses and approvals required by any regulatory or statutory authority necessary for it to transport Refuse to Contractor, and will comply with the provisions contained within the Contractor's operating permit and all reasonable rules and regulations promulgated by contractor relating to receipt and disposal of Refuse.

c. **Compliance with Rules:**
City drivers will obey posted speed and traffic control signs. Refuse will be disposed of at the location and in the manner directed by the Contractor's managers or its supervisors.

d. **Indemnification:**
To the extent permitted by law, City agrees to indemnify and hold the Contractor harmless from and against loss, damage, or claim (including reasonable attorneys' fees) resulting from or arising out of the gross negligent acts or omissions of City in the performance of its obligations under this Agreement.

5. **Assignment:**

In the event that the City discontinues using its own employees to collect the City's Refuse and contacts for all such work with a third party, including the issuance of any franchise therefor, then the City shall assign this Agreement to such contractor or franchisee and shall require such contractor or franchisee to comply with all obligations contained in the Agreement during the remaining term thereof. In such event Contractor shall charge the City for all Refuse delivered by such contractor or franchisee at the same rate as set forth herein. Any such assignment shall not be deemed to be a cause to terminate this Agreement. The parties agree the City of Bloomington and the Town of Normal each retain the right to assign this agreement to a third party and assignment by one does not affect the validity of the agreement with regard to the non-assigning city or town. Contractor shall not assign this Agreement or any of the work described herein without the express written consent of the City and Town.

6. **Term:**

   a. This Agreement shall be for an initial period of two (2) years, commencing on March 1, 2014, and will be automatically renewed on an annual basis for up to five (5) additional periods of one (1) year each unless either party gives ninety (90) days written notice to the other prior to the expiration date of the original term or any renewal period. All terms, conditions, covenants and agreements set forth herein shall be applicable to any extension or renewal of this Agreement, except that the parties will negotiate in good faith mutually acceptable rates to be paid by the City during any renewal periods.

   b. This Agreement shall be subject to cancellation in the event either party is guilty of material breach of this Agreement; provided, however, that the Agreement may not be cancelled if the breaching party cures the breach within thirty days of receipt of written notice from the other party; provided further, if the breach is of such a nature that it is impossible to cure within such thirty day period, the Agreement may not be cancelled so long as the breaching party continues to diligently pursue a cure, unless such breach relates to the inability of Contractor to accept Refuse at the licensed solid waste facility as a result of the cancellation or suspension of its permit by the Illinois Environmental Protection Agency.

7. **Compensation:**

   a. In consideration for the Work, the City agrees to pay Contractor the appropriate rate set forth on Exhibit A for each ton of Refuse delivered to the licensed solid waste facility. The Rate shall apply regardless of whether the Refuse delivered by the City to Contractor is loose or compacted. City agrees that any delivery of Refuse by City to Contractor shall be deemed to be at least one (1) ton per vehicle.

   b. Whenever the licensed solid waste facility remains open past closing time solely because of a request of the City, the City shall pay Contractor an hourly rate set forth on Exhibit A for any actual time the facility remains open; provided,

however, that this charge shall not be applied if the reason the City requested the facility to remain open was to dispose of Refuse resulting from fires, floods, explosion, accidents, weather or Acts of God.

c. At no time during the term of this Agreement, including any renewal term, shall any fine or penalty entered against Contractor for any breach or violation of any Federal, State or local law, statue, ordinance, rule or regulation, be passed through to the City.

d. Contractor shall invoice the City and Town separately for Refuse delivered to the licensed solid waste facility, on a semi-monthly basis, for the total quantity of Refuse delivered to the facilities covered by this Agreement by city or town.

e. All invoices sent to the City, by the Contractor, shall be paid within thirty (30) days after approved by the City Council, provided, however, in the event of any dispute as to any invoice, the City will pay the amount that is not in dispute, and will undertake discussions and negotiation with Contractor to resolve any discrepancy or dispute in any invoice, and shall, upon resolution of any discrepancy or dispute, pay said agreed upon amount as soon as reasonably possible. In order to enable the parties to reach a resolution of any discrepancy or dispute, Contractor shall maintain records indicating, in sufficient detail, dates, truck numbers, amounts, tonnages, etc. including in each invoice and shall make available such records to the City in the event of any discrepancy or dispute concerning any invoice.

8. **Specific Performance:**
The parties hereto agree that substitute performance of the Work will be difficult or impossible to obtain without undue hardship or extreme expense to either party, and in the event Contractor or City fails or Refuses to perform the Work hereunder, the parties hereto agree that the other party has an inadequate remedy at law. Therefore, Contractor or City may be compelled to specifically perform the Work under this Agreement.

9. **Independent Contractor:**
It is understood and agreed that Contractor is an independent Contractor.

10. **Insurance:**
The parties shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the limits specified below:

Coverage	Minimum Limits of Liability
Workers Compensation	Statutory
General Liability	$1,000,000 combined single limit
Automobile Liability	$1,000,000 combined single limit
Environmental Liability for Third party Bodily Injury Or Property Damage Arising	$1,000,000

From Contractor's Cargo Due
To Upset, Overturn, or
Damage to vehicle

The parties shall provide one another with a certificate of insurance and shall keep this insurance in effect during the term of this Agreement; provided, in the event City uses its governmental powers to enter into a pooled insurance arrangement or self-funded insurance arrangement; such arrangement shall be deemed to be in compliance with the requirements of this section.

11. **Equal Opportunity:**
It is the affirmed policy of the City to encourage utilization of the community's human resources on an equal opportunity basis. The City requires all contractors and vendors doing business with the City not to discriminate against anyone on the basis of race, age, color, religion, gender, ancestry, national origin, marital status, mental or physical disability unrelated to ability, familial status or sexual orientation. To accomplish this result, all contractors doing or proposing to do business with the City will be required to submit on request an acceptable written affirmative action plan for the utilization of all available workers on an equal opportunity basis. Contractor hereby agrees, as a material part of the Agreement, to comply with the City of Bloomington Contract Compliance Program, Section I, Paragraph (3), titled "Equal Employment Opportunity".

12. **Notices:**
All notices to be given hereunder by either party shall be in writing and given by personal delivery or certified mail to the parties at the addresses as hereinafter set forth. For purposes of calculating time periods under the provisions of this Agreement, notice shall be deemed effective upon receipt or personal delivery, whichever is applicable.

13. **Governing Law:**
This agreement and the rights of the parties hereunder shall be governed by and interpreted in accordance with the laws of the State of Illinois.

14. **Other Refuse Collected:**
The City shall retain the right to dispose of "other" Refuse, spoil, bulky waste, leaves, grass, as is determined to be in the best interest of the City.

15. **Successors and Assigns:**
This agreement shall be binding upon and shall inure to the benefit of all successors and assigns of Contractor and City.

16. **Contractor Certifications:**
Contractor hereby certifies that the representations set forth on Exhibit B are true and correct and form a material part of this Agreement.

17. **RFP Documents:**
The request for proposals issued by City and the response provided by Contractor are attached hereto by reference and form a part of this Agreement.

18. **Entire Agreement:**
This Agreement supersedes all prior oral understandings and constitutes the entire agreement between the parties with respect to the subject matter herein.

19. **Severability:**
If any provision of this Agreement is held invalid by a court of law, the remainder of this Agreement shall not be affects thereby unless the invalidity of part substantially alters the business terms of the original Agreement.

20. **No Third Party Beneficiary:**
This Agreement is for the sole benefit of the parties and nothing herein is intended to confer upon any third party any legal or equitable right, benefit or remedy whatever under or by reason of this Agreement.

21. **Amendments:**
This Agreement may only be amended in writing signed by each party hereto.

22. **Delay No Waiver:**
No waiver by any party of any of the provisions hereof shall be effective unless reduced to writing and signed by the party so waiving. No delay or failure to exercise any right, remedy or power under this Agreement shall operate or be construed as a waiver.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

CITY OF BLOOMINGTON

BY_____

ATTEST:

_____

TOWN OF NORMAL

BY Christopher Koos

ATTEST:

Wendell J Briggs

REPUBLIC/ALLIED

BY Daniel J Winters
Daniel J. Winters

ATTEST: Debbie Keith - Secretary
Debbie Keith

EXHIBIT A

COMPLETING THIS PAGE IS MANDATORY
RFP #2014-38 RESPONSE FORM

SOLID WASTE DISPOSAL SERVICES
FOR THE CITY OF BLOOMINGTON AND THE TOWN OF NORMAL

The offeror agrees to contract with the City of Bloomington and Town of Normal to provide all necessary labor, supervision, machinery, tools, apparatus, documents and any other means to do all the work and furnish all the materials specified in the proposal in the manner and time therein as set forth by the proposer and that the proposer will take in full payment the amount set forth hereon. The cost of all labor, material and equipment necessary for the completion of the proposed work, even though not shown or specified, shall be included in the total price for the various items shown herein.

We further agree to complete all of the above work in a complete, neat, and workmanlike manner. Payment of prevailing wage rates as predetermined by the Bloomington City Council pursuant to the Prevailing Wage Ordinance 2012-21 is acknowledged.

The offeror certifies by signature below that it has not been barred from contracting with a unit of State or Local government in the State of Illinois as a result of a violation of Section 33E-3 or 33E-4 of the Criminal Code of 1961, as amended.

DESCRIPTION	AMOUNT
Solid Waste Disposal (3/1/2014 to 2/29/2016)	$ 46.46 per Ton
After Hours Operation (3/1/2014 to 2/29/2016)	$ 22.24 per hour - per person
Cost for Five (5) Year Period After expiration of Original Agreement	
Solid Waste Disposal (3/1/2016 to 2/28/2017)	$ 48.55 per Ton
Solid Waste Disposal (3/1/2017 to 2/28/2018)	$ 50.01 per Ton
Solid Waste Disposal (3/1/2018 to 2/28/2019)	$ 51.81 per Ton
Solid Waste Disposal (3/1/2019 to 2/29/2020)	$ 53.06 per Ton
Solid Waste Disposal (3/1/2020 to 2/28/2021)	$ 54.65 per Ton
After Hours Operation (3/1/2016 to 2/28/2017)	$ 23.25 per hour - per person
After Hours Operation (3/1/2017 to 2/28/2018)	$ 23.95 per hour - per person
After Hours Operation (3/1/2018 to 2/28/2019)	$ 24.67 per hour - per person
After Hours Operation (3/1/2019 to 2/29/2020)	$ 25.41 per hour - per person
After Hours Operation (3/1/2020 to 2/28/2021)	$ 26.17 per hour - per person

Republic / Bloomington Transfer
Firm

2112 W. Washington St.
Address

309-828-3384
Phone Number

Authorized Signature

Bloomington IL 61705
City State Zip

1-22-2014
Date

Email Address: dwinters@republicservices.com

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EXHIBIT B
Contractor Certification
For Services

Contractor on behalf of contractor, its principals, and owners with more than a seven and one half percentage interest in Contractor certifies that the following representations are true and correct and further agrees as a condition of doing business with the Town of Normal to require all of Contractor's subcontractors and sub-subcontractors to certify that the following representations are true and correct for each subcontractor and sub-subcontractor:

1. CONFLICT. Contractor certifies that no Town of Normal officer or employee has any interest in the proceeds of this contract.
2. BRIBERY. Contractor certifies that same has not committed bribery or attempted bribery of an officer or employee of any governmental official whether on the federal, state or local level.
3. DEBARMENT. Contractor certifies that same has not been barred from conducting business with any governmental unit whether federal, state or local.
4. SARBNES-OXLEY. Contractor certifies that the business entity its officers, directors, partners, or other managerial agents of the business have not been convicted of a felony under the Sarbanes-Oxley Act of 2002 nor have any of the same been convicted of any felony under state or federal securities laws.
5. BID RIGGING/BID ROTATING. Contractor certifies that same has not been barred from contracting with any unit of state or local government as a result of a violation of 720 ILCS 5/33E-3 (bid-rigging) or 720 ILCS 5/33E-4 (bid-rotating).
6. DELINQUENT PAYMENTS. Contractor certifies that same is not delinquent in the payment of any debt or tax due the State or the Town of Normal.
7. RECORDS. Contractor certifies that same shall maintain books and records relating to the performance of this contract as necessary to support amounts charged under the contract for a period of three (3) years from the later of the date of final payment under the contract or completion of the contract.
8. HUMAN RIGHTS ACTS. Contractor agrees to comply with applicable provisions of the Town of Normal Human Rights Ordinance, the Illinois Human Rights Act, the U.S. Civil Rights Act and the Americans with Disabilities Act.
9. NON-DISCRIMINATION. Contractor certifies that the same is an "Equal Opportunity Employer" as defined by Section 2000 (e) of Chapter 21, Title 42 U.S. Code Annotated and applicable Executive Orders.
10. DBE. Contractor certifies that same is or is not (please circle applicable designation) a Minority and Female Business Enterprise as defined by the State of Illinois (30 ILCS 575/et seq.)
11. PATRIOT ACT. Contractor certifies that same is in compliance with the Patriot Act and Executive Order 13224 and federal Anti-Money Laundering Control Act of 1986 as amended.

12. AMERICAN RECOVERY AND REINVESTMENT ACT. Contractor certifies that same is in compliance with and will continue to comply with the American Recovery and Reinvestment Act of 2009 when federal funds are used pursuant to this Act for the work undertaken by Contractor.

13. TAXPAYER IDENTIFICATION. Contractor certifies that its correct Federal Taxpayer Identification Number (Social Security Number or Federal Employer Identification Number) is 13-3831976.

14. To the extent required by Illinois law Contractor agrees to comply with the Illinois Freedom of Information Act and produce upon request public records of the Town of Normal held by such contractor all within the time allowed by law and subject to applicable exemptions allowed by law.

Contractor hereby agrees to defend, indemnify and hold harmless the Town of Normal its officers, employees and agents from and against any and all claims, damages, losses, risks, liabilities, and expenses (including reasonable attorneys' fees and costs) arising from or related to any breach of the foregoing representations and warranties.

Done this 14th day of February, 2014.

Republic /Allied - American Disposal Services of Illinois, Inc
Contractor

CERTIFICATE OF SECRETARY

The undersigned, Secretary of **AMERICAN DISPOSAL SERVICES ILLINOIS, INC.**, a Delaware corporation (the "Company"), hereby certifies that the following is a true and correct copy of the resolution which was duly adopted by unanimous written consent of the Board of Directors of the Company on July 15, 2011, that such resolution has not been rescinded, amended or modified in any respect, and is in full force and effect on the date hereof:

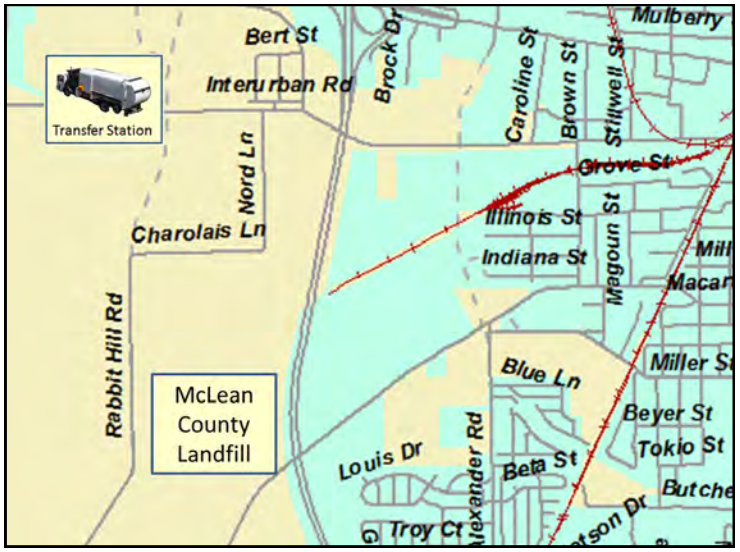
RELATING TO THE WASTE DISPOSAL AGREEMENT WITH THE CITY OF BLOOMINGTON AND THE TOWN OF NORMAL IN THE STATE OF ILLINOIS

RESOLVED, that any individual at the time holding the position of Area President, Area Controller, or General Manager be, and each of them hereby is, appointed as an Authorized Agent, to act in the name and on behalf of the Company, in connection with the day-to-day business activities of the Company, and further, in addition to the foregoing positions, any Municipal Services Director or Area Municipal Services Manager be, and each of them hereby is, appointed as an Authorized Agent to execute any bid and proposal, and if awarded, any related contract for services to be performed by the Company and any bond required by such bid, proposal or contract in accordance with the existing Levels of Authority.

I further certify that **DANIEL J. WINTERS** holds the title of General Manager and in such capacity has full authority to act in the name and on behalf of the Company as set forth in the foregoing resolution.

WITNESS MY HAND, this 10th day of February, 2014.

Eileen B. Schuler, Secretary



Locations:

Allied Waste Services Transfer Station in relation to its McLean County Landfill.

Item 7B.

Proposed FY 2014/2015 Budget Presentation
by David Hales, City Manager
(45 minutes)

Budget materials will be provided
at the meeting