

Table of Contents

Agenda	4
Council Minutes dated June 24, 2013	
Council Minutes dated June 24, 2013.	8
For Information Only	
Report, Bills Payable, 7-2-13	23
Bill No. 5422 - An Ordinance To Amend And Adopt The 2009 International Building Code As The City's New Building Code For Commercial Structures. Final Reading and Passage	
Amended Bill No 5422	47
5-1-13 Memo to the CA (2009 IBC).	76
EXHIBIT A - Building Code Board of Appeals Approval	79
EXHIBIT B - Caryl Kinsey Fox's Recommendation	80
EXHIBIT C - Chamber of Commerce's Comments and Building Division's Responses	82
EXHIBIT D - Significant Changes to the 2009 IBC	86
Bill No. 5423 - An Ordinance To Adopt The 2009 International Energy Conservation Code As The City's New Energy Conservation Code. Final Reading and Passage	
Amended Bill No 5423	88
EXHIBIT A - Building Code Board of Appeals Approval.	93
EXHIBIT B - Caryl Kinsey Fox's Recommendation	94
EXHIBIT C - Climate Action Task Force's Recommendation	96
EXHIBIT D - Significant Changes to the 2009 IECC	97
EXHIBIT E - True Cost of the 2009 IECC.	98
5-8-13 Memo to the CA (2009 IECC).	100
Bill No. 5424 - An Ordinance To Amend And Adopt The 2009 International Residential Code For One- And Two-Family Dwellings As The City's New Residential Building Code. Final Reading and Passage	
Amended Bill No 5424	103
5-8-13 Memo to the CA (2009 IRC).	136
EXHIBIT A - Building Code Board of Appeals Approval.	142
EXHIBIT B - Caryl Kinsey Fox's Recommendation	143
EXHIBIT C - HBA's Comments and City's Responses	145
EXHIBIT D - Richard Kutta's Comments and City's Responses	208
EXHIBIT E - UL Test Summary of Fire Performance of Engineered Lightweight Lumber	213
EXHIBIT F - NFPA Journal Cover Story	215
EXHIBIT G - 2010 ICC Code Change Hearings.	217
EXHIBIT H - APA Technical Topics.	218
EXHIBIT I - Creve Coeur Fire Protection District's Approval Letter	219
EXHIBIT J - Monarch Fire Protection District's Letter.	221

EXHIBIT K - Significant Changes to the 2009 IECC	222
EXHIBIT L - True Cost of the 2009 IECC	223
EXHIBIT M - HBA's Letter Regarding Staff's Disapproval of Their Comments.	225
EXHIBIT AA - Building Code Board of Appeals 7/1/13	226
Bill No. 5429 - An Ordinance Of The City Council Of The City Of Creve Coeur, Missouri Authorizing The Execution Of A Maintenance Agreement With The Missouri Highways And Transportation Commission For The Maintenance Of Illuminated Street Name Signs On Traffic Signals Located In The MoDOT Right-Of-Way At Conway Road And South New Ballas Road. Final Reading and Passage	
Bill No 5429.	227
"Exhibit A" MoDOT ER52 maintenance agreement for illuminated street name signs.	228
Staff Recommendation - Illuminated Street Name Signs at Conway/Ballas	235
Bill No. 5431 - An Ordinance Authorizing The Issuance Of A New Conditional Use Permit For A 2,837 Square-Foot, Limited- Service, Ultimate Zoup Restaurant, Located At 810 North New Ballas Road, And Containing An Emergency Clause. First Reading	
Bill No 5431.	236
Staff Report.	239
Applicant's Materials	246
Public Comment received July 1, 2013	256
Public Hearing Transcripts from July 1, 2013.	257
Resolution No. 1066 - A Resolution Of The City Council Of The City Of Creve Coeur, Missouri Authorizing The Execution Of An Agreement With St. Louis County Regarding A Community Development Block Grant For Ada Compliant Improvements To The Creve Coeur Government Center.	
Resolution No. 1066	266
Exhibit A	267
Staff Report.	272
Resolution No. 1067 - A Resolution Approving An Amendment To The Agreement For Legal Services Of Curtis, Heinz, Garrett, & O'Keefe, Carl J. Lumley, City Attorney And Leland B. Curtis, Assistant City Attorney.	
Resolution No. 1067	273
memo - 2013 city attorney agreement	276
Residential Utility Tax Rates	
Ordinance - Permanent reduction.	277
Ordinance - Temporary reduction.	279
Memo from Dan Smith dated July 3, 2013	281
Utility Tax rates	282
Olive Boulevard TDD New Ballas Lighting	
Olive TDD Lighting - Staff Memorandum	283
Space Needs Analysis - Government Center Renovations	
Space Needs Analysis Report	289

FDH Final Report to Clty of Creve Coeurv1 1.	291
Draft Request for Qualifications Document	339



**AGENDA
CITY OF CREVE COEUR
CITY COUNCIL MEETING
300 N NEW BALLAS ROAD
Monday, July 08, 2013
7:00 PM**

CALL MEETING TO ORDER

PLEDGE OF ALLEGIANCE

INVOCATION

ROLL CALL

COMMENTS FROM THE GENERAL PUBLIC

(Citizens are asked to limit comments to three minutes and to complete a speaker card)

ACCEPTANCE OF AGENDA

ANNOUNCEMENTS

The City Council meets the 2nd and 4th Monday of each month

6:00 p.m. – 7:00 p.m. – Work Session

7:00 p.m. – Regular Meeting of the City Council

1. CONSENT AGENDA

a. Council Minutes dated June 24, 2013

b. The Creve Coeur Arts Commission is requesting approval of the in-kind donation of \$2,000 for the use of the AMC Creve Coeur 12 Theater for the Silver Screen Series.

Summary: Brian Hastings, the manager of the AMC Creve Coeur 12 Theater, is providing the use of the auditorium for the Silver Screen Series for the four Monday's of September beginning September 9th at no cost to the City. The value of the in-kind donation is \$2,000. Any donation of \$1,000 or more requires approval by the City Council.

BILLS PAYABLE REPORT

For Information Only

Summary: A report of bills payable dated July 2, 2013 in the amount of \$468,789.88 has been provided for Council review. No vote is required.



CITY OF CREVE COEUR – AGENDA
CITY COUNCIL MEETING
Monday, July 08, 2013
7:00 PM

UNFINISHED BUSINESS

2. Bill No. 5422 - An Ordinance To Amend And Adopt The 2009 International Building Code As The City's New Building Code For Commercial Structures. Final Reading and Passage

Summary: This proposed building code regulates building construction for and within structures such as office buildings, churches, temples, theaters, restaurants, schools, hospitals, shopping centers and warehouses. The city's present commercial building code is the 2003 edition of the International Building Code. St. Louis County and many municipalities within St. Louis County have already adopted this building code as their commercial building code. The building division is recommending that the City of Creve Coeur do the same. Bill was deferred at the May 28, June 10 and 24, 2013 Council Meetings.

3. Bill No. 5423 - An Ordinance To Adopt The 2009 International Energy Conservation Code As The City's New Energy Conservation Code. Final Reading and Passage

Summary: This code regulates the design and construction of residential and commercial buildings for the effective use of energy. Many municipalities within St. Louis County have adopted this energy conservation code as their new energy conservation code. The building division is recommending the City of Creve Coeur do the same. Bill was deferred at the May 28, 2013 Council Meeting. Bill was deferred at the May 28, June 10 and 24, 2013 Council Meetings.

4. Bill No. 5424 - An Ordinance To Amend And Adopt The 2009 International Residential Code For One- And Two-Family Dwellings As The City's New Residential Building Code. Final Reading and Passage

Summary: This proposed building code regulates the construction, alteration, movement, enlargement, replacement, repair, location and demolition of detached one- and two-family dwellings and townhomes not more than 3 stories in height with a separate means of egress. Residential dwelling units more than 3 stories in height or that share a means of egress are regulated by the 2009 IBC. The city's present residential building code is the 2003 edition of the International Residential Code. St. Louis County and many municipalities within St. Louis County have already adopted this building code as their residential building code. The



CITY OF CREVE COEUR – AGENDA
CITY COUNCIL MEETING
Monday, July 08, 2013
7:00 PM

building division is recommending that the City of Creve Coeur do the same. Bill was deferred at the May 28, 2013 Council Meeting. Bill was deferred at the May 28, June 10 and 24, 2013 Council Meetings.

- 5. Bill No. 5429 - An Ordinance Of The City Council Of The City Of Creve Coeur, Missouri Authorizing The Execution Of A Maintenance Agreement With The Missouri Highways And Transportation Commission For The Maintenance Of Illuminated Street Name Signs On Traffic Signals Located In The MoDOT Right-Of-Way At Conway Road And South New Ballas Road. Final Reading and Passage**

Summary: The approval of this ordinance will allow the city to execute a maintenance agreement with MoDOT for the city to maintain illuminated street name signs that are to be installed by Mercy Hospital at the Conway/S New Ballas intersection on the traffic signal mastarms.

NEW BUSINESS

- 6. Bill No. 5431 - An Ordinance Authorizing The Issuance Of A New Conditional Use Permit For A 2,837 Square-Foot, Limited-Service, Ultimate Zoup Restaurant, Located At 810 North New Ballas Road, And Containing An Emergency Clause. First Reading**

Summary: An application was submitted by Thaer Abdulkarim, of Ultimate Zoup, for a conditional use permit for a 72 seat, 2,837 square foot restaurant located in the tenant space of 810 N. New Ballas Road, at the northeast corner of Olive Boulevard and N. New Ballas Road. Section 405.210 Table A, all limited-service restaurants in the "CB", Core Business zoning district require the issuance of a conditional use permit as provided in Section 405.1070, Conditional Use Permits. The Applicant is asking for an emergency reading due to the unexpected lack of quorum of the June 17th Planning and Zoning Commission that delayed the public hearing.

- 7. Resolution No. 1066 - A Resolution Of The City Council Of The City Of Creve Coeur, Missouri Authorizing The Execution Of An Agreement With St. Louis County Regarding A Community Development Block Grant For Ada Compliant Improvements To The Creve Coeur Government Center.**

Summary: Amending Resolution #968 allowing the City to construct ADA improvements at the Tappmeyer Homestead. Completely funded through grant funding.



CITY OF CREVE COEUR – AGENDA
CITY COUNCIL MEETING
Monday, July 08, 2013
7:00 PM

8. Resolution No. 1067 - A Resolution Approving An Amendment To The Agreement For Legal Services Of Curtis, Heinz, Garrett, & O'Keefe, Carl J. Lumley, City Attorney And Leland B. Curtis, Assistant City Attorney.

Summary: The proposed resolution will provide an increase in the monthly retainer for the City Attorney from \$3,500 to \$4,000. The fee agreement has not been adjusted since 2009.

BUSINESS FROM THE MAYOR and CITY COUNCIL

9. Residential Utility Tax Rates

Summary: Council Member Rhoades is proposing legislation for a reduction in utility tax rates.

BUSINESS FROM CITY ADMINISTRATOR

10. Olive Boulevard TDD New Ballas Lighting

Summary: City staff, acting as the Olive TDD project manager, would like to update the City Council on plans for the decorative sidewalk lighting for North New Ballas Road.

11. Space Needs Analysis - Government Center Renovations

Summary: City staff is preparing to issue a Request for Qualifications (RFQ) to hire a consultant to conduct a Space Needs Analysis and Preliminary Design for renovations to the Government Center. In addition, staff will review the recently-completed Energy Audit of city facilities.

Pursuant to Section 610.022 RSMo., the City Council could, at any time during the meeting, vote to close the public meeting and move to closed session to discuss matters relating to litigation, legal actions and/or communications from the City Attorney as provided under Section 610.021(1) RSMo. and/or personnel matters under Section 610.021(13) RSMo. And/or employee matters under Section 610.021(3) RSMo. and/or real estate matters under Section 610.021(2) or other matters as permitted by Chapter 610.

Posted: _____ posted 7/5/2013

Deborah Ryan, MRCC
City Clerk



**MINUTES
CITY OF CREVE COEUR
CITY COUNCIL MEETING
300 N NEW BALLAS ROAD
Monday, June 24, 2013
7:00 PM**

CALL MEETING TO ORDER

A regular meeting of the City Council of the City of Creve Coeur was called to order by Mayor Glantz at the Creve Coeur Government Center, 300 N New Ballas Road on Monday, June 24, 2013.

PLEDGE OF ALLEGIANCE

Mayor Glantz led the Pledge of Allegiance.

INVOCATION

Mayor Glantz gave the invocation.

ROLL CALL

Mayor Glantz	Mayor
Mrs. Kramer	Council Member Ward I
Mr. Kreuter	Council Member Ward I
Mrs. Lawrence	Council Member Ward II
Mr. Wang	Council Member Ward II
Mrs. D'Alfonso	Council Member Ward III
Mr. Hoffman	Council Member Ward III
Mrs. Rhoades	Council Member Ward IV
Mr. Saunders	Council Member Ward IV

COMMENTS FROM THE GENERAL PUBLIC

(Citizens are asked to limit comments to three minutes and to complete a speaker card)

George Cibulka resident of 808 Fernview displayed pictures of his yard where he claims the limbs were left too long and killed his grass and voiced concerns about the efficiency of the program.

Mark Perkins stated two weeks ago the crews were behind so the city put out two additional crews to canvas the entire City after the storms. The program is back on schedule on a two week rotation.

ACCEPTANCE OF AGENDA

Council Member Saunders moved, seconded by Council Member Hoffman to accept the agenda as presented.

Council Member Rhoades requested the addition of Item 16A. Utility Tax under Business from Mayor and City Council.



CITY OF CREVE COEUR – MINUTES
CITY COUNCIL MEETING
Monday, June 24, 2013
7:00 PM

Council member Hoffman moved, seconded by Council member D'Alfonso to approve the agenda as amended, with the vote upon such motion being as follows, to-wit:

Council Member Kreuter – Aye
Council Member Wang – Aye
Council Member D'Alfonso – Aye
Council Member Rhoades – Aye
Council Member Saunders – Aye
Council Member Hoffman – Aye
Council Member Lawrence – Aye
Council Member Kramer – Aye

The vote on the motion being 8 ayes and 0 nays, motion carried.

ANNOUNCEMENTS

The City Council meets the 2nd and 4th Monday of each month
6:00 p.m. – 7:00 p.m. – Work Session
7:00 p.m. – Regular Meeting of the City Council

1. CONSENT AGENDA

Council Member Hoffman moved, seconded by Council Member Saunders to approve the consent agenda as presented.

- a. Council Minutes dated June 10, 2013**
- b. Acceptance of Donations for the Purchase of Equipment from the Creve Coeur Joint Crime Prevention Partnership**
- c. Resolution No. 1063 - A Resolution Authorizing the City of Creve Coeur to allow the Sale of Four police Vehicles at Auction.**

Mayor Glantz called the question for the approval of the consent agenda as presented, with the vote upon such motion being as follows, to-wit:

Council Member Rhoades – Aye
Council Member Saunders – Aye
Council Member Hoffman – Aye
Council Member Lawrence – Aye
Council Member Kramer – Aye
Council Member D'Alfonso – Aye
Council Member Wang – Aye
Council member Kreuter – Aye

The vote on the motion being 8 ayes and 0 nays, motion carried.



CITY OF CREVE COEUR – MINUTES
CITY COUNCIL MEETING
Monday, June 24, 2013
7:00 PM

BILLS PAYABLE REPORT

For Information Only

Summary: A report of bills payable dated June 19, 2013 in the amount of \$203,889.94 has been provided for council review. No vote is required.

UNFINISHED BUSINESS

2. Bill No. 5422 - An Ordinance To Amend And Adopt The 2009 International Building Code As The City's New Building Code For Commercial Structures. Final Reading and Passage

Mark Perkins stated a meeting with HBA representatives, Building Board of Appeals and staff is scheduled for Tuesday, June 25, 2013 at 5:30 p.m. Request to defer until July 8, 2013.

Council Member Hoffman moved, seconded by Council Member Saunders to defer Bill Nos. 5422, 5423 and 5424 until July 8, 2013, with the vote upon such motion being as follows, to-wit:

Council Member Kreuter – Aye
Council Member Wang – Aye
Council Member D'Alfonso – Aye
Council Member Rhoades – Aye
Council Member Saunders – Aye
Council Member Hoffman – Aye
Council Member Lawrence – Aye
Council Member Kramer - Aye

The vote on the motion being 8 ayes and 0 nays, motion carried.

3. Bill No. 5423 - An Ordinance To Adopt The 2009 International Energy Conservation Code As The City's New Energy Conservation Code. Final Reading and Passage

Bill deferred until Monday, July 8, 2013.

4. Bill No. 5424 - An Ordinance To Amend And Adopt The 2009 International Residential Code For One- And Two-Family Dwellings As The City's New Residential Building Code. Final Reading and Passage

Bill deferred until Monday, July 8, 2013.

5. Bill No. 5426 - An Ordinance Approving A Final Subdivision Plat For A Subdivision Known As 222 North Mason Road, City Of Creve Coeur, St. Louis County, Missouri. Final Reading and Passage

City Clerk read Bill NO. 5426 for the final time.



CITY OF CREVE COEUR – MINUTES
CITY COUNCIL MEETING
Monday, June 24, 2013
7:00 PM

Council Member Wang moved, seconded by Council Member Saunders to approve Bill No. 5426.

Council Member Rhoades asked since this project was, in some part, linked to the bridge replacement if there was any update.

Mark Perkins stated relative to bridge 211, the County is continuing to move forward with both design and right of way acquisition and he believes the timeline is 2014 for construction. Bridge 212 at St. Timothy's that the City is also aware of that is going to be replaced this year.

Mayor Glantz called the question for the approval of Bill No. 5426, with the vote upon such motion being as follows, to-wit:

Council Member Rhoades – Aye
Council Member D'Alfonso – Aye
Council Member Wang – Aye
Council Member Kreuter – Aye
Council Member Kramer – Aye
Council Member Lawrence – Aye
Council Member Hoffman – Aye
Council member Saunders – Aye

The vote on the motion being 8 ayes and 0 nays, motion carried. Bill No. 5426 becomes Ordinance No. 5306.

6. Substitute Bill No. 5427 - An Ordinance Amending The Adopted 2012-2013 General And Enterprise Funds Budgets Of The City Of Creve Coeur By Authorizing Additional Appropriations And Unappropriations From Operating Departments. Final Reading and Passage

City Clerk read Substitute Bill No. 5427 for the final time.

Council Member Hoffman moved, seconded by Council Member Saunders to approve Substitute Bill No. 5427.

Mark Perkins stated there are some additional amendments that have been made that will require approval from Council as well. The additional amendments are the result of some additional office equipment, appropriations relating to the needs assessment of the Dielmann Center recreation complex and the Enterprise Fund equipment maintenance account.

Council Member Saunders moved, seconded by Council Member Hoffman to accept and approve the second substitution of Bill No. 5427, with the vote upon such motion being as follows, to-wit:



CITY OF CREVE COEUR – MINUTES
CITY COUNCIL MEETING
Monday, June 24, 2013
7:00 PM

Council Member Kreuter – Aye
Council Member Wang – Aye
Council Member D'Alfonso – Aye
Council Member Rhoades – Aye
Council Member Saunders – Aye
Council Member Hoffman – Aye
Council Member Lawrence – Aye
Council Member Kramer – Aye

The vote on the motion being 8 ayes and 0 nays, motion carried. Bill No. 5427 becomes Ordinance No. 5307.

7. Bill No. 5428 - An Ordinance Adopting The Annual Budget Of The City Of Creve Coeur For The Fiscal Year 2014 Commencing July 1, 2013 And Appropriating Funds Pursuant Thereto. Final Reading and Passage

City Clerk read Bill No. 5428 for the final time.

Council Member Hoffman moved, seconded by Council Member Saunders to approve Bill No. 5428.

Stan Edelstein resident of 12321 Woodline Drive read and presented a statement for the record. (Exhibit A)

Mark Perkins stated the city's Finance Committee has submitted their comments dated June 19, 2013 and recommends approval. Mark Perkins stated one of the suggestions is for staff to consider alternatives to paying off Millennium Park debt. Staff will be working with the financial advisor to determine if there is a more financially advantageous route to take than paying off the debt early. There is a suggestion from the Finance Committee that more funding be made available for street construction work and that is what the five year CIP includes. Part of that money is freed up by the refinancing of the debt. There is also a letter from Tom Grote regarding his and neighbor's concerns about the streets and gutters in Chaminade Park. Staff and some elected officials met with some residents of Chaminade this afternoon and discussed some improvements that can be made. Mark Perkins stated staff appreciates the ongoing comments from Mr. Kent relative to the budget. There were a couple e-mails received today in response to comments from Mr. Kent regarding personnel costs. Mark Perkins stated our personnel costs are budgeted to increase 5.3 percent over the next year. It is important to note that this includes all of our benefits, health insurance, pension costs, etc. So that is just not salaries. It also includes a full year of our new accountant position, new police officer position as well as the permits clerk. Those new personnel positions come up to about 1.5 percent of that 5.3 percent. We are having a 3.2 percent average market salary increase for our



CITY OF CREVE COEUR – MINUTES
CITY COUNCIL MEETING
Monday, June 24, 2013
7:00 PM

employees and are in line with other government entities in our area here. We are also making some market adjustment for some positions and most of that money is going to police officers. All of that goes into that 5.3 percent so it is just not salaries, it is all those benefits rolled into that as well. The budget as a whole, it is important to note, the overall increase of 5.3 percent is going to ebb and flow with the entire budget from year to year. The last ten years we have averaged a 3.5 percent increase in our general fund operating budgets and the last four years it has been seven-tenths of one percent increase in the general fund operating budget.

Council Member Lawrence stated in the Finance Committee's letter to City Council, they do suggest alternatives be made available for the retirement of the Millennium Park debt, because of the so called surplus that the city has. The city really doesn't have a surplus but rather the illusion of a surplus. We have a big debt with Millennium Park and underfunded pension plan. In order to have a fiscally responsible budget, you pay off your debts and resist the temptation to use that money for other projects. You do want to do what Joseph did and you do want to be fiscally conservative and pay off the debts. It is just like paying off your personal mortgage and when that happens, you have more income stream to spend on other projects without the cloud of the debt over your head. The worries are that the interest rates are going to rise, which they are. It is very important to not give into the temptation to not pay off the debt.

Robert Kent resident of 13084 Ferntrails Lane stated he agrees with allowing additional funding for streets but feels there needs to be plan to completely redo the streets on a regular basis. Not sure if it would be on a ten year cycle or how many years to get the pavement condition index up to date and have a plan to do it. Mr. Kent would still like to see a plan for the sidewalks and an inventory for sidewalks that could go along with that. Agree with Council Member Lawrence that trading debt for equity would be a good idea if the city doesn't start spending it again.

Council Member Hoffman stated some of the streets that were annexed are of different quality than the streets that have been in the city longer and the need isn't necessarily on a rotation basis. Chassell is a prime example right now.

Robert Kent stated he would agree and we know what the condition of those streets is and should be able to come up with a plan.

Mark Perkins stated staff has been working on a PCI street rating report and it is fairly up to date. Funding has been included in the five year plan. Mark Perkins stated he doesn't feel that we will ever get to a point where we can say we are one hundred percent caught up. There are always going to be streets out there that are going to need something more than resurfacing or micro. There will always be reconstruction needs in the city. Staff is finding that there are a number of streets around town, particularly composite streets, whereby putting additional funds into the plan we can continue to address those needs because they are pretty costly. At this point, we do have a plan and generally have a good idea where repairs are needed and where the money is going to be spent.



CITY OF CREVE COEUR – MINUTES
CITY COUNCIL MEETING
Monday, June 24, 2013
7:00 PM

Council Member Hoffman stated the sidewalk proposal is a good idea and now that the Ladue sidewalk is in, we should have an inventory of where we are at.

Mark Perkins stated staff is in the process now for getting a contract going for our sidewalk repair to the tune of \$50 - \$60, 000.

Mel Klearman resident of 739 Bergerac Drive stated there is a debt Series B notes for the Olive/Graeser TDD for the next forty years and would like it included in some type of relief.

Robert Kent stated he would like an inventory of sidewalks.

Mark Perkins stated staff conducted a physical inventory of the sidewalks and that is where the repair list came from for the repairs.

Dan Smith stated the Series B notes were designed primarily like revenue notes in that the obligations of those notes is the sales tax revenue. All of the parties of the TDD understood that particular structure of the financing.

Mayor Glantz called the question for the approval of Bill No. 5428, with the vote upon such motion being as follows, to-wit:

Council Member Rhoades – Aye
Council Member D'Alfonso – Aye
Council Member Wang – Aye
Council Member Kreuter – Aye
Council Member Kramer – Aye
Council Member Lawrence – Aye
Council Member Hoffman – Aye
Council member Saunders – Aye

The vote on the motion being 8 ayes and 0 nays, motion carried. Bill No. 5428 becomes Ordinance No. 5308.

NEW BUSINESS

- 8. Bill No. 5429 - An Ordinance Of The City Council Of The City Of Creve Coeur, Missouri Authorizing The Execution Of A Maintenance Agreement With The Missouri Highways And Transportation Commission For The Maintenance Of Illuminated Street Name Signs On Traffic Signals Located In The MoDOT Right-Of-Way At Conway Road And South New Ballas Road. First Reading**

City Clerk read Bill No. 5429 for the first time.



CITY OF CREVE COEUR – MINUTES
CITY COUNCIL MEETING
Monday, June 24, 2013
7:00 PM

9. Bill No. 5430 - An Ordinance Amending Title I, Chapter 160, Section 160.010 of the Code of Ordinances of the City of Creve Coeur, Missouri, Pertaining to the City's Open Meetings and Records Policy. Emergency Clause

City Clerk read Bill No. 5430 for the first time.

Council Member Hoffman moved, seconded by Council Member Rhoades for a second reading of Bill No. 5430.

Carl Lumley stated when the State Statute was originally approved there was a sunset clause added to it and then the legislature got in a tangle and let the expiration occur. A year later they finally got around to eliminating the expiration date. Carl Lumley recommended Council approve on an emergency basis for this reason and get the security back in place.

Mayor Glantz called the question for the approval of the second reading of Bill No., 5430, with the vote upon such motion being as follows, to-wit:

Council Member Kreuter – Aye
Council Member Wang – Aye
Council Member D'Alfonso – Aye
Council Member Rhoades – Aye
Council Member Saunders – Aye
Council Member Hoffman – Aye
Council Member Lawrence – Aye
Council Member Kramer – Aye

The vote on the motion being 8 ayes and 0 nays, motion carried.

City Clerk read Bill No. 5430 for the second time.

Council Member Hoffman moved, seconded by Council Member Kramer for the final passage of Bill No. 5430 on emergency basis as described, with the vote upon such motion being as follows, to-wit:

Council Member Kramer – Aye
Council Member Lawrence – Aye
Council Member Hoffman – Aye
Council Member Saunders – Aye
Council Member Rhoades – Aye
Council Member D'Alfonso – Aye
Council Member Wang – Aye
Council Member Kreuter – Aye



CITY OF CREVE COEUR – MINUTES
CITY COUNCIL MEETING
Monday, June 24, 2013
7:00 PM

The vote on the motion being 8 ayes and 0 nays, motion carried. Bill No. 5430 becomes Ordinance No. 5309.

10. Resolution No. 1059 - A Resolution Of The City Council Of The City Of Creve Coeur, Missouri, Authorizing The Execution Of A Contract With M & H Concrete Contractors, Inc. For Concrete Roadway And Sidewalk Repairs Related To The Street Repair Program For The 2014 Fiscal Year For \$345,597.50.

City Clerk read Resolution No. 1059.

Council Member Hoffman moved, seconded by Council Member Wang to approve Resolution No. 1059.

Mayor Glantz suggested staff discuss Resolution No. 1060, 1061 and 1064 at the same time.

Matt Wohlberg, City Engineer stated there are three typical programs that PW does; concrete, asphalt and microsurfacing. Staff used the same project list presented at the work session and took out the combination streets. Those will be made into separate projects so that it will not complicate the concrete and asphalt projects. Microsurfacing projects are separate as are combination streets. Staff has requested the asphalt contractor to have a quality control person on site so that the City's quality control person can confirm the results. Street sweeping has been added to the microsurfacing contract. The concrete program will have a fair amount of curbing that will be spread out through all of the projects. There are some high priority slabs that will be taken care.

Council Member Lawrence asked if there will be a quality control person on site for the concrete work.

Matt Wohlberg stated yes, we have staff inspector on site for concrete.

Mayor Glantz asked if it was still the opinion of professional city staff that the microsurfacing is a good program.

Matt Wohlberg stated yes, it has its place and does a decent job of sealing the surface as a whole.

Mayor Glantz called the question for the approval of Resolution No. 1059, with the vote upon such motion being as follows, to-wit:

Council Member Saunders – Aye
Council Member Rhoades – Aye
Council Member D'Alfonso – Aye
Council Member Wang – Aye



CITY OF CREVE COEUR – MINUTES
CITY COUNCIL MEETING
Monday, June 24, 2013
7:00 PM

Council Member Kreuter – Aye
Council Member Kramer – Aye
Council Member Lawrence – Aye
Council Member Hoffman – Aye

The vote on the motion being 8 ayes and 0 nays, motion carried.

11. Resolution No. 1060 - A Resolution Of The City Council Of The City Of Creve Coeur, Missouri Authorizing The Execution Of A Contract With Missouri Petroleum Products Company, LLC, For Asphalt Pavement Surface Treatments Related To The Street Repair Program For The 2014 Fiscal Year For \$134,500.00.

City Clerk read Resolution No. 1060.

Council Member Saunders moved, seconded by Council Member Saunders to approve Resolution No. 1060, with the vote upon such motion being as follows, to-wit:

Council Member Kreuter – Aye
Council Member Wang – Aye
Council Member D'Alfonso – Aye
Council Member Rhoades – Aye
Council Member Saunders – Aye
Council Member Hoffman – Aye
Council Member Lawrence – Aye
Council Member Kramer – Aye

The vote on the motion being 8 ayes and 0 nays, motion carried.

12. Resolution No. 1061 - A Resolution Of The City Council Of The City Of Creve Coeur, Missouri, Authorizing The Execution Of A Contract With Amcon Municipal Concrete, LLC, For The 2013 Roadway Rehabilitation Project As Part Of The Street Repair Program For The 2014 Fiscal Year For The Amount Of \$ 465,441.50.

City Clerk read Resolution No. 1061.

Council Member Wang moved, seconded by Council Member Hoffman to approve Resolution No. 1061, with the vote upon such motion being as follows, to-wit:

Council Member Kramer – Aye
Council Member Lawrence – Aye
Council Member Hoffman – Aye
Council Member Saunders – Aye



CITY OF CREVE COEUR – MINUTES
CITY COUNCIL MEETING
Monday, June 24, 2013
7:00 PM

Council Member Rhoades – Aye
Council Member D'Alfonso – Aye
Council Member Wang – Aye
Council Member Kreuter – Aye

The vote on the motion being 8 ayes and 0 nays, motion carried.

13. Resolution No. 1062 - A Resolution Of The City Council Of The City Of Creve Coeur, Missouri Authorizing The Execution Of An Agreement With St. Louis County Regarding A Community Development Block Grant For ADA Compliant Improvements To The Creve Coeur Government Center.

City Clerk read Resolution No. 1062. Mr. Perkins explained the proposal.

Council Member Wang moved, seconded by Council Member Kramer to approve Resolution No. 1062, with the vote upon such motion being as follows, to-wit:

Council Member Kreuter – Aye
Council Member Wang – Aye
Council Member D'Alfonso – Aye
Council Member Rhoades – Aye
Council Member Saunders – Aye
Council Member Hoffman – Aye
Council Member Lawrence – Aye
Council Member Kramer – Aye

The vote on the motion being 8 ayes and 0 nays, motion carried.

14. Resolution No. 1064 - A Resolution Of The City Council Of The City Of Creve Coeur, Missouri, Authorizing The Execution Of A Contract With Ford Asphalt Company, Inc., For Asphalt Pavement Resurfacing Related To The Street Repair Program For The 2014 Fiscal Year For \$139,367.11.

City Clerk read Resolution No. 1064.

Council Member Saunders moved, seconded by Council Member Hoffman to approve Resolution No. 1064, with the vote upon such motion being as follows, to-wit:

Council Member Saunders – Aye
Council Member Rhoades – Aye
Council Member D'Alfonso – Aye
Council Member Wang – Aye



CITY OF CREVE COEUR – MINUTES
CITY COUNCIL MEETING
Monday, June 24, 2013
7:00 PM

Council Member Kreuter – Aye
Council Member Kramer – Aye
Council Member Lawrence – Aye
Council Member Hoffman – Aye

The vote on the motion being 8 ayes and 0 nays, motion carried.

**15. Resolution No. 1065 - A Resolution Authorizing The Purchase Of The
City's Insurance Coverage's For The Year Beginning July 1, 2013.**

City Clerk read Resolution No. 1065.

Council Member Wang moved, seconded by Council Member Hoffman to approve Resolution No. 1065.

Carl Lumley stated there are changes being suggested for an increase for Section 1, Item 2 for Police and General Liability. Mr. Smith explained further.

Council Member Rhoades moved, seconded by Council Member Wang to Substitute Resolution No. 1065 as suggested, with the vote upon such motion being as follows, to-wit:

Council Member Rhoades – Aye
Council Member Saunders – Aye
Council Member Hoffman – Aye
Council Member Lawrence – Aye
Council Member Kramer – Aye
Council Member D'Alfonso – Aye
Council Member Wang – Aye
Council member Kreuter – Aye

The vote on the motion being 8 ayes and 0 nays, motion carried.

Council Member Rhoades moved, seconded by Council Member D'Alfonso to approve Substitute Resolution No. 1065, with the vote upon such motion being as follows, to-wit:

Council Member Kramer – Aye
Council Member Lawrence – Aye
Council Member Hoffman – Aye
Council Member Saunders – Aye
Council Member Rhoades – Aye
Council Member D'Alfonso – Aye
Council Member Wang – Aye
Council Member Kreuter – Aye

The vote on the motion being 8 ayes and 0 nays, motion carried.



CITY OF CREVE COEUR – MINUTES
CITY COUNCIL MEETING
Monday, June 24, 2013
7:00 PM

APPOINTMENTS

16. Nominating Committee Minutes for Wednesday, June 12, 2013 and Wednesday, June 19, 2013

Mayor Glantz stated he is pleased to present a list of the various appointments and reappointments to boards, committees and/or commissions. There were a number of qualified candidates and we have an excellent slate of appointments this year.

Council Member Kreuter moved, seconded by Council Member Hoffman to approve the list of reappointment and appointments as presented (Exhibit B), with the vote upon such motion being as follows, to-wit:

Council Member Rhoades – Aye
Council Member Saunders – Aye
Council Member Hoffman – Aye
Council Member Lawrence – Aye
Council Member Kramer – Aye
Council Member D'Alfonso – Aye
Council Member Wang – Aye
Council member Kreuter – Aye

The vote on the motion being 8 ayes and 0 nays, motion carried.

Council Member Saunders stated this was his first time through the process and it was wonderful to see the many interested and qualified residents that stepped forward to serve the community. Council Member Rhoades thanked the City Clerk for pulling all the information together so quickly. Mayor Glantz concurred.

Mayor Glantz stated the following Council Members will serve as liaisons to the following boards, committees and commissions:

Arts Commission	Council Member Saunders
Climate Action Task Force	Council Member Kramer
EDC	Council Member Saunders
Employee Pension	Council Member Lawrence
Finance	Council Member Wang
HEB	Council Member D'Alfonso
Historic	Council Member Kreuter
Parks	Council Member Rhoades
Police	Council Member Kreuter
Stormwater	Council Member Hoffman



CITY OF CREVE COEUR – MINUTES
CITY COUNCIL MEETING
Monday, June 24, 2013
7:00 PM

Mayor Glantz stated the Board of Adjustment, Planning and Zoning, Personnel Appeals and Building Code Board of Appeals are handled by staff liaisons.

BUSINESS FROM THE MAYOR and CITY COUNCIL

16A. Utility Tax

Council Member Rhoades stated some time ago a policy was made by Council, as a courtesy, to give notice whenever a Council Member is planning on introducing legislation. Council Member Rhoades stated she is still waiting on information but plans to propose an adjustment to the utility tax rates for residential. She anticipates that it will be a modest reduction and something will be coming forward. It is important to look out for the fiscal condition of the city but certainly every resident feels the same way about their own budget. Electric rates have really spiraled up for a variety of reasons by the utility companies and the tax rate is beyond the control of the citizens and she feels the Council can offer just a little bit of relief and would be the right thing to do.

BUSINESS FROM CITY ADMINISTRATOR

17. West Central Dispatch Annual Budget

Mark Perkins stated the total operating budget for the WCDC is a little over \$1 million. It is staffed by eleven full time dispatchers. County is in the process of installing a new county wide radio system, which will further reduce our operating costs. Approximately \$70,000 relative to AT&T will be greatly reduced when the new system is fully operational in the fall of 2014. The Creve Coeur annual fee for the fiscal year 2014 will be \$431,587 and this is determined by a base fee component and then there is a usage base and we have the higher usage of the three cities. Costs are being well controlled and the service continues to be very good.

Council Member Rhoades asked if there is turnover in staff.

Mark Perkins stated it has been basically stable and slightly better than average.

Council Member Saunders moved, seconded by Council Member Hoffman to go into Executive Session for personnel and executive session minutes at 8:12 p.m., with the vote upon such motion being as follows, to-wit:

Council Member Kreuter – Aye
Council Member Wang – Aye
Council Member D'Alfonso – Aye
Council Member Rhoades – Aye
Council Member Saunders – Aye
Council Member Hoffman – Aye
Council Member Lawrence – Aye
Council Member Kramer - Aye

The vote on the motion being 8 ayes and 0 nays, motion carried.



CITY OF CREVE COEUR – MINUTES
CITY COUNCIL MEETING
Monday, June 24, 2013
7:00 PM

Council Member Hoffman moved, seconded by Council Member Wang to adjourn Executive Session at 8:28 p.m., with the vote upon such motion being as follows, to-wit:

Council Member Rhoades - Aye
Council Member Lawrence – Aye
Council Member Wang - Aye
Council Member D’Alfonso - Aye
Council Member Hoffman – Aye
Council Member Saunders - Aye
Council Member Kramer – Aye
Council Member Kreuter- Aye

The vote on the motion being 8 ayes and 0 nays, motion carried.

Council Member Hoffman moved, seconded by Council Member Kramer to adjourn at 8:32 p.m., with the vote upon such motion being as follows, to-wit:

Council Member Kramer – Aye
Council Member Lawrence – Aye
Council Member Hoffman – Aye
Council Member Saunders – Aye
Council Member D’Alfonso – Aye
Council Member Wang – Aye
Council Member Kreuter – Aye

The vote on the motion being 7 ayes and 0 nays, motion carried.

Submitted by:

Deborah Ryan
City Clerk

Barry Glantz
Mayor



City of Creve Coeur
300 N. New Ballas Road
Creve Coeur, Missouri 63141
(314) 432-6000
www.creve-coeur.org

DATE: July 2, 2013

TO: Mark Perkins, City Administrator

FROM: Daniel Smith, Director of Finance

SUBJECT: Bills Payable

For your information and transmittal to the City Council, is a list of bills payable dated July 2, 2013 in the amount of \$468,789.88.



CITY OF CREVE COEUR
ACCOUNTS PAYABLE LISTING

7/2/2013

NO DEPT - NO DIV

Vendor Number	Purchase Order	Invoice Number	Invoice Date	Vendor Name	Description	GL Account	Invoice Amount
00066		219689	25-Jun-13	FROESEL OIL	1540 GAL DIESEL	01-00-00-1653	4,907.68
01993		100412	04-Oct-12	GARUCCIO, JOE	SEWER LATERAL REPAIR REIMB	02-00-00-1901	1,985.60
00026		52413	24-May-13	PERKINS, MARK	SEWER LATERAL REPAIR REIMB	02-00-00-1901	2,569.60
01994		61913	19-Jun-13	WEBER, KRIS	SEWER LATERAL REPAIR REIMB	02-00-00-1901	2,726.40
Sum of Invoices							12,189.28



CITY OF CREVE COEUR
ACCOUNTS PAYABLE LISTING

7/2/2013

LEGISLATIVE

Vendor Number	Purchase Order	Invoice Number	Invoice Date	Vendor Name	Description	GL Account	Invoice Amount
00080		9418-104-5	24-Jun-13	DIERBERGS	FOOD FOR STAFF/COUNCIL	01-11-12-6264	13.97
01995		1706	18-Jun-13	SEXTANT MARKETING GROUP	WORKSHOP W/PETER KAGEYAMA	01-11-12-6203	5,274.42
00340		1330	01-Jul-13	ST. LOUIS AREA INSURANCE TRUST	ONE HALF ANNUAL PREMIUM-WORKERS' COMP INS.	01-11-12-5243	34.95
00340		1330	01-Jul-13	ST. LOUIS AREA INSURANCE TRUST	ONE HALF ANNUAL PREMIUM-WORKERS' COMP INS.	01-11-13-5243	51.08
Sum of Invoices							5,374.42



CITY OF CREVE COEUR
ACCOUNTS PAYABLE LISTING

7/2/2013

Administration

Vendor Number	Purchase Order	Invoice Number	Invoice Date	Vendor Name	Description	GL Account	Invoice Amount
00235		061913	19-Jun-13	CITY OF CHESTERFIELD	EXPENSE-PKWY LOCAL GOVT WRKSHOP	01-12-11-6264	67.50
00340		1330	01-Jul-13	ST. LOUIS AREA INSURANCE TRUST	ONE HALF ANNUAL PREMIUM-WORKERS' COMP INS.	01-11-13-5243	259.87
00052		40448402 6/13	14-Jun-13	ST LOUIS POST-DISPATCH	NEWSPAPER SUBSCRIPTION	01-12-11-6271	38.00
Sum of Invoices							365.37



CITY OF CREVE COEUR
ACCOUNTS PAYABLE LISTING

7/2/2013

IT

Vendor Number	Purchase Order	Invoice Number	Invoice Date	Vendor Name	Description	GL Account	Invoice Amount
00139	P001664	XJ5NN8DW6	17-Jun-13	DELL	10 EA OPTIPLEX 3010 PCs	01-12-51-7332	7,921.00
01664	P001662	19517	18-Jun-13	ELSAG NORTH AMERICA	MPH 900 EXTENDED WARRANTY	01-12-51-7332	3,000.00
00050		INV0029408	15-Jun-13	REJIS	PIX FIREWALL MAINTENANCE JUNE 2013	01-12-51-6213	21.24
00340		1330	01-Jul-13	ST. LOUIS AREA INSURANCE TRUST	ONE HALF ANNUAL PREMIUM-WORKERS' COMP INS.	01-12-51-5243	39.43
Sum of Invoices							10,981.67



CITY OF CREVE COEUR
ACCOUNTS PAYABLE LISTING

7/2/2013

FINANCE

Vendor Number	Purchase Order	Invoice Number	Invoice Date	Vendor Name	Description	GL Account	Invoice Amount
00016		061713	17-Jun-13	COLLECTOR OF REVENUE	SALES TAX REPORT-JUNE 2013	01-13-11-6201	20.00
00340		1330	01-Jul-13	ST. LOUIS AREA INSURANCE TRUST	ONE HALF ANNUAL PREMIUM- WORKERS' COMP INS.	01-13-11-5243	255.84
Sum of Invoices							275.84



CITY OF CREVE COEUR
ACCOUNTS PAYABLE LISTING

7/2/2013

MUNICIPAL COURT

Vendor Number	Purchase Order	Invoice Number	Invoice Date	Vendor Name	Description	GL Account	Invoice Amount
00073	P001673	CQ63230	03-Jun-13	CDW-G	PRINTER FOR BOOKING ROOM-COURT	01-13-14-6202	569.99
00050		INV0029406	15-Jun-13	REJIS	SUBSCRIPTION FEES-JUNE 2013	01-13-14-6202	2,013.56
00340		1330	01-Jul-13	ST. LOUIS AREA INSURANCE TRUST	ONE HALF ANNUAL PREMIUM-WORKERS' COMP INS.	01-13-14-5243	176.53
Sum of Invoices							2,760.08



CITY OF CREVE COEUR
ACCOUNTS PAYABLE LISTING

7/2/2013

INTERDEPARTMENTAL

Vendor Number	Purchase Order	Invoice Number	Invoice Date	Vendor Name	Description	GL Account	Invoice Amount
00154		225004877	18-Jun-13	KONICA MINOLTA BUSINESS SOLUTIONS	QTRLY FEE 3/13 TO 6/13	01-13-15-6213	432.62
00340		1330	01-Jul-13	ST. LOUIS AREA INSURANCE TRUST	LIABILITY INSURANCE	01-13-15-6220	45,842.00
Sum of Invoices							46,274.62



CITY OF CREVE COEUR
ACCOUNTS PAYABLE LISTING

7/2/2013

COMMUNITY SERVICES

Vendor Number	Purchase Order	Invoice Number	Invoice Date	Vendor Name	Description	GL Account	Invoice Amount
01693		57	20-Jun-13	RICOH USA, INC	REPAIR ON COPY MACHINE	01-14-11-6213	64.93
00340		1330	01-Jul-13	ST. LOUIS AREA INSURANCE TRUST	ONE HALF ANNUAL PREMIUM- WORKERS' COMP INS.	01-14-11-6213	29.12
Sum of Invoices							94.05



CITY OF CREVE COEUR
ACCOUNTS PAYABLE LISTING

7/2/2013

ICE ARENA

Vendor Number	Purchase Order	Invoice Number	Invoice Date	Vendor Name	Description	GL Account	Invoice Amount
01550		452-6202513	18-Jun-13	ARAMARK UNIFORM SERVICES	CLEANING SUPPLIES (061813)	06-14-31-7301	0.88
01550		452-6228407	25-Jun-13	ARAMARK UNIFORM SERVICES	CLEANING SUPPLIES (062513)	06-14-31-7301	0.88
01550		452-6202513	18-Jun-13	ARAMARK UNIFORM SERVICES	UNIFORMS (061813)	06-14-31-7308	3.96
01550		452-6228407	25-Jun-13	ARAMARK UNIFORM SERVICES	UNIFORMS (062513)	06-14-31-7308	3.96
00948		116962	17-Jun-13	C&R MECHANICAL	CHILLER MAINTENANCE AGREEMENT	06-14-31-6211	2,832.00
00082		0721104	19-Jun-13	METROLIFT PROPANE	PROPANE FOR OLYMPIA	06-14-31-7307	175.76
01693		1040278357	20-Jun-13	RICOH USA, INC	REPAIR ON COPY MACHINE	06-14-31-6213	64.92
00340		1330	01-Jul-13	ST. LOUIS AREA INSURANCE TRUST	ONE HALF ANNUAL PREMIUM- WORKERS' COMP INS.	06-14-31-6213	3,237.18
Sum of Invoices							6,319.54



CITY OF CREVE COEUR
ACCOUNTS PAYABLE LISTING

7/2/2013

GOLF MAINTENANCE

Vendor Number	Purchase Order	Invoice Number	Invoice Date	Vendor Name	Description	GL Account	Invoice Amount
00970		460078	17-Jun-13	O'REILLY AUTO PARTS	GREASE FOR EQUIPMENT	06-14-32-6211	49.90
00173		IN111626	04-Jun-13	SUPREME TURF PRODUCTS	MICRONUTRIENTS	06-14-32-7303	475.00
00173		IN111616	04-Jun-13	SUPREME TURF PRODUCTS	DYE FOR SPRAY TANK	06-14-32-7303	184.00
00340		1330	01-Jul-13	ST. LOUIS AREA INSURANCE TRUST	ONE HALF ANNUAL PREMIUM- WORKERS' COMP INS.	06-14-32-5243	766.17
Sum of Invoices							1,475.07



CITY OF CREVE COEUR
ACCOUNTS PAYABLE LISTING

7/2/2013

PRO SHOP

Vendor Number	Purchase Order	Invoice Number	Invoice Date	Vendor Name	Description	GL Account	Invoice Amount
01140		55326	10-Jun-13	ARCHWAY BOWLING & TROPHY	USED BALLS FOR RESALE	06-14-33-8324	45.00
00721		8500	14-Jun-13	PATTONVILLE SCHOOL DISTRICT	SCORE CARDS	06-14-33-7304	345.00
01693		1040278357	20-Jun-13	RICOH USA, INC	REPAIR ON COPY MACHINE	06-14-33-6213	64.92
00116		3335	20-Jun-13	SAM'S CLUB	GENERAL SUPPLIES	06-14-33-7304	32.51
00119		1804605	13-Jun-13	TITLEIST	SPECIAL ORDER MITCHELL	06-14-33-8323	96.15
00340		1330	01-Jul-13	ST. LOUIS AREA INSURANCE TRUST	ONE HALF ANNUAL PREMIUM- WORKERS' COMP INS.	06-14-33-5243	550.21
Sum of Invoices							1,133.79



CITY OF CREVE COEUR
ACCOUNTS PAYABLE LISTING

7/2/2013

SNACK BAR

Vendor Number	Purchase Order	Invoice Number	Invoice Date	Vendor Name	Description	GL Account	Invoice Amount
01550		452-6202513	18-Jun-13	ARAMARK UNIFORM SERVICES	WIPING TOWELS (061813)	06-14-34-7301	3.58
01550		452-6228407	25-Jun-13	ARAMARK UNIFORM SERVICES	WIPING TOWELS (062513)	06-14-34-7301	3.58
01001		60242	17-Jun-13	BI-STATE REFRIGERATION	ICE MACHINE REPAIR	06-14-34-6211	156.00
00116		3335	20-Jun-13	SAM'S CLUB	FOOD FOR RESALE	06-14-34-8315	62.42
00116		3335	20-Jun-13	SAM'S CLUB	SNACKS FOR RESALE	06-14-34-8319	219.89
00340		1330	01-Jul-13	ST. LOUIS AREA INSURANCE TRUST	ONE HALF ANNUAL PREMIUM- WORKERS' COMP INS.	06-14-34-5243	43.46
Sum of Invoices							488.93



CITY OF CREVE COEUR
ACCOUNTS PAYABLE LISTING

7/2/2013

BUILDING MAINTENANCE

Vendor Number	Purchase Order	Invoice Number	Invoice Date	Vendor Name	Description	GL Account	Invoice Amount
01550		452-6228406	25-Jun-13	ARAMARK UNIFORM SERVICES	UNIFORM RENTAL (6/25/13)	01-16-11-7308	7.92
01550		452-6202512	18-Jun-13	ARAMARK UNIFORM SERVICES	UNIFORM RENTAL (6/18/13)	01-16-11-7308	7.92
00117		6022683	27-Jun-13	HOME DEPOT	BLDG MAINT SUPPLIES	01-16-11-6212	74.26
00164		034595	17-Jun-13	NEW SYSTEM CARPET & BUILDING CARE LTD.	PAPER PRODUCTS, CAN LINERS	01-16-11-6212	1,007.67
00492		149598	24-Jun-13	TOMASOVIC GREENHOUSE & NURSERY INC	TREE FOR CITY HALL	01-16-11-6212	175.00
00340		1330	01-Jul-13	ST. LOUIS AREA INSURANCE TRUST	ONE HALF ANNUAL PREMIUM- WORKERS' COMP INS.	01-16-11-5243	991.09
Sum of Invoices							2,263.86



CITY OF CREVE COEUR
ACCOUNTS PAYABLE LISTING

7/2/2013

POLICE-ADMIN

Vendor Number	Purchase Order	Invoice Number	Invoice Date	Vendor Name	Description	GL Account	Invoice Amount
00148		C29515A	18-Jun-13	I/O SOLUTIONS	RETURN NAT BASIC ABIL TEST SCORNG	01-21-11-6203	120.00
00050		INV0029408	15-Jun-13	REJIS	IMDS ORACLE DB MAINT-JUNE 2013	01-21-11-6202	21.00
00050		INV0029408	15-Jun-13	REJIS	LIVE SCAN CONNECTION	01-21-11-6202	50.00
00050	P001462	INV0029408.	15-Jun-13	REJIS	SUBSCRIPTION FEES-JUNE 2013	01-21-11-6202	4,030.39
00050	P001497	INV0029408...	15-Jun-13	REJIS	ROUTER MAINT/SUPPORT-JUNE 2013	01-21-11-6202	108.00
00050	P001497	INV0029408...	15-Jun-13	REJIS	CHARTER FIBER CONNECTION-JUNE	01-21-11-6202	747.00
00050	P001498	INV0029408..	15-Jun-13	REJIS	GLOBAL SOFTWARE SVCS-JUNE 2013	01-21-11-6213	1,102.50
00050		INV0029407	15-Jun-13	REJIS	MCAFFEE AV ANNUAL SUPPORT	01-21-11-6253	280.00
01048		9706736362	18-Jun-13	VERIZON WIRELESS	MONTHLY AIRCARD CHARGE	01-21-11-6253	40.03
00340		1330	01-Jul-13	ST. LOUIS AREA INSURANCE TRUST	ONE HALF ANNUAL PREMIUM-WORKERS' COMP INS.	01-21-11-6253	4,615.84
Sum of Invoices							11,114.76



CITY OF CREVE COEUR
ACCOUNTS PAYABLE LISTING

7/2/2013

POLICE-INVESTIGATIONS

Vendor Number	Purchase Order	Invoice Number	Invoice Date	Vendor Name	Description	GL Account	Invoice Amount
00050		INV0029408	15-Jun-13	REJIS	IMDS ORACLE DB MAINT-JUNE 2013	01-21-21-6202	10.50
00340		1330	01-Jul-13	ST. LOUIS AREA INSURANCE TRUST	ONE HALF ANNUAL PREMIUM- WORKERS' COMP INS.	01-21-21-5243	5,597.52
Sum of Invoices							5,608.02



CITY OF CREVE COEUR
ACCOUNTS PAYABLE LISTING

7/2/2013

POLICE-PATROL

Vendor Number	Purchase Order	Invoice Number	Invoice Date	Vendor Name	Description	GL Account	Invoice Amount
00426	P001603	26364	12-Jun-13	ADGRAPHIX	GRAPHIC PACKAGE FOR FORD EXPLO	01-21-22-6210	378.00
00426	P001603	26364	12-Jun-13	ADGRAPHIX	GRAPHIC PACKAGE OVER PO AMT	01-21-22-6210	10.00
00426		26366	14-Jun-13	ADGRAPHIX	GRAPHICS FOR 2011 CROWN VIC	01-21-22-6210	408.00
01821		307492	20-Jun-13	ALL STAR DODGE CHRYSLER JEEP	CAR 2403 3000 MILE SERVICE	01-21-22-6210	38.03
01618		13166GF	20-Jun-13	BOSQUI'S	REMOVE GRAPHICS FROM 5 CARS	01-21-22-6210	400.00
00095	P001660	240531	12-Jun-13	DOBBS TIRE & AUTO	STATE TIRE FEE	01-21-22-6210	4.00
00095	P001660	240531	12-Jun-13	DOBBS TIRE & AUTO	8 P235/55/R17 GOODYEAR EAGLE	01-21-22-6210	855.36
00234		389915	17-Jun-13	ED. ROEHR SAFETY PRODUCTS	2 L BRACKETS FOR XT6 LIGHTS	01-21-22-6210	11.78
00096	P001657	135538	21-Jun-13	EVS	CHANGEOVER CAR 2410	01-21-22-6210	1,590.00
00096	P001657	135536	21-Jun-13	EVS	CHANGEOVER OF CAR 2404	01-21-22-6210	1,455.00
00096	P001657	135537	21-Jun-13	EVS	CHANGEOVER OF CAR 2406	01-21-22-6210	1,455.00
00096		135530	16-Jun-13	EVS	MISC VEHICLE REPAIRS	01-21-22-6210	35.00
00117		3011506	20-Jun-13	HOME DEPOT	ITEMS TO INSTALL ANTENNAS	01-21-22-6211	239.08
00562	P001676	63422	19-Jun-13	TRAFFIC CONTROL COMPANY	85 TRAFFIC CONES W/REFLECTIVE	01-21-22-9503	1,438.20
00091		211385	13-Jun-13	WIRELESS USA	ANTENNA AND CABLES	01-21-22-6210	124.94
00050		INV0029408	15-Jun-13	REJIS	14 EA DATA LINES	01-21-22-6253	686.00
					ONE HALF ANNUAL PREMIUM-WORKERS'		
00340		1330	01-Jul-13	ST. LOUIS AREA INSURANCE TRUST	COMP INS.	01-21-22-5243	33,875.04
Sum of Invoices							43,003.43



CITY OF CREVE COEUR
ACCOUNTS PAYABLE LISTING

7/2/2013

PUBLIC WORKS

Vendor Number	Purchase Order	Invoice Number	Invoice Date	Vendor Name	Description	GL Account	Invoice Amount
00340		1330	01-Jul-13	ST. LOUIS AREA INSURANCE TRUST	ONE HALF ANNUAL PREMIUM-WORKERS' COMP INS.	01-31-11-5243	2,996.13
Sum of Invoices							2,996.13



CITY OF CREVE COEUR
ACCOUNTS PAYABLE LISTING

7/2/2013

STREETS

Vendor Number	Purchase Order	Invoice Number	Invoice Date	Vendor Name	Description	GL Account	Invoice Amount
01550		452-6228404	25-Jun-13	ARAMARK UNIFORM SERVICES	MOP RENTAL (6/25/13)	01-31-41-6212	8.91
01550		452-6202510	18-Jun-13	ARAMARK UNIFORM SERVICES	MOP RENTAL (6/18/13)	01-31-41-6212	8.91
01550		452-6228404	25-Jun-13	ARAMARK UNIFORM SERVICES	UNIFORM RENTAL (6/25/13)	01-31-41-7308	43.00
01550		452-6202510	18-Jun-13	ARAMARK UNIFORM SERVICES	UNIFORM RENTAL (6/18/13)	01-31-41-7308	43.00
01550		15344629	04-Jun-13	ARAMARK UNIFORM SERVICES	S/S SHIRTS-OPS SUPERINTENDENT	01-31-41-7308	191.94
00693		267314	11-Jun-13	BMC ENTERPRISES, INC.	CONCRETE-CONWAY GRDNS CRT.	01-31-41-7305	376.76
00010		928794	20-Jun-13	BRANNEKY HARDWARE	KITCHEN SUPPLIES	01-31-41-7304	8.98
00013		1763-212521	25-Jun-13	CARQUEST AUTO PARTS	OIL FILTERS, TIRE PROTECTANT	01-31-41-6210	21.04
00013		1763-212365	21-Jun-13	CARQUEST AUTO PARTS	PARTS FOR TRUCK 106	01-31-41-6210	5.44
00013		1763-212225	19-Jun-13	CARQUEST AUTO PARTS	BELT FOR TRUCK 207	01-31-41-6210	36.66
00013		1763-212020	14-Jun-13	CARQUEST AUTO PARTS	BELT FOR TRUCK 207	01-31-41-6210	26.14
00099		1304672	31-May-13	CEEKAY SUPPLY	WELDING GAS/TANKS	01-31-41-7307	64.08
01806		75094	12-Jun-13	EASTERN MISSOURI CONCRETE LLC	CONCRETE-330 CONWAY GRDN CT.	01-31-41-7305	373.26
01326		7910	23-Apr-13	FIREPRO LLC	ANNUAL EXTING.SVC/INSP-GARAGE	01-31-41-6211	839.00
01136		64915855	04-Jun-13	JOHN DEERE LANDSCAPES	IRRIGATION PARTS	01-31-41-6211	21.07
00215	P001672	9865	19-Jun-13	LANDESIGN, LLC/MULCH-TECH	MULCH FOR OLVE & BALLAS ISLAND	01-31-41-7303	4,680.00
00042		1105530	18-Jun-13	MPR SUPPLY	IRRIGATION SUPPLIES-BALLAS RD	01-31-41-6211	20.08
00042		105264	14-Jun-13	MPR SUPPLY	IRRIGATION PARTS-BALLAS RD.	01-31-41-6211	820.00
00165		TI-0263069	21-Jun-13	NEWMAN TRAFFIC SIGNS	STREET NAME SIGNS	01-31-41-7305	113.18
00809		124222.	05-Mar-13	RED BUD SUPPLY, INC.	SAFTEY CONES	01-31-41-7305	60.00
00092		49364	17-Jun-13	ST LOUIS COUNTY	SIGNAL MAINT-QTRLY BILLING	01-31-41-6251	1,951.08
00270		38590-00	18-Jun-13	TERMINAL SUPPLY CO.	CONTROLLER FOR ARROW BOARD	01-31-41-6211	98.69
00104		S17834	17-Jun-13	VERMEER	CHIPPER REPAIR	01-31-41-6211	1,500.56
00340		1330	01-Jul-13	ST. LOUIS AREA INSURANCE TRUST	ONE HALF ANNUAL PREMIUM-WORKERS' COMP INS.	01-31-41-5243	14,109.63
Sum of Invoices							25,421.41



CITY OF CREVE COEUR
ACCOUNTS PAYABLE LISTING

7/2/2013

HEALTH & WELFARE

Vendor Number	Purchase Order	Invoice Number	Invoice Date	Vendor Name	Description	GL Account	Invoice Amount
00105	P001463	0346-015432458.	15-Jun-13	REPUBLIC SERVICES	RESIDENTIAL SVC JUNE 2013	01-31-42-6214	80,972.60
00105	P001464	0346-015432458	15-Jun-13	REPUBLIC SERVICES	RECYCLING SVCS JUNE 2013	01-31-42-6217	23,443.40
Sum of Invoices							104,416.00



CITY OF CREVE COEUR
ACCOUNTS PAYABLE LISTING

7/2/2013

PARKS

Vendor Number	Purchase Order	Invoice Number	Invoice Date	Vendor Name	Description	GL Account	Invoice Amount
01550		452-6228404	25-Jun-13	ARAMARK UNIFORM SERVICES	UNIFORM RENTAL (6/25/13)	01-31-43-7308	43.00
01550		452-6202510	18-Jun-13	ARAMARK UNIFORM SERVICES	UNIFORM RENTAL (6/18/13)	01-31-43-7308	43.00
01203		062513	25-Jun-13	CUSTOM HOME ELEVATORS OF ST. LOUIS	ELEVATOR REPAIR-TAPPMeyer	01-31-43-6212	112.50
00117		7011878	26-Jun-13	HOME DEPOT	ITEMS FOR MILL PRK & TAPP HSE	01-31-43-6212	57.72
00117		7011888	26-Jun-13	HOME DEPOT	ITEMS FOR EVENT AT MILL PRK	01-31-43-6212	11.38
00040		810742	20-Jun-13	MILBRADT	OIL CAP ASSEMBLYS-CHAIN SAWS	01-31-43-6211	43.98
00040		810628	19-Jun-13	MILBRADT	BAR OIL FOR CHAIN SAWS	01-31-43-6211	35.10
01962	P001654	3207	27-May-13	PAINTING TECHNOLOGIES	PAINT MILLENNIUM PAVILLION/RST	01-31-43-6212	6,942.00
00110		314876	12-Jun-13	RICMAR INDUSTRIES	WEED KILLER FOR PARKS	01-31-43-7301	395.90
00557		32902	11-Jun-13	STANDARD REFRIGERATION	PLUMBING SUPPLIES	01-31-43-6212	492.75
00173		IN112027	18-Jun-13	SUPREME TURF PRODUCTS	WEED KILLER FOR R.O.W.	01-31-43-7301	350.00
00173		IN111982	17-Jun-13	SUPREME TURF PRODUCTS	WEED KILLER FOR PARKS	01-31-43-7301	479.00
00173		IN112071	17-Jun-13	SUPREME TURF PRODUCTS	WEED KILLER FOR LAKE @ CONWAY	01-31-43-7301	395.00
00173		IN111981	17-Jun-13	SUPREME TURF PRODUCTS	CHEMICAL FOR LAKE @ CONWAY	01-31-43-7301	585.00
00109		450551	18-Jun-13	WESTPORT POOLS	CHEMICALS FOR SPLASH PAD	01-31-43-7301	88.56
00340		1330	01-Jul-13	ST. LOUIS AREA INSURANCE TRUST	ONE HALF ANNUAL PREMIUM- WORKERS' COMP INS.	01-31-43-5243	2,362.13
Sum of Invoices							12,437.02



CITY OF CREVE COEUR
ACCOUNTS PAYABLE LISTING

7/2/2013

COMMUNITY DEVELOPMENT - PLANNING

Vendor Number	Purchase Order	Invoice Number	Invoice Date	Vendor Name	Description	GL Account	Invoice Amount
00213		061813-1	18-Jun-13	MCLAUGHLIN COURT REPORTING SERVICES	CRT RPTR P&Z MTG 6/17/13	01-32-11-6202	50.00
00303		10334782	12-Jun-13	MISSOURI LAWYERS MEDIA	PUB HRG NOTICE FOR P&Z	01-32-11-6260	39.44
00340		1330	01-Jul-13	ST. LOUIS AREA INSURANCE TRUST	ONE HALF ANNUAL PREMIUM- WORKERS' COMP INS.	01-32-11-5243	209.69
Sum of Invoices							299.13



CITY OF CREVE COEUR
ACCOUNTS PAYABLE LISTING

7/2/2013

COMMUNITY DEVELOPMENT - BUILDING

Vendor Number	Purchase Order	Invoice Number	Invoice Date	Vendor Name	Description	GL Account	Invoice Amount
00340		1330	01-Jul-13	ST. LOUIS AREA INSURANCE TRUST	ONE HALF ANNUAL PREMIUM- WORKERS' COMP INS.	01-32-61-5243	8,163.08
Sum of Invoices							8,163.08



CITY OF CREVE COEUR
ACCOUNTS PAYABLE LISTING

7/2/2013

CAPITAL IMPROVEMENTS

Vendor Number	Purchase Order	Invoice Number	Invoice Date	Vendor Name	Description	GL Account	Invoice Amount
01934	P001634	PAY #2 LADUE	25-Jun-13	AMCON MUNICIPAL CONCRETE	LADUE RD SIDEWALK IMPROV.	02-61-71-9510-13605	91,196.40
01744	P001493	PAY #3 '12 ASPHLT	28-Jun-13	COUNTY ASPHALT PAVING	ASPHALT PAVEMENT RESURFACING	02-61-71-9510-13601	19,587.92
00049		35792	19-Jun-13	EMPLOYEE STAFFING GROUP	TEMP PERSONNEL W/E 6/16/13	02-61-71-9510-13601	1,620.00
00049		35806	26-Jun-13	EMPLOYEE STAFFING GROUP	TEMP PERSONNEL W/E 6/23/13	02-61-71-9510-13601	1,599.75
00023		334103	25-Jun-13	FRED WEBER	ASPHALT FOR MICRO-PREP	02-61-71-9510-13601	177.00
00023		333439	21-Jun-13	FRED WEBER	ASPHALT FOR MICRO-PREP	02-61-71-9510-13601	177.00
00023		333059	20-Jun-13	FRED WEBER	ASPHALT FOR MICRO-PREP	02-61-71-9510-13601	472.00
00023		331828	14-Jun-13	FRED WEBER	ASPHALT FOR MICRO-PREP	02-61-71-9510-13601	295.00
00023		332422	18-Jun-13	FRED WEBER	ASPHALT FOR MICRO-PREP	02-61-71-9510-13601	413.00
00023		331638	13-Jun-13	FRED WEBER	ASPHALT FOR MICRO-PREP	02-61-71-9510-13601	472.00
00314	P001527	PAY #4 OLIVE ST	27-Jun-13	GERSTNER ELECTRIC, INC.	PROJECT	02-61-71-9510-13604	13,685.50
01908	P001633	PAY #3-GRAESER	27-Jun-13	GROVE DESIGN GROUP LLC	DESIGN SVCS GRAESER ROAD RESUR	02-61-71-9510-13707	9,118.81
01879	P001575	062513	25-Jun-13	SIZEMORE & SONS CONCRETE	RUE DE LA BANQUE TRENCH DRAIN	02-61-71-9509-13514	8,800.00
01879	P001575	062513	25-Jun-13	SIZEMORE & SONS CONCRETE	HIBLER ROAD TRENCH DRAIN	02-61-71-9509-13514	8,800.00
01361	P001597	969	20-Jun-13	VOTRUBA EXCAVATING	PROJECT	02-61-71-9510-13601	8,920.00
Sum of Invoices							165,334.38
GRAND TOTAL OF ALL INVOICES							468,789.88

December 7, 2012

City of Creve Coeur

**Building Division's Draft of a City Ordinance Amending and Adopting
the 2009 International Building Code as the City's New Commercial Building Code**

BILL NUMBER 5422

ORDINANCE NUMBER _____

An Ordinance repealing ARTICLE II, BUILDING CODE, of Chapter 500 of the City Code of Ordinances of the City of Creve Coeur, and enacting in lieu thereof a new ARTICLE II, BUILDING CODE.

WHEREAS, the city regulates construction practices and standards by means of technical codes to protect the health, safety and welfare of its citizens, and

WHEREAS, such codes must be updated from time to time, and

WHEREAS, at least one copy of the 2009 International Building Code, which is hereby to be adopted by reference, has been filed with the City Clerk's office and made available for public use, inspection and examination for a period of at least 90 days prior to adoption of this ordinance pursuant to Section 67.280 RSMo and notice thereof has been publicly posted, and

WHEREAS, a copy of this ordinance has been available for public inspection in the City Clerk's office and it has been read two times by the City Council as required by the City's Charter prior to adoption.

NOW, THEREFORE, be it ordained by the City Council of the City of Creve Coeur, Missouri as follows:

SECTION 1: ARTICLE II, BUILDING CODE, of Chapter 500 of the City Code of Ordinances is hereby repealed and a new ARTICLE II of Chapter 500 is hereby enacted to be known as "THE BUILDING CODE". Said ARTICLE to read as follows:

ARTICLE II. BUILDING CODE

SECTION 500.020 ADOPTED: A certain document, a copy of which is on file in the office of the City Clerk, such copy being marked and designated as the "INTERNATIONAL BUILDING CODE, 2009", FOURTH EDITION, including "APPENDIX H – SIGNS", as published by the International Code Council, Inc., is hereby adopted as the Building Code of the City of Creve Coeur, Missouri, for the control of building and structures as herein provided; and each and all of the regulations, provisions, penalties, conditions, and terms of the INTERNATIONAL BUILDING CODE, 2009, FOURTH EDITION, are hereby referred to, adopted and made a part hereof, as if fully set out in this Article, with the additions, insertions, deletions, and changes, prescribed in this Article.

SECTION 500.030 JURISDICTIONAL TITLES: Throughout the INTERNATIONAL BUILDING CODE, 2009, FOURTH EDITION, wherever the terms "name of jurisdiction" or "local jurisdiction" appear, it shall be deemed to mean "City of Creve Coeur, Missouri". Likewise, wherever the terms "department of building inspection" or "department of building safety" appear, it shall be deemed to mean "Creve Coeur Building Division". Wherever the term "code" appears, it shall mean the INTERNATIONAL BUILDING CODE, 2009, FOURTH EDITION, as amended in this Article.

**SECTION 500.040 AMENDMENTS TO CHAPTER 1 INTERNATIONAL BUILDING CODE:
– CHAPTER 1 – ADMINISTRATION:**

Chapter 1 of the International Building Code, 2009, Fourth Edition, is amended as set forth herein. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection or clause number in the code is hereby enacted and added thereto.

101.4.2 Mechanical. The provisions of the St. Louis County Mechanical Code, as adopted by the city, shall apply to the installation, alterations, repairs and replacement of mechanical systems, including equipment, appliances, fixtures, fittings and/or appurtenances, including ventilating, heating, cooling, air-conditioning and refrigeration systems, incinerators and other energy-related systems. All references to the International Mechanical Code shall be interpreted as references to the adopted St. Louis County Mechanical Code.

This amendment made to clarify that the city's mechanical code is the St. Louis County Mechanical Code.

101.4.3 Plumbing. The provisions of the St. Louis County Plumbing Code, as adopted by the city shall apply to the installation, alteration, repair and replacement of plumbing systems including equipment, appliances, fixtures, fittings and appurtenances, and where connected to a water or sewage system. All references to the International Plumbing Code shall be interpreted as references to the adopted St. Louis County Plumbing Code.

This amendment made to clarify that the city's plumbing code is the St. Louis County Plumbing Code.

102.7 Matters not provided for. Any requirements that are essential for the structural, fire or sanitary safety of an existing or proposed building or structure, or for the safety of the occupants thereof, which are not specifically provided for by this code, shall be determined by the building official.

This amendment made to add a new section to this code so as to be consistent with the city's present building code.

104.6.1 Interference with building official: No person shall hinder, obstruct, resist, fail to provide entry at reasonable times, or otherwise interfere with the code official in the performance of his official duties.

This amendment made to add a new section to this code so as to be consistent with the city's present building code.

104.6.1.1 Disasters. In the event of a disaster such as a windstorm, tornado, flood, fire, earthquake, bomb blast or explosion, the building official is authorized to deputize Missouri Structural Assessment and Visual Evaluation (SAVE) Volunteer Inspectors certified by the Missouri State Emergency Management Agency (SEMA) to conduct emergency post-disaster safety evaluations of buildings.

This amendment made to add a new section to this code that allows the building official to expand the city's inspection capabilities after a disaster. This is consistent with St. Louis County's building code adopting ordinance.

104.12 Rule-making authority. The building official shall have authority, as necessary in the interest of public health, safety and general welfare, to adopt and promulgate rules and

regulations to interpret and implement the provisions of this code, to secure the intent thereof and to designate requirements applicable because of local climatic or other conditions. Such rules shall not have the effect of waiving structural or fire performance requirements specifically provided for in this code or of violating accepted engineering practice involving public safety.

This amendment made to add a new section to this code so as to be consistent with the city's present building code.

105.1.1 Annual permit. [Delete this section in its entirety]

The city contracts with St. Louis County to issue annual mechanical, electrical and plumbing permits to qualified tradespersons employed by building owners.

105.1.2 Annual permit records. [Delete this section in its entirety]

See reason for deleting Section 105.1.1

105.2 Work exempt from permit. Exemptions from permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction. Permits shall not be required for the following:

Building:

1. Retaining walls which are not over 2 feet (610mm) in height measured from the top of the proposed finished grade at the non-retained side of the wall to the top of the wall, unless supporting a surcharge or impounding Class I, II or III-A liquids.
2. Painting, tiling, carpeting and similar finish work.
3. Prefabricated swimming pools accessory to a Group R-3 occupancy which have a maximum water depth of 24 inches (610mm), a maximum water volume of 5,000 gallons (18925L) and are installed entirely above ground.

Electrical:

Any work exempted from permits by the Electrical Code.

Gas:

Any work exempted from permits by the Mechanical Code.

Mechanical:

Any work exempted from permits by the Mechanical Code.

Plumbing:

Any work exempted from permits by the Plumbing Code.

This amendment made to clarify when permits are not required.

105.5 Expiration. Every permit issued shall become invalid unless the work on the site authorized by such permit is commenced within 180 days after its issuance, or if the work authorized on the site by such permit is suspended or abandoned for a period of 180 days after the time the work is commenced, or after one year from the date of issuance for tenant improvements, or after two years from the date of issuance for new buildings or building additions if the permit has not otherwise expired. The building official is authorized to grant, in writing, one or more extensions of time, for periods not to exceed 90 days each. An extension shall be requested in writing and justifiable cause must be demonstrated.

The city's present building code allows commercial building permits to be valid for up to two years regardless of the type of project. This amendment will limit the time frame for completing tenant improvements to one year instead of two years. New buildings and additions will still have two years to complete.

105.5.1 Expiration of demolition permits. Demolition work shall be completed within thirty (30) days after the date of issuance of the demolition permit. The building official may, after receiving a written request from the applicant, grant one or more thirty day extensions to this permit if the applicant presents evidence of justifiable cause.

This amendment made to reflect the city's present requirements.

105.7 Placement of permit and inspection placard. The building permit or copy shall be kept on the site of the work until the completion of the project. An inspection placard shall be posted on the job site in accordance with Section 110.1.1 of this code.

This amendment was made to add new section 105.7 so as to be consistent with the city's present building code.

107.1 General. The application for a permit shall be accompanied by four (4) complete sets of construction documents drawn to scale. The construction documents and site plans shall be prepared and sealed by an architect or an engineer licensed and registered in the State of Missouri to render this service. All construction documents and site plans shall be prepared by the appropriate registered design professional consistent with the professional registration laws of the State of Missouri. All construction documents submitted with an application for a building permit shall bear an original embossed or wet ink seal and an original dated signature of the responsible Missouri registered design professional for each discipline on the front sheet of each discipline within each set of construction documents. In addition, all other sheets of the construction documents, other than the specifications or calculations, shall bear the original embossed or wet ink seal and the original dated signature or the mechanically reproduced seal and dated signature of the responsible Missouri registered design professional. Any addenda or modifications submitted for changes to the construction documents shall also bear the original seal and original dated signature of the responsible Missouri registered design professional. Such changes shall be clearly indicated. The building official may waive these requirements when the scope of the work is of a minor nature and does not involve structural alterations.

This amendment made to reflect the city's present requirements.

107.2.3 Means of egress. The construction documents shall show in sufficient detail the location, construction, size and character of all portions of the means of egress in compliance with the provisions of this code. The construction documents shall designate the number of occupants to be accommodated on every floor, and in all rooms and spaces.

This amendment made to delete the exceptions made to occupancies in groups R-2 and I-1. St. Louis County made the same amendment.

107.2.5.2 All buildings and structures. For all buildings and structures for all use groups to be constructed, the following additional information shall be shown on the site plan.

- A. The location of all front, side and rear building lines, together with all easements including utilities, drainage and roadways.
- B. The present and proposed finished grades of yards, driveways or walks for drainage in relation to the established first floor elevation including the slope away from the foundation.
- C. The lot number, block (if any), plat or subdivision number, recorded subdivision name, front street and side streets (where applicable) and the north direction arrow.

107.2.5.3 Private sewage disposal system. The site plan shall indicate the location of a private sewage system when a public sewage system is not available. All technical data and soil data required by the Plumbing Code shall be submitted with the site plan.

107.2.6 Residential Fire Sprinkler Option Form. An application for permit for a one or two family dwelling or residence or townhome shall be accompanied by the city's Residential Fire Sprinkler Option Form signed by the builder and the purchaser affirming that a fire sprinkler system was offered to the purchaser prior to entering into the purchase contract in conformance with Section 903.1 of this code. If there is no purchaser at the time of the permit application submittal, then said signed FORM shall be submitted as soon as there is a purchaser and prior to the issuance of a certificate of occupancy for the new residence. The provisions of this section shall expire on December 31, 2019.

This amendment was made to be consistent with state law.

107.3.1 Approval of construction documents. When the building official issues a permit, the construction documents shall be approved in writing or by stamp, as "Reviewed for Code Compliance". Two (2) sets of construction documents so approved shall be retained by the building official. The other two (2) approved sets shall be returned to the applicant for submittal to the respective fire district for their approval. Upon their approval, the fire district shall return one (1) set of city and fire district-approved construction documents to the applicant. This set shall be kept at the site of work and shall be open to inspection by the building official or a duly authorized representative.

109.2 Schedule of fees. The fees for plan reviews, issuing permits, making inspections, working overtime, issuing certificates of occupancy, establishing escrow funds and other administrative enforcement activities performed by the building department shall be paid in accordance with the fees established in Appendix B to Title IV, Community Development and Public Works Fee Schedule, of the City Code of Ordinances.

109.2.1 Building Code Board of Appeals filing fee. A filing fee of \$150.00 shall be paid upon the submittal of the written appeal in order for a quorum of the Building Code Board of Appeals to be notified to convene for the purpose of hearing an appeal of a decision of the building official as set forth in Section 112. The filing fee shall be refunded to the applicant if the Board reverses the decision of the building official.

109.3 Building permit valuations. The applicant for a permit shall provide an estimated construction cost for the project at the time of application. The estimated construction cost shall be for the total value of work, including materials, labor, profit and overhead for all structural, architectural, mechanical, electrical and plumbing work, as it relates to the project for which the permit is to be issued. The estimated construction cost shall not include the cost of land or registered design professional fees. If, in the opinion of the building official, the estimated construction cost is underestimated on the application, the permit shall be denied, unless the applicant can show detailed estimates to meet the approval of the building official. Final building permit valuation shall be set by the building official.

109.4 Work commencing before permit issuance. Where any work for which a permit is required by this code is started, or proceeded with, prior to obtaining said permit, the normal applicable fee shall be doubled and a penalty fee of up to \$500.00 may be charged by the building official. The payment of said doubled fee or penalty shall not relieve any persons from fully complying with the requirements of this code or from other penalties prescribed herein.

109.6 Refunds. In the case of revocation of a permit no refund shall be granted. Any excess fee for a project that has not been commenced shall be returned to the permit holder upon written request received no later than twelve (12) months after the date the permit was issued and the permit shall be cancelled. All plan examination fees, permit processing fees, inspection fees and penalties that have been imposed upon the permit holder under the requirements of this code shall be deducted from the refund or paid by the permit holder prior to any refund being granted.

These amendments were made to Sections 107.2.5.2 through 109.6 to reflect the city's present requirements.

110.1.1 Inspection placard. Work requiring a permit shall not commence until the permittee or his/her agent posts a city-issued inspection placard at the job site for recording inspections. Failure to maintain this inspection placard will not relieve the permittee of responsibility as provided by this code. When work has progressed to a point of having windows, or when the job is an alteration or addition, the placard shall be attached to the glass in view for recording the balance of inspections required by the code. Absence of inspection placard shall result in the imposition of a penalty fee as set forth in Section 109.2.

110.1.2 Manufacturer's installation instructions. Manufacturer's installation instructions, as required by this code, shall be available at the job site at the time of inspection.

110.3 Required inspections. After issuing a building permit, the building official shall conduct inspections as set forth in Sections 110.3.1 through 110.3.12 during and upon completion of the work for which a permit has been issued so as to be able to ensure that substantial compliance with this code has occurred. A record of all such inspections and any violations of this code shall be maintained by the building official. The owner shall provide for special inspections in accordance with Section 1704.

110.3.1 Soil and footing inspection: A soil inspection shall be made after excavation for the building or structure is complete and trenches for footings, spread footings, column pads, grade beams, and other types of footings are crumbed, formed, have the reinforcing steel tied in place, and are ready for concrete. A City-approved barrier shall be in place around the excavation until backfilling has occurred. No concrete shall be placed without this inspection.

110.3.1.1 Lowest floor elevation. Any building or structure permitted to be constructed on property designated as a flood hazard area shall have an elevation certification (as required by Section 1612.5 and prepared and sealed by a registered design professional) which certifies the lowest floor elevation, including the basement, submitted to the building official prior to the required foundation inspection. No foundation inspection shall be approved until said submittal is made.

110.3.2 Foundation inspection: A foundation inspection shall be made after the top of the footing has been cleaned, the foundation forms have been properly set, the reinforcing steel has been cleaned and tied in place, and the proper anchor bolts are on site. A City-approved barrier shall be in place around the excavation until backfilling has occurred. No concrete shall be placed without this inspection.

110.3.3 Pier inspection: A pier inspection shall be made where special foundations such as drilled and poured-in-place concrete piers, caissons, driven piles of all types, and other extraordinary types of foundations are required. Additional pier inspections shall be made when the code official determines the size of the project warrants it. The code official may require a special inspector, as set forth in Section 1704, to make these inspections when deemed necessary by the building official. Reinforcing steel required in the above cases shall be placed to allow for adequate inspections. A City-approved barrier shall be placed around the excavation until backfilling has occurred. No concrete shall be placed without this inspection.

110.3.4 Structural concrete slab and under-floor inspection. Structural concrete slab and under-floor inspections shall be made after in-slab or under-floor reinforcing steel and building service equipment, conduit, piping accessories and other ancillary equipment items are in place, but before any concrete is placed or floor sheathing installed, including the sub-floor.

110.3.5 Framing inspection: A framing inspection shall be made after the plumbing, mechanical, electrical and fire rough-in inspections have been made and approved by those

inspection departments and their dated approval signatures have been noted on the posted inspection placard; and after all masonry walls, fireplace chimneys, vents, and all framing (including the floor, wall, and roof structures, fireblocking, bracing and sheathing) are completed. Protection of joints and penetrations in fire-resistance rated assemblies shall not be concealed from view until inspected and approved. No mechanical, electrical, plumbing, or framing systems shall be concealed before this inspection is made and approved by the code official.

110.3.6 Ceiling cover inspection. A ceiling cover inspection shall be made after the plumbing, mechanical, electrical and fire rough-in inspections have been made and approved by those inspection departments and their dated approval signatures have been noted on the posted inspection placard; and after all masonry walls, fireplace chimneys, vents, ceiling grid and hanger wires, and all framing (including the floor and/or roof structures, fireblocking, bracing and sheathing) are completed. Protection of joints and penetrations in fire-resistance rated assemblies shall not be concealed from view until inspected and approved.

110.3.7 Gypsum board and plaster: The following ceiling and wall gypsum board or plaster inspections shall be performed as specified:

- A) A lath inspection shall be made after all lathing, interior and exterior, is in place and before any plaster is applied.
- B) A gypsum board inspection shall be made after all gypsum board sheets are in place and properly fastened and before any joint compound is applied over joints and fasteners.

Each layer of a multi-layered fire-resistance rated assembly shall be inspected and approved prior to the next layer being applied. Protection of joints and penetrations in fire-resistance rated assemblies shall not be concealed from view until inspected and approved.

110.3.8 Fire- and smoke-resistant penetrations. Protection of joints and penetrations in fire-resistance-rated assemblies, smoke barriers and smoke partitions shall not be concealed from view until inspected and approved.

110.3.9 Energy efficiency inspections. Inspections shall be made to determine compliance with Chapter 13 of this Code and shall include, but not be limited to, inspections for envelope insulation R- and U-values, fenestration U-value, duct system R-value, and HVAC and water-heating equipment efficiency.

110.3.10 Supplemental inspections. In addition to the inspections specified above, the building official is authorized to make or require other inspections or re-inspections of any construction work to ascertain compliance with the provisions of this code, the city's zoning code and the city's code of ordinances.

110.3.11 Special inspections. For special inspections, see Section 1704.

110.3.12 Final inspection. A final building inspection shall be made after the prior required inspections have been completed and the final mechanical, electrical, and plumbing inspections have been made and approved by those inspection departments; and the final fire inspection has been made and approved by the appropriate fire district.

These amendments were made to Sections 110.3.1 through 110.3.12 to be more specific in content. The more specific language as to when inspections are required and what the inspector will be looking for will assist contractors with the field inspection process.

110.5.1 Duty to request a final inspection and obtain final approval: Upon completion of the work described in the permit application and on the approved construction documents, the permit holder shall request a final inspection and obtain final approval before any occupancy of the building or structure shall occur. Failure of the permit holder to make a timely request for a final inspection and obtain final approval shall constitute a violation of the building code, shall subject

the permit holder to penalties as set forth in Section 114.4, and shall result in forfeiture to the City of any funds deposited in escrow in connection with the permit if the failure continues after 30 days written notice sent by certified mail to the last known address of the permit holder, in order to offset at least some of the costs incurred by the City as a result of such continuing failure. The building official shall be responsible for sending such notices, including to all permit holders that have failed to make a timely request for a final inspection as of the effective date of these provisions. Unless the permit holder applies in signed writing for segregated investment of its escrow deposit at the time of permit application, an escrow deposit may be invested by the City with other municipal funds and any income derived there from may be used for general revenue purposes at any time. If the permit holder applies by timely signed writing for segregated investment of its escrow deposit, the City shall segregate such funds and invest them in the same manner as allowed for municipal funds, to the extent practicable given the amount of the escrow; however, no return is assured and the City shall have no liability whatsoever other than to pay any income actually derived from such investment in the event of return of such escrow deposit. In the event of a forfeiture of an escrow deposit, any income from segregated investment shall also be forfeited.

110.7 Coordination of inspections. Whenever in the enforcement of this code or another code or ordinance, the responsibility of more than one code official of the jurisdiction is involved, it shall be the duty of the code officials involved to coordinate their inspections and administrative orders as fully as practicable. Whenever an inspector from any agency or department observes an apparent or actual violation of some provision of some law, ordinance or code not within the inspector's authority to enforce, the inspector shall report the findings to the code official having jurisdiction.

These amendments were made to Sections 110.5.1 and 110.7 to reflect the city's present requirements.

111.1 New buildings: Any building or structure hereafter constructed shall not be used or occupied in whole or in part until the certificate of occupancy shall have been issued by the code official. The person in whose name the building permit has been issued pursuant to Section 105 shall obtain the certificate of occupancy and shall prevent the occupancy of any building or structure or part thereof until such certificate is issued to him. Issuance of a certificate of occupancy shall not be construed as an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction.

111.1.1 Existing buildings: Upon written request from the owner or prospective tenant of an existing building or structure, the code official shall issue a certificate of occupancy, provided that there are not violations of law, or this code, or orders of the code official pending, or which are found to exist upon an inspection of the building, and it has been established after inspection and investigation that the alleged occupancy is also in conformance with the Zoning Ordinance of Creve Coeur, Missouri. This code shall not require the removal, alteration, or abandonment of, or prevent the continuance of, the occupancy of a lawfully existing building or structure, unless such use is deemed to endanger public safety and welfare. Issuance of a certificate of occupancy shall not be construed as an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction.

111.1.2 Residential occupancy. The requirements of Section 111.1.1 shall not be applicable to existing one- and two-family residential buildings and structures that were previously issued certificates of occupancy prior to the effective date of Section 111.1.

111.1.3 Required certificate of occupancy. Failure of the owner or tenant of a structure to obtain a certificate of occupancy as required by Sections 111.1 and 111.1.1 shall be deemed a violation of this code and shall subject said owner or tenant to penalties as set forth in Section 114.4.

111.4 Revocation of the certificate of occupancy: The certificate of occupancy shall always be subject to this code and other laws enforced by the building official. Non-compliance with the regulations of this code and other laws enforced by the building official shall be deemed a violation subject to the penalties set forth herein, and, in addition, the building official shall be empowered to revoke the certificate of occupancy issued for the building in question, until such time as the violations are corrected and the building is in compliance with this code and the Zoning Ordinance of Creve Coeur, Missouri. The issuance of a certificate of occupancy shall not relieve the owner or tenant from compliance with all regulations of this code and other applicable regulations.

111.5 Permanent address numbers: Every dwelling unit or business structure within the City of Creve Coeur shall have the correct street number(s) permanently affixed on said dwelling unit or business structure so as to be clearly visible from the street in front of the property. The street number(s) shall be a minimum of four (4) inches in height when displayed on a dwelling unit and a minimum of six (6) inches in height when displayed on a business structure. Said street numbers shall be contrasting in color to that of the structure and shall be placed in proximity to the main entrance into the structure. Permanent address numbers shall be permanently affixed on a dwelling unit or a business structure prior to the issuance of a certificate of occupancy.

These amendments were made to Sections 111.1 through 111.5 to reflect the city's present requirements.

113.1 General. In order to hear and decide appeals of orders, decisions or determinations made by the building official relative to the application and interpretation of this code, there is and shall remain a Building Code Board of Appeals. The board shall adopt rules of procedure for conducting its business.

113.2 Limitations on authority. Any person shall have a right to appeal a decision of the building official to the Building Code Board of Appeals. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equivalent form of construction is proposed. The board shall have no authority to waive requirements of this code.

113.3 Time limitation and filing procedure. All appeals shall be filed in writing with the building official. A written appeal may not be filed more than thirty days after the affected individuals are notified of the building official's decision.

113.3.1 Filing fee. An application for appeal shall not be filed without full payment of the filing fee as set forth in Section 109.2.1. Said filing fee shall be refunded to the applicant if the Board reverses the decision of the building official.

113.4 Membership of board. The Building Code Board of Appeals shall consist of five regular members, who shall be residents of the City of Creve Coeur, appointed pursuant to Section 4.4(i) of the City Charter for three-year staggered terms. To the extent possible, based on applications submitted to the City, members of the Building Code Board of Appeals should be representative of the following professions or disciplines: registered architects, builder or superintendent of building construction with ten years of experience, structural engineer, code enforcement professional, mechanical engineer, electrical engineer, civil engineer, fire protection engineer, mechanical contractor, electrical contractor, plumbing contractor, fire protection contractor, or other disciplines associated with the building trades or design professions.

113.4.2 Chair. The Chair of the Building Code Board of Appeals shall be elected annually by the members of the Building Code Board of Appeals.

113.4.3 Secretary. The City Administrator shall designate a qualified clerk to serve as secretary to the board. The secretary shall file a detailed record of all proceedings in the office of the city administrator.

113.4.4 Compensation of members. Members of the Building Code Board of Appeals shall not be compensated for service but shall be reimbursed for actual expenses pursuant to established City policy.

113.4.5 Code of Ethics for members. All members shall be subject to the city's Code of Ethics.

113.5 Notice of meeting. The Building Code Board of Appeals shall meet upon notice from the chair, within 5 calendar days of the filing of a written appeal with the building official, or at stated periodic meetings.

113.6 Open hearing. All hearings before the Building Code Board of Appeals shall be open to the public. Proper public notice shall be given. The appellant, the appellant's representative, the code official, and any person whose interests are affected shall be given the opportunity to be heard.

113.6.1 Procedure. The Board shall adopt and make available to the public through the secretary procedures under which a hearing shall be conducted. The procedures shall not require compliance with strict rules of evidence but shall mandate that only relevant information be received.

113.7 Quorum. Three members of the Building Code Board of Appeals shall constitute a quorum for the purpose of hearing appeals.

113.8 Board decision. The Building Code Board of Appeals shall only reverse or modify the decision of the code official by a majority vote of the quorum present and voting. Otherwise, the decision shall be deemed to be upheld.

113.8.1 Notification of decision. The secretary of the board shall notify the appellant and the building official of the decision in writing.

113.8.2 Administration. The building official shall take immediate action in accordance with the decision of the board.

113.9 Court review: Any aggrieved person, whether or not a previous party of the appeal, shall have the right to apply to the appropriate court for a writ of certiorari to correct errors of law. Application for review shall be made in the manner and time required by law following the filing of the decision of the Building Code Board of Appeals in the office of the City Administrator.

These amendments were made to Sections 113.1 through 113.9 to reflect the city's present requirements.

114.4 Violation penalties. Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who erects, constructs, alters or repairs a building or structure in violation of the approved construction documents or directive of the building official, or of a permit or certificate issued under the provisions of this code, shall be guilty of an ordinance violation, punishable by a fine of not more than \$500, or by imprisonment not exceeding 90 days, or both such fine and imprisonment. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

115.1.1 Mud or debris or an excessive amount of surface water on streets and adjacent properties. After a verbal warning to the owner or contractor, the building official shall have the

authority to issue a stop work order to any project which is causing mud or debris or an excessive amount of surface water to be transferred to any street or adjacent property.

115.3 Unlawful continuance. Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be subject to penalties as set forth in Section 114.4.

These amendments were made to Sections 114.4 through 115.3 to reflect the city's present requirements.

SECTION 117 EMERGENCY MEASURES

117.1 Imminent danger. When, in the opinion of the building official, there is imminent danger of failure or collapse of a building or structure or any part thereof which endangers life, or when any structure or part of a structure has fallen and life is endangered by the occupation of the building or structure, the building official is hereby authorized and empowered to order and require the occupants to vacate the same forthwith. The building official shall cause to be posted at each entrance to such structure a notice reading as follows: "This Structure is Unsafe and its Occupancy has been Prohibited by the Building Official." It shall be unlawful for any person to enter such structure except for the purpose of making the required repairs or of demolishing the same, which work shall be done at such person's own risk.

117.2 Temporary safeguards. When, in the opinion of the building official, there is imminent danger due to an unsafe condition, the building official may cause the necessary work to be done in an effort to render such structure temporarily safe, whether or not the legal procedure described herein has been instituted. Neither the city or the building official or any other city employee shall be deemed to have guaranteed such security or safety or have any liability related to actions or omissions hereunder.

117.3 Closing streets. When necessary for the public safety, the building official shall temporarily close structures and close, or order the authority having jurisdiction to close, sidewalks, streets, public ways, and places adjacent to unsafe structures, and prohibit the same from being used.

117.4 Emergency repairs. For the purpose of Section 117, the building official shall employ the necessary labor and materials to perform the required work as expeditiously as possible.

117.5 Costs of emergency repairs. Costs incurred in the performance of emergency work shall be paid by the city on approval from the building official. The city attorney of the jurisdiction shall institute appropriate action against the owner of the premises where the unsafe structure is or was located for purpose of recovering such costs and may cause a special tax lien to be placed against the property for such purposes.

These amendments were made to add Sections 117.1 through 117.5 to this code so as to be consistent with the city's present building code. St. Louis County made the same building code amendment.

SECTION 500.050 AMENDMENTS TO CHAPTER 2 INTERNATIONAL BUILDING CODE: – CHAPTER 2 – DEFINITIONS:

Chapter 2 of the International Building Code, 2009 Fourth Edition, is amended as set forth herein. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

201.3 Terms defined in other codes. Where terms are not defined in this code and are defined in the International Fire Code, International Fuel Gas Code, St. Louis County Mechanical Code, St. Louis County Electrical Code, St. Louis County Plumbing Code, International Energy Conservation Code or International Property Maintenance Code, such terms shall have the meanings ascribed to them as in those codes.

This amendment made to correctly identify the city's mechanical, electrical, and plumbing codes.

**SECTION 500.060 AMENDMENTS TO CHAPTER 3 INTERNATIONAL BUILDING CODE:
– CHAPTER 3 – USE AND OCCUPANCY CLASSIFICATION:**

Chapter 3 of the International Building Code, 2009 Fourth Edition, is amended as set forth herein. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set forth below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

303.1 Assembly Group A-4. Assembly uses intended for viewing of indoor sporting events and activities with spectator seating including, but not limited to:

- Arenas
- Skating Rinks
- Swimming Pools
- Tennis Courts
- Gymnasiums (with spectator seating/bleachers)

This amendment was made to add "Gymnasiums (with spectator seating/bleachers)" for clarification purposes. While Assembly Group A-3 is written to include "Gymnasiums (without spectator seating)", the code is silent on "Gymnasiums (with spectator seating/bleachers)" which should be included in the A-4 group category.

**SECTION 500.070 AMENDMENTS TO CHAPTER 4 INTERNATIONAL BUILDING CODE:
– CHAPTER 4 – SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY:**

Chapter 4 of the International Building Code, 2009 Fourth Edition, is amended as set forth herein. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

415.6.4 Dry cleaning plants. The construction and installation of dry cleaning plants shall be in accordance with the requirements of this code, the St. Louis County Mechanical Code, the St. Louis County Plumbing Code and NFPA 32. Dry cleaning solvents and systems shall be classified in accordance with the International Fire Code.

This amendment was made to reference the city's mechanical and plumbing codes.

**SECTION 500.080 AMENDMENTS TO CHAPTER 5 INTERNATIONAL BUILDING CODE:
– CHAPTER 5 – GENERAL BUILDING HEIGHTS AND AREAS:**

Chapter 5 of the International Building Code, 2009 Fourth Edition, is amended as set forth herein. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

501.2 Address identification. New and existing buildings shall be provided with approved address numbers or letters. Each character shall be a minimum of 4 inches high for dwelling units and 6 inches high for business structures and a minimum of 0.5 inch wide. They shall be installed on a contrasting background and be plainly visible from the street or road fronting the property. Where access is by means of a private road and the building address cannot be viewed from the public way, a monument, pole or other approved sign or means shall be used to identify the structure.

This amendment was made to be consistent with fire districts' requirements.

**SECTION 500.090 AMENDMENTS TO CHAPTER 6 INTERNATIONAL BUILDING CODE:
– CHAPTER 6 – TYPES OF CONSTRUCTION:**

Chapter 6 of the International Building Code, 2009 Fourth Edition, is amended as set forth herein. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

603.1.2 Piping. The use of combustible piping materials shall be permitted when installed in accordance with the limitations of the St. Louis County Mechanical Code and the St. Louis County Plumbing Code.

The amendment to Sections 603.1.2 was made to reference the city's mechanical and plumbing codes.

**SECTION 500.100 AMENDMENTS TO CHAPTER 7 INTERNATIONAL BUILDING CODE:
– CHAPTER 7 – FIRE AND SMOKE PROTECTION FEATURES:**

Chapter 7 of the International Building Code, 2009 Fourth Edition, is amended as set forth herein. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number is hereby enacted and added thereto.

Section 713.5 Penetrations in smoke barriers. Penetrations in smoke barriers shall be tested in accordance with the requirements of UL 1479 for air leakage. The air leakage of the penetration assemblies measured at 0.30 inch (7.47 Pa) of water in both the ambient temperature and elevated temperature tests, shall not exceed:

1. 5.0 cfm per square foot (0.025m³ / s x m²) of penetration opening for each through-penetration firestop system; and
2. A total cumulative leakage of 50 cfm (0.024m³ / s) for any 100 square feet of wall area or floor area.

This amendment was made for clarification purposes.

**SECTION 500.110 AMENDMENTS TO CHAPTER 8 INTERNATIONAL BUILDING CODE:
– CHAPTER 8 – INTERIOR FINISHES:**

Chapter 8 of the International Building Code, 2009 Fourth Edition, is adopted without modification.

**SECTION 500.120 AMENDMENTS TO CHAPTER 9 INTERNATIONAL BUILDING CODE:
– CHAPTER 9 – FIRE PROTECTION SYSTEMS:**

Chapter 9 of the International Building Code, 2009 Fourth Edition, is amended as set forth herein. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number is hereby enacted and added thereto.

903.1 General. Automatic sprinkler systems shall comply with this section. Notwithstanding the provisions of the Building Code and International Building Code, as amended and adopted by the City of Creve Coeur, Missouri, a builder of one or two family dwellings or residences or townhouses shall offer to any purchaser, on or before the time of entering into the purchase contract, the option, at the purchaser's cost, to install or equip fire sprinklers in the dwelling, residence or townhouse. Notwithstanding any other provision of law to the contrary, no purchaser of such dwelling, residence or townhouse shall be denied the right to choose or decline to install a fire sprinkler system in such dwelling, residence or townhouse being purchased. The provisions of this section shall expire on December 31, 2019.

903.2.6.1 Existing Group I. All skilled nursing and intermediate care facilities not required prior to August 28, 2007, to install and maintain an automatic sprinkler system, shall install and maintain an automatic sprinkler system in accordance with NFPA 13 by December 31, 2012, unless the facility receives an exemption from the State of Missouri Department Of Health and presents evidence in writing from a certified sprinkler system representative or licensed engineer that the facility is unable to install an approved NFPA 13 automatic sprinkler system due to the unavailability of water supply requirements associated with this system.

This amendment was made to be consistent with state law.

903.2.10.3 Buildings more than 3 stories in height or having an occupied floor level located 55 feet or more above the lowest level of fire department vehicle access. An automatic sprinkler system shall be installed throughout all buildings that are more than 3 stories above the grade plane or have an occupied floor level located 55 feet or more above the lowest level of fire department vehicle access.

Exceptions: No changes made.

This amendment is similar to those approved when the city adopted the 1984 BOCA National Building Code in 10/1986, the 1990 BOCA National Building Code in 4/1992, the 1993 BOCA National Building Code in 6/1995, the 1999 BOCA National Building Code in 2/2002 and the 2003 International Building Code. These amendments have been made to be consistent with those made by the fire districts that serve the city and is related to the difficulties associated with manual suppression of a fire in multi-story buildings.

[F] 903.3.1.2 NFPA 13 or NFPA 13R sprinkler systems. Where allowed in buildings of Group R, up to and including four stories in height, automatic sprinkler systems shall be installed throughout in accordance with NFPA 13 or NFPA13R.

This amendment was made to give a design professional more flexibility when designing the fire sprinkler system for multistory apartment, condominium and hotel buildings.

[F] 903.3.1.2.2 Combustible attics. Sprinkler protection shall be provided within attics constructed of or containing combustible materials.

This amendment was made as a result of the 7/17/2012 Central West End Apartment fire that destroyed this 4-story apartment building. This fire started in the attic and quickly throughout the attic because of the 'lumbeyard' that was located between each line of draftstopping. If this building's attic had been provided with fire sprinklers the result would have been repairs being

made instead of demolishing and rebuilding the entire structure. Missouri Baptist College has decided to sprinkle the attics of their Phase 2 dormitory buildings.

[F] 903.3.5 Water supplies. Delete the reference to the “International Plumbing Code” and substitute the “St. Louis County Plumbing Code”.

This amendment made to reference the city's plumbing code.

[F] 903.4.1 Monitoring. Alarm, supervisory and trouble signals shall be distinctly different and automatically transmitted to an approved central station, remote supervising station or proprietary supervising station as defined in NFPA 72.
Exceptions: No changes made.

This amendment made to be consistent with the city's present code.

[F] 903.4.2 Alarms. The fire sprinkler system water flow device(s) shall activate alarm notification appliances, located throughout the entire building, which shall be components of an automatic fire alarm system installed in accordance with the provisions of Section 907 and NFPA 72. Such fire sprinkler water flow devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the fire sprinkler system.
Exception: Alarm notification appliances shall not be required for limited area sprinkler systems (see Section 903.3.5.1.1)

See the related proposed amendment for Section 907.2.24.

907.2.24 Buildings equipped throughout with an automatic sprinkler system. An automatic fire alarm system with alarm notification appliances shall be installed and maintained in all new buildings equipped throughout with an automatic sprinkler system that is designed and installed in accordance with Section 903.3.1.1 or Section 903.1.1.2. An automatic fire alarm system with alarm notification devices shall be installed and maintained in all existing unsprinklered buildings that become equipped throughout with an automatic sprinkler system that is designed and installed in accordance with Section 903.3.1.1 or Section 903.3.1.2. An automatic fire alarm system with alarm notification appliances shall be installed and maintained in all existing sprinklered buildings where the construction costs for the proposed renovation of these buildings exceeds 50 percent of their appraised values (as established by the St. Louis County Assessor's Office) prior to the proposed renovations occurring. Manual fire alarm boxes are not required unless otherwise required by Sections 907.2.1 through 907.2.23.

This amendment was made to add a new section to this code. In many cases, the proposed code, as written, only requires an audible bell mounted on an exterior wall to be activated by the building's fire sprinkler system water flow device. This means that there could be a fire some where in a fully sprinklered multi-story office building or retail shopping center or large warehouse and the only occupant notification device activated would be this single, exterior-mounted audible bell. Building occupants could be working or shopping in a building on fire and not be aware of it. The building department views this as a potentially unsafe condition that is not specifically addressed by the code as written. This proposed amendment would require that a building's fire sprinkler system water flow device activate alarm notification appliances (horn / strobes) located throughout the entire building, thereby alerting all building occupants of a fire condition as soon as it is detected and expediting the evacuation process. See also the amendment to Section 903.4.2. Please note that this amendment was previously approved when the city adopted the 1993 BOCA National Building Code in 6/1995, the 1999 BOCA National Building Code in 2/2002 and the 2003 International Building Code in 5/2007.

907.14 Monitoring. All fire alarm and fire detection systems shall be monitored by an approved central station, remote supervising station or proprietary supervising station as defined in NFPA 72.

Exceptions: No changes made.

This amendment made to be consistent with the amendment made to Section 903.4.1.

**SECTION 500.130 AMENDMENTS TO CHAPTER 10 INTERNATIONAL BUILDING CODE:
– CHAPTER 10 – MEANS OF EGRESS:**

Chapter 10 of the International Building Code, 2009 Fourth Edition, is amended as set forth herein. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number is hereby enacted and added thereto.

1004.1.1 Areas without fixed seating. The number of occupants shall be computed at the rate of one occupant per unit of area as prescribed in Table 1004.1.1. For areas without fixed seating, the occupant load shall not be less than the number determined by dividing the floor area under consideration by the occupant per unit of area factor assigned to the occupancy as set forth in Table 1004.1.1 or by the actual number of occupants for whom each occupied space, floor or building is designed, whichever number of occupants is greater.

This amendment was made to be consistent with the city's present building code.

Exception. Delete.

This amendment was made because the exception contains subjective language that would be difficult for the building official to consistently enforce.

1008.1.9.10 Stairway doors.

Exception 3. Delete.

This amendment was made to make this code section consistent with the city's present code. The exception, as written, would permit exit stairway doors to be locked from the stairway side if the stairway served 4 stories or less. The city's present code prohibits all exit stairway doors from being locked from the stairway side because of the concern that persons could enter an exit stairway filling with smoke and then attempt to exit the stairway only to discover that the exit stairway door had closed and locked behind them. This exception was also amended by the 2006 edition of the International Building Code.

1011.1 Where required. Amend "Exception 1" to read as follows:

Exceptions:

1. Exit signs are not required in buildings which require only one exit.

This amendment was made to be consistent with the city's present building code.

1011.5.1 Graphics. Amend the first sentence of this section to read as follows: Every exit sign and directional exit sign shall have plainly legible red letters not less than 6 inches high with the principle strokes of the letters not less than 0.75 inch wide.
No other changes made to rest of this section.

This amendment was made to be consistent with the city's present building code and fire district regulations. Red is the most recognized color for exit signs.

1013.3 Opening limitations. Required guards shall not have openings which allow passage of a sphere 4 inches (102 mm) in diameter from the walking surface to the required guard height. Guards shall not have an ornamental pattern that would provide a ladder effect. Angular intermediate balusters shall be installed at an angle 45 degrees or greater to an adjacent walking surface or stair tread.

Exceptions 1 through 6. No changes made.

This amendment was made to make this section consistent with the city's present code as it relates to the 'ladder effect' language. The code as written does not define 'ladder effect'. The proposed language does. This amendment is identical to the amendment approved when the city adopted the 1999 BOCA National Building Code in 2/2002 and the 2003 International Building Code in 5/2007.

1013.7 Retaining walls. Guards shall be provided where retaining walls with differences in grade level on either side of the wall in excess of 30 inches (762 mm) are located closer than 24 inches (610 mm) to a walk, path, parking lot or driveway on the high side of the retaining wall. If deemed in the interest of public safety by the building official per Section 104.12, guards or other approved protective measures shall be provided where retaining walls with differences in grade level on either side of the wall in excess of 30 inches are located 24 inches or farther from a walk, path, parking lot or driveway.

This amendment was made to add a new code section to clarify when guards are required across the top of retaining walls.

1017.4.4 Dead ends in aisles. Where more than one exit or exit access doorway is required, the exit access shall be arranged such that there are no dead ends in aisles more than 20 feet in length.

Exceptions:

1. In occupancies in Use Group B where aisles are bounded by furniture, counters, partitions or similar dividers not more than 6 feet in height, the length of a dead-end aisle shall not be more than 50 feet.
2. In occupancies in Use Group B where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, the length of dead-end aisles shall not exceed 50 feet.
3. A dead-end aisle shall not be limited in length where the length of the dead-end aisle is less than 2.5 times the least width of the dead-end aisle.

This amendment was made to correct an oversight that occurred when the 1999 BOCA National Building Code transitioned to the International Building Code. The 2009 IBC has this language being applicable to corridors only. If this amendment is not made a designer could propose a dead-end aisle between office work stations up to 100 feet in length.

1023.1 General. Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide direct access to grade. The exit discharge shall not reenter a building. The combined use of Exceptions 1 and 2 below shall not exceed 50 percent of the number and capacity of the required exits.

Exceptions:

1. A maximum of 50 percent of the number and capacity of the exit enclosures is permitted to egress through areas on the level of discharge provided all of the following conditions are met:
 - 1.1 Such exit enclosures egress to a free and unobstructed path of travel to an exterior exit door. This free and unobstructed path of travel shall not have any floor dimension less than ten (10) feet in width or length with a minimum floor area of three hundred (300) square feet and a minimum clear ceiling height of eight (8)

feet. This exterior exit door shall be readily visible and identifiable from the point of termination of the exit enclosure.

1.2 and 1.3 No change.

2. No change

This amendment was made to establish minimum dimensions for an exit discharge lobby. The code is silent on this issue. This amendment is identical to the one made when the city adopted the 1999 BOCA National Building Code in 2/2002 and the 2003 International Building Code in 5/2007.

**SECTION 500.140 AMENDMENTS TO CHAPTER 11 INTERNATIONAL BUILDING CODE:
– CHAPTER 11 – ACCESSIBILITY:**

Chapter 11 of the International Building Code, 2009 Fourth Edition, is amended as set forth herein. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number is hereby enacted and added thereto.

Section 1106.5 Van spaces. For every four or fraction of four accessible parking spaces, at least one shall be a van-accessible parking space. Where accessible parking is provided within or beneath a building, at least one van-accessible parking space shall also be provided within or beneath the building adjacent to the other interior accessible parking spaces.

Exception: No change.

This amendment was made to be consistent with state law.

**SECTION 500.150 AMENDMENTS TO CHAPTER 12 INTERNATIONAL BUILDING CODE:
– CHAPTER 12 – INTERIOR ENVIRONMENT:**

Chapter 12 of the International Building Code, 2009 Fourth Edition, is amended as set forth herein. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number is hereby enacted and added thereto.

1203.1 General. Buildings shall be provided with natural ventilation in accordance with Section 1203.4, or mechanical ventilation in accordance with the St. Louis County Mechanical Code.

This amendment made to reference the city's mechanical code.

1206.3.3 Court drainage. Delete the reference to the “International Plumbing Code” and substitute the “St. Louis County Plumbing Code”.

This amendment made to reference the city's plumbing code.

**SECTION 500.160 AMENDMENTS TO CHAPTER 13 INTERNATIONAL BUILDING CODE:
– CHAPTER 13 – ENERGY EFFICIENCY:**

Chapter 13 of the International Building Code, 2009 Fourth Edition, is adopted without modification.

**SECTION 500.170 AMENDMENTS TO CHAPTER 14 INTERNATIONAL BUILDING CODE:
– CHAPTER 14 – EXTERIOR WALLS:**

Chapter 14 of the International Building Code, 2009 Fourth Edition, is adopted without modification.

**SECTION 500.180 AMENDMENTS TO CHAPTER 15 INTERNATIONAL BUILDING CODE:
– CHAPTER 15 – ROOF ASSEMBLIES AND ROOFTOP STRUCTURES:**

Chapter 15 of the International Building Code, 2009 Fourth Edition, is amended as set forth herein. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number is hereby enacted and added thereto.

[P] 1503.4 Roof drainage. Delete the reference to the “International Plumbing Code” and substitute the “St. Louis County Plumbing Code”.

This amendment made to reference the city's plumbing code.

**SECTION 500.190 AMENDMENTS TO CHAPTER 16 INTERNATIONAL BUILDING CODE:
–CHAPTER 16 – STRUCTURAL DESIGN:**

Chapter 16 of the International Building Code, 2009 Fourth Edition, is amended as set forth herein. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number is hereby enacted and added thereto.

**TABLE 1607.1
MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS AND MINIMUM CONCENTRATED LIVE
LOADS**

Modify the following row within this table to read as follows:

OCCUPANCY OR USE	UNIFORM (psf)	CONCENTRATED (psf)
5. Balconies(exterior)	100	----
Balconies on one- and two- family residences only, and not exceeding 100 sq. ft.	60	----
Decks (h)	Same as occupancy served	----

1608.2.1 Creve Coeur ground snow loads. Ground snow loads to be used in determining the design snow loads for roofs shall be 20 psf.

This section added for clarification purposes.

1612.3 Establishment of flood hazard areas. To establish flood hazard areas, the applicable governing body shall adopt a flood hazard map and supporting data. The flood hazard map shall include, at a minimum, areas of special flood hazard as identified by the Federal Emergency Management Agency in an engineering report entitled “The Flood Insurance Study for St. Louis County, Missouri and Incorporated Areas”, dated August 2, 1995, as amended or revised with the accompanying Flood Insurance Rate Map (FIRM) and Flood Boundary and Floodway Map (FBFM) and related supporting data along with any revisions thereto. The adopted flood hazard map and supporting data are hereby adopted by reference and declared to be part of this section.

The proper dated engineering report was inserted as required.

1613.5.1 Acceleration parameters. The earthquake spectral response acceleration at short periods (Ss) shall be 0.54g. The earthquake spectral response acceleration at 1-second periods (S1) shall be 0.18g.

This amendment was made to be consistent with St. Louis County's adopting ordinance.

**SECTION 500.200 AMENDMENTS TO CHAPTER 17 INTERNATIONAL BUILDING CODE:
– CHAPTER 17 – STRUCTURAL TESTS AND SPECIAL INSPECTIONS:**

Chapter 17 of the International Building Code, 2009 Fourth Edition, is adopted without modification.

**SECTION 500.210 AMENDMENTS TO CHAPTER 18 INTERNATIONAL BUILDING CODE:
– CHAPTER 18 – SOILS AND FOUNDATIONS:**

Chapter 18 of the International Building Code, 2009 Fourth Edition, is amended as set forth herein. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number is hereby enacted and added thereto.

1807.2.4 Guards. Guards shall be provided in accordance with Section 1013.7.

This section was added to clarify that there are circumstances when guards are required along the top of retaining walls.

Section 1809.5 Frost protection. Except where otherwise protected from frost, foundation walls, piers and other permanent supports of buildings and structures shall be protected from frost by one or more of the following methods:

1. Extending a minimum of thirty (30) inches below the finish grade.

No changes made to methods 2 or 3 or exceptions 1, 2 or 3.

This amendment was made to establish the frost line for the City of Creve Coeur.

Section 1805.4.3 Drainage discharge.

Delete the reference to the “International Plumbing Code” and substitute the “St. Louis County Plumbing Code”.

The city's plumbing code is the St. Louis County Plumbing Code.

Section 1805.5 Enclosure of surface water run-off: Surface water run-off concentrated into an enclosed pipe system shall not be discharged closer than ten (10) feet from any property line without prior approval from the building official. If this method of discharge causes a drainage nuisance to an adjacent property, an alternate drainage method shall be proposed for approval by the building official.

Exception: This section shall not apply to enclosed pipe storm water systems of twelve (12) inches or greater in diameter that are under the jurisdiction of the City of Creve Coeur or the Metropolitan Sewer District.

This amendment was added to prevent drainage nuisances caused by downspouts, footing drains, sump pumps, etc.

SECTION 500.220 AMENDMENTS TO CHAPTER 19 INTERNATIONAL BUILDING CODE:

– CHAPTER 19 – CONCRETE:

Chapter 19 of the International Building Code, 2009 Fourth Edition, is adopted without modification.

SECTION 500.230 AMENDMENTS TO CHAPTER 20 INTERNATIONAL BUILDING CODE:

– CHAPTER 20 – ALUMINUM:

Chapter 20 of the International Building Code, 2009 Fourth Edition, is adopted without modification.

SECTION 500.240 AMENDMENTS TO CHAPTER 21 INTERNATIONAL BUILDING CODE:

– CHAPTER -- 21 MASONRY:

Chapter 21 of the International Building Code, 2009 Fourth Edition, is adopted without modification.

SECTION 500.250 AMENDMENTS TO CHAPTER 22 INTERNATIONAL BUILDING CODE:

– CHAPTER 22 – STEEL:

Chapter 22 of the International Building Code, 2009 Fourth Edition, is adopted without modification.

SECTION 500.260 AMENDMENTS TO CHAPTER 23 INTERNATIONAL BUILDING CODE:

– CHAPTER 23 – WOOD:

Chapter 23 of the International Building Code, 2009 Fourth Edition, is adopted without modification.

SECTION 500.270 AMENDMENTS TO CHAPTER 24 INTERNATIONAL BUILDING CODE:

– CHAPTER 24 – GLASS AND GLAZING:

Chapter 24 of the International Building Code, 2009 Fourth Edition, is adopted without modification.

SECTION 500.280 AMENDMENTS TO CHAPTER 25 INTERNATIONAL BUILDING CODE:

– CHAPTER 25 – GYPSUM BOARD AND PLASTER:

Chapter 25 of the International Building Code, 2009 Fourth Edition, is amended as set forth herein. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection or clause number is hereby enacted and added thereto.

Section 2503.1 Inspection. Lath and gypsum board shall be inspected in accordance with *Section 109.3.7.*

This amendment was made so as to be consistent with the city's required sequence of inspections.

SECTION 500.290 AMENDMENTS TO CHAPTER 26 INTERNATIONAL BUILDING CODE:

– CHAPTER 26 – PLASTIC:

Chapter 26 of the International Building Code, 2009 Fourth Edition, is adopted without modification.

SECTION 500.300 AMENDMENTS TO CHAPTER 27 INTERNATIONAL BUILDING CODE:

– CHAPTER 27 – ELECTRICAL:

Chapter 27 of the International Building Code, 2009 Fourth Edition, is adopted without modification.

SECTION 500.310 AMENDMENTS TO CHAPTER 28 INTERNATIONAL BUILDING CODE:

– CHAPTER 28 – MECHANICAL SYSTEMS:

Chapter 28 of the International Building Code, 2009 Fourth Edition, is amended as set forth herein. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection or clause number is hereby enacted and added thereto.

Section 2801.1 Scope. Delete the references to the “International Mechanical Code” and substitute “St. Louis County Mechanical Code”.

This amendment made to identify the St. Louis County Mechanical Code as the city's mechanical code for occupancies other than individual dwelling units.

SECTION 500.320 AMENDMENTS TO CHAPTER 29 INTERNATIONAL BUILDING CODE:

– CHAPTER 29 – PLUMBING SYSTEMS:

Chapter 29 of the International Building Code, 2009 Fourth Edition, is amended as set forth herein. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection or clause number is hereby enacted and added thereto.

Section 2901.1 Scope. Delete the references to the “International Plumbing Code” and the “International Private Sewage Disposal Code” and substitute “St. Louis County Plumbing Code”.

This amendment made to identify the St. Louis County Plumbing Code as the city's plumbing code.

Section 2902.1 Minimum number of fixtures. Each building shall be provided with plumbing fixtures as prescribed by the St. Louis County Plumbing Code. Table 2902.1 shall apply to new buildings, additions to existing buildings and any changes of occupancy or use in an existing building which result in an increased occupant load, except new cafeterias used only by employees. Access to public toilet facilities shall not be through areas used for food preparation, repair or assembly of products for consumer use, storage rooms or mechanical equipment rooms. Requirements for the physically disabled shall be based on this Building Code and ICC/ANSI A117.1 – 2003.

The total occupant load used to determine plumbing fixture count shall be determined by the net floor area. The use or occupancy classification shall be determined by the actual use of the various spaces within the building. The minimum number of fixtures required shall be calculated at 50 percent female and 50 percent male based on the total occupant load, except when specific occupancy information relating to gender is provided that is acceptable to the Code Official.

Once the uses and occupant loads have been determined the requirements of applicable sections of the St. Louis County Plumbing Code shall be applied to determine the minimum number of plumbing fixtures required.

State of Missouri regulations that exceed these minimums shall apply.

Exceptions:

1. For Mercantile occupancies, square feet of the net floor area shall be used to calculate the number of occupants to determine plumbing fixtures.
2. For Industrial and Warehouse occupancies, the actual number of occupants shall be used as the total occupant load to determine plumbing fixtures. For a building with a warehouse area of ten thousand (10,000) square feet or greater, a minimum of one (1) unisex toilet room including one (1) floor drain, one (1) water closet, and one (1) lavatory with hot water shall be located in the warehouse area.
3. Where outdoor seating is provided for a restaurant the actual outdoor seating area shall be included in the total occupant load for the restaurant.
4. Re-occupancy with no change in use may require a change in the number of plumbing fixtures required due to an increase in occupant load or reconfiguration of the space.

This amendment made to be consistent with the St. Louis County Plumbing Code.

TABLE 2902.1 MINIMUM NUMBER OF REQUIRED PLUMBING FACILITIES. The contents of this Table as amended by the St. Louis County Plumbing Code shall apply.

This amendment made to be consistent with the St. Louis County Plumbing Code.

Section 2902.1.1 Fixture calculations. The requirements of Section 2902.1 shall apply.

Section 2902.1.2 Family or assisted use toilet and bath fixtures. The requirements of Section 413.0 of the St. Louis County Plumbing Code shall apply.

Section 2902.2 Separate facilities. The requirements of Section 412.3 and Section 413.3 of the St. Louis County Plumbing Code shall apply.

Section 2902.3 Required public toilet facilities. The requirements of Section 2902.1 of this code and Section 412.3 of the St. Louis County Plumbing Code shall apply.

Section 2902.3.1 Access. The requirements of Section 2902.1 of this code and Section 412.2 of the St. Louis County Plumbing Code shall apply.

Section 2902.3.2 Location of toilet facilities in occupancies other than covered mall buildings. The requirements of Section 412.5 of the St. Louis County Plumbing Code shall apply.

Section 2902.3.3 Location of toilet facilities in covered mall buildings. The requirements of Section 412.5 of the St. Louis County Plumbing Code shall apply.

Amendments were made to Sections 2901.1 through 2902.3.3 to be consistent with the St. Louis County Plumbing Code.

**SECTION 500.330 AMENDMENTS TO CHAPTER 30 INTERNATIONAL BUILDING CODE:
– CHAPTER 30 – ELEVATORS AND CONVEYING SYSTEMS:**

Chapter 30 of the International Building Code, 2009 Fourth Edition, is amended as set forth herein. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number is hereby enacted and added thereto.

Section 3009

EXISTING ELEVATORS AND ESCALATORS

Section 3009.1 Referenced standard. All existing elevators and escalators shall comply with the requirements of ASME (American Society of Mechanical Engineers) A17.3 Safety Code for Existing Elevators and Escalators listed in Chapter 35.

This new section added to be consistent with the St. Louis County's building code amending ordinance.

SECTION 500.340 AMENDMENTS TO CHAPTER 31 INTERNATIONAL BUILDING CODE: – CHAPTER 31 -- SPECIAL CONSTRUCTION:

Chapter 31 of the International Building Code, 2009 Fourth Edition, is amended as set forth herein. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number is hereby enacted and added thereto.

Section 3102.1 General. Delete the reference to “180 days” and substitute “90 days”.

This amendment made to reflect the city's desire for a shorter duration for the erection of air-supported, air-inflated, or membrane-covered cable structures. This duration is consistent with the city's present code.

Section 3103.5 Membrane material. The membrane material for all tents, membrane structures and their appurtenances shall be of: approved noncombustible material as defined in Section 703.4; flame-resistant material as determined in accordance with NFPA 701 listed in Chapter 35; or material treated in an approved manner to render the material flame-resistant.

This amendment made to reinstate this section into the code. The ICC had deleted this section. St. Louis County also reinstated this section.

Section 3103.6 Certification. An affidavit or affirmation shall be submitted to the building official and a copy retained on the premises on which the tent or membrane structure is located. The affidavit shall attest to the following information relative to the flame-resistance of the fabric:

1. Names and addresses of the owners of the tent or membrane structure.
2. Date the fabric was last treated with flame-resistant solution.
3. Trade name or kind of chemical used in treatment.
4. Name of person or firm treating the material.
5. Name of testing agency and test standard by which the fabric was tested.

This amendment made to reinstate this section into the building code. The ICC had deleted this section. St. Louis County also reinstated this section.

Section 3103.7 Label. Membrane structures, tents and canopies shall bear a permanently affixed label that identifies the size and fabric or material type.

Section 3103.8 Anchorage. All temporary structures shall be anchored to the ground to resist the wind loads prescribed by Section 1609. At the discretion of the building official, the anchorage system may be required to be designed by a registered design professional.

These new sections were added to be consistent with St. Louis County's Building Code.

Section 3109.4.1.9 Pool structure as barrier. Where an above-ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a fixed or removable ladder or steps, the ladder or steps shall be surrounded by a barrier which meets the requirements of Sections 3109.4.1.1 through 3109.4.1.8. A removable ladder or steps shall not constitute an acceptable alternative to enclosure requirements.

This amendment made to reflect present city building code language. St. Louis County made a similar amendment.

SECTION 3111 ANTENNAS

Section 3111.1 Permits not required. A building permit is not required for roof installation of antennal structures not more than twelve (12) feet in height. Such a structure shall be erected so as to not damage the roof covering, and when removed from the roof, the roof covering shall be repaired to maintain weather and water tightness. The installation of any antennal structure mounted on the roof of a building shall not be erected nearer to the lot line than the total height of the antennal structure above the roof, nor shall such structure be erected near electric power lines or encroach upon any street or other public space.

Section 3111.2 Permits required. Approval shall be secured for all roof-mounted antennal structures more than 12 feet in height above the roof. The application shall be accompanied by detailed drawings of the structure and methods of anchorage. All connections to the roof structure shall be properly flashed to maintain water tightness.

Section 3111.3 Dish antennas. An antenna consisting of a radiation element which transmits or receives radiation signals generated as electrical, light or sound energy, and supported by a structure with or without a reflective component to the radiating dish, usually in a circular shape with a parabolic curve design constructed of a solid or open mesh surface, shall be known as a dish antenna.

Section 3111.3.1 Permits. The approval of the building official shall be secured for all dish antenna structures more than 2 feet in diameter erected on the roof of or attached to any building or structure.

Section 3111.3.2 Structural provisions. Dish antennas larger than 2 feet in diameter shall be subject to the structural provisions of Sections 1608 and 1609. The snow load provisions of Section 1608 shall not apply where the antenna has a heater to melt falling snow.

This amendment made to reinstate Sections 3111.1 through 3111.3.2 into the building code. The ICC deleted this section. St. Louis County also reinstated this section.

SECTION 500.350 AMENDMENTS TO CHAPTER 32 INTERNATIONAL BUILDING CODE: – CHAPTER 32 – ENCROACHMENTS INTO THE PUBLIC RIGHT-OF-WAY:

Chapter 32 of the International Building Code, 2009 Fourth Edition, is adopted without modification.

SECTION 500.360 AMENDMENTS TO CHAPTER 33 INTERNATIONAL BUILDING CODE: – CHAPTER 33 – SAFEGUARDS DURING CONSTRUCTION:

Chapter 33 of the International Building Code, 2009 Fourth Edition, is amended as set forth herein. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number is hereby enacted and added thereto.

Section 3302.3 Street and adjacent property cleaning. Mud and debris on streets or adjacent properties caused either directly or indirectly by construction shall be removed immediately. This maintenance shall be performed at all times during construction. The responsibility for ensuring that streets leading to and from and properties adjacent to the construction site are kept clean shall be with the owner of said property. Failure to comply with this section shall result in the property owner being cited with a violation subject to penalties set forth in Section 114.4 or being served with a Stop Work Order specified in Section 115.0 or both.

This amendment made to satisfy the city's desire to keep streets and adjacent properties clean during construction.

Section 3303.4 Grading and restoration of lot. Where a structure has been demolished or otherwise removed from a lot and construction for the new structure has not begun, the vacant lot shall be filled, graded, and maintained in conformity to the established elevation of the street grade at curb level nearest the point of demolition or excavation. Provisions shall be made to prevent the accumulation of water or damage to any foundations on the premises or adjoining property. If construction activity as authorized by a grading permit or building permit has not commenced within thirty (30) days of the demolition of the structure, said lot shall be re-vegetated with approved vegetation.

This amendment made to prevent an unsightly or unsanitary condition to occur on a vacant lot for an extended period of time.

Section 3305.1 Facilities required. Delete the reference made to the "International Plumbing Code" and substitute "St. Louis County Plumbing Code".

This amendment made to specify that sanitary facilities shall be provided during construction per the St. Louis County Plumbing Code.

**SECTION 500.370 AMENDMENTS TO CHAPTER 34 INTERNATIONAL BUILDING CODE:
– CHAPTER 34 – EXISTING STRUCTURES:**

Chapter 34 of the International Building Code, 2009 Fourth Edition, is amended as set forth herein. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number is hereby enacted and added thereto.

Section 3401.3 Compliance with other codes. Alterations, repairs, additions and changes of occupancy to existing structures shall comply with the provisions for alterations, repairs, additions and changes of occupancy in the International Fire Code, International Energy Conservation Code, International Fuel Gas Code, International Property Maintenance Code, International Residential Code, St. Louis County Mechanical Code, St. Louis County Plumbing Code and NFPA 70.

This amendment made to reference the proper plumbing, mechanical and electrical codes to govern such work in existing structures.

Section 3401.4 Alternative compliance. Delete this section in its entirety.

This deletion was made to be consistent with the city's present code. By deleting this section the city will use only Chapter 34 of the 2009 IBC to regulate existing buildings and not the International Existing Building Code.

Section 3410. Conformance. Structures moved into or within the City of Creve Coeur shall comply with the provisions of this code for new structures.

Exception: The moved structure may be granted nonconforming status provided all of the following conditions are met:

1. No change shall be made in the previous use or occupancy of the moved structure.
2. No addition shall be made to the structure after it is moved.
3. It can be demonstrated to the building official, in writing, that the moved structure's structural strength, means of egress facilities, life safety systems and mechanical, electrical and plumbing systems are in compliance with the building, mechanical, electrical and plumbing codes enforced when the moved structure was originally built.

The exception was added because requiring an old building to be brought into full compliance with present codes would discourage it being moved and could result in its demolition instead of it being reused. Reusing a structure instead of demolishing it would be considered a more 'green' approach.

Section 3412.2 Applicability. Insert the date "September 14, 1953".

This amendment made to reflect the effective date of the first building code adopted by the City of Creve Coeur. Any structures existing prior to this date may comply with SECTION 3412 COMPLIANCE ALTERNATIVES, when being altered or added on to instead of complying with Chapters 2 through 33 or Section 3401.3, and 3403 through 3409.

**SECTION 500.380 AMENDMENTS TO CHAPTER 35 INTERNATIONAL BUILDING CODE:
– CHAPTER 35 – REFERENCED STANDARDS:**

Chapter 35 of the International Building Code, 2009 Fourth Edition, is amended as set forth herein. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number is hereby enacted and added thereto.

This chapter lists the standards that are referenced in various sections of this document. The standards are listed herein by the promulgating agency of the standard, the standard identification, the effective date and title, and the section or sections of this document that reference the standard. The application of the referenced standards shall be as specified in Section 102.4.

ASME – American Society of Mechanical Engineers

Three Park Avenue
New York, NY 10016-5990

Standard reference number	Title	Referenced in code section number
ADD: A17.3 – 2008	Safety Code for Existing Elevators and Escalators	3009.1

ICC – International Code Council, Inc.

500 New Jersey Ave., NW
6th Floor
Washington, DC 20001

Standard reference number	Title	Referenced in code section number.
DELETE: ICC/ANSI A117.1-03	Accessible and Useable Buildings and Facilities	NO CHANGE .
ADD: ICC/ANSI A117.1-09	Accessible and Useable Buildings and Facilities	NO CHANGE.
DELETE: IEBC- 09	International Existing Building Code	DELETED.

DELETE: IMC – 09 International Mechanical Code

ADD: Mechanical Code- St. Louis County Mechanical Code **ADD:** 102.2.1, 105.2, 107.3.3.1
City Ordinance No. 5214

DELETE: IPC – 03 International Plumbing Code

ADD: Plumbing Code – St. Louis County Plumbing Code **ADD:** 101.4.3, 105.2, 107.2.7,
City Ordinance No. 5214 2902.1, 2902.1.1, 2902.1.2,
2902.2, 2902.3, 2902.3.1,
2902.3.2, 2902.3.3

NFPA – National Fire Protection Association
1 Batterymarch Park
Quincy, MA 02169-7471

Standard reference number	Title	Referenced in code section number
ADD: 70-08	National Electrical Code / St. Louis County Electrical Code – City Ordinance No. 5214	ADD: 105.2
ADD: 701.4	Standards Methods of Fire Tests for Flame-propagation of Textiles and Films	ADD: 3103.5

These amendments made to be consistent with other amendments previously made.

SECTION 2: SAVING CLAUSE: Nothing in this ordinance or in the Building Code hereby adopted, shall be construed to affect any suit or proceeding currently pending in any court as of the effective date hereof, or any rights previously acquired or liability previously incurred, or any cause or causes of action existing under any ordinance hereby repealed, as cited herein.

SECTION 3: SEVERABILITY: If any section, subsection, provision, sentence, clause, or phrase of this ordinance or of the ICC International Building Code, Fourth Edition, 2009, is, for any reasons held to be unconstitutional or invalid, such decision shall not affect the validity of the remaining portions of this ordinance or of said code, and the City of Creve Coeur City Council hereby declares that it would have passed the same , even though such portion so held to be unconstitutional had not been included therein.

SECTION 4: EFFECTIVE DATE: This ordinance shall become effective **August 1, 2013**, in accordance with section 3.11(g) of the City Charter.

Adopted by the City Council this __ day of _____, 2013.

ROBERT HOFFMAN
PRESIDENT OF THE CITY COUNCIL

Approved this __ day of _____, 2013.

BARRY GLANTZ
MAYOR

ATTEST:

DEBORAH RYAN, MPCC
CITY CLERK

MEMORANDUM

TO: Mark Perkins, City Administrator

CC: Paul Langdon, Director of Community Development

FROM: Steve Unser, Chief Building Official

DATE: May 8, 2013

RE: Building Division's Draft of a City Ordinance to
Amend and Adopt the 2009 International Building Code as the
City's New Commercial Building Code.

Please find attached the aforementioned draft for review, comments and approval. St. Louis County and the majority of municipalities within St. Louis County have adopted or are in the process of adopting this building code as their new commercial building code. In the interest of code enforcement consistency throughout our region, the building division is recommending that the City of Creve Coeur do the same. This code regulates building construction for and within structures such as office buildings, churches, temples, theaters, restaurants, schools, hospitals, shopping centers and warehouses.

Please note that an explanation for each amendment is written in *italics* and underlined after each proposed amendment. These "explanations" will be removed from the body of the ordinance prior to its adoption.

On December 11, 2012, this draft of this proposed ordinance was filed with the City Clerk's office and made available for public inspection and examination pursuant to Section 67.280 RSMo. This draft was posted on the city's website for public review on December 11, 2012. Also, on December 13, 2012, printed copies of this draft were mailed to members of the city's Building Code Board of Appeals, the Associated General Contractors of St. Louis and the Creve Coeur-Olivette Chamber of Commerce. Printed copies were also made available at the building division's public counter.

See attached Exhibit A for the Building Code Board of Appeals recommendation to adopt this code as proposed.

See attached Exhibit B for Caryl Kinsey Fox's recommendation to adopt this code as proposed.

The city requested that any comments from all interested parties regarding this draft be submitted to the building division for review within ninety (90) days of the date of it being made available to the public. These review comments will be shared with the city administrator and city council for possible inclusion into a revised draft.

See attached Exhibit C for the 3/27/13 comments from the Creve Coeur-Olivette Chamber of Commerce and the 4/11/13 responses from the Building Division.

AMENDMENTS OF NOTE

There are numerous amendments proposed during a new building code adoption process. While most of these amendments are administrative or technical in nature, some merit additional attention.

Referenced page numbers are from the proposed ordinance.

Section 105.5 Expiration. (See page 3)

The maximum time frame for commencing permitted work has been kept at 180 days. The expiration date for completing new buildings and additions has been kept at 2 years from the date of issuance. The expiration date for completing tenant improvements has been reduced from 2 years to 1 year from the date of issuance. This change is intended to reduce the backlog of active building permits.

Section 109.2.1 Building Code Board of Appeals filing fee. (See page 5)
Applicant will have the filing fee refunded if the board rules in the applicant's favor.

Sections 110.3 through 110.3.12 Required inspections. (See pages 6 and 7)
More specific language was added to better communicate field inspection requirements to contractors so as to expedite the building inspection process.

Sections 113.1 through 112.9 Board of Appeals (See pages 9 and 10)
These amendments were made to 'streamline' the appeals process.

Section 903.3.1.2.2 Combustible attics. (See pages 14 and 15)
The building code as written allows combustible attics to be 'draftstopped' at prescribed locations with ½ inch gypsum wallboard which does very little to prevent the spread of fire across a combustible attic space. Please see the italicized explanation.

Section 907.2.24 Buildings equipped throughout with an automatic sprinkler system (See page 15)

This amendment has been approved per the previous three code adoption cycles (6/1995, 2/2002 and 5/2007). Please see the italicized explanation.

Section 1008.1.9.10 Stairway doors. (See page 16)

This amendment restores code language from our present code so as to be consistent with the precedent the city has already established for locking stairway doors in the city's existing multi-story buildings.

Section 1013.7 Retaining walls. (See page 17)

This amendment was made to clarify when guards are required across the top of retaining walls.

Section 3303.4 Grading and restoration of lot. (See page 26)

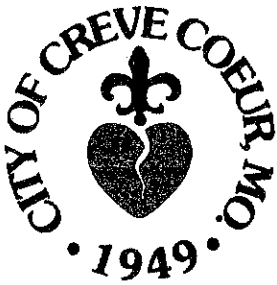
This amendment was made to prevent an unsightly or unsanitary condition from occurring on a vacant lot after demolition of the building has been completed.

Significant Building Code Changes

Every 3 years a new commercial building code is published by the International Code Council. The International Building Code is kept up to date through the review of proposed code changes submitted by code enforcement officials, industry representatives, design professionals and other interested parties. Proposed code changes are carefully considered through an open code development process in which all interested and affected parties may participate. A consensus is reached for each proposed code change by a majority vote of members at the ICC Code Change Hearings which are held twice a year (spring/fall) at various cities.

The intent of the city has been to adopt the building code as written through this model code development process and to ensure that any amendments proposed by the building division will not be less restrictive than the minimum regulations contained in the published International Building Code.

While every code change cannot be listed here, please ***see attached Exhibit D for a summary of significant changes that will be made to the city's present commercial building code (2003 IBC) by the city's adoption of the proposed commercial building code (2009 IBC).***



city
of

CREVE COEUR

300 North New Ballas Road • Creve Coeur, Missouri 63141
(314) 432-6000 • Fax (314) 872-2539 • Relay MO 1-800-735-2966
www.creve-coeur.org

EXHIBIT A

April 15, 2011

Mayor and Council Members
Creve Coeur Government Center
300 N. New Ballas Road.
Creve Coeur, MO 63141

RE: Building Code Board of Appeals Review of the Rough Drafts of the City
Ordinances being proposed to adopt the City's New Building Codes.

Dear Mayor and Council Members;

The Building Code Board of Appeals was asked by the Chief Building Official on December 11, 2012, to review the aforementioned ordinances that will amend and adopt the 2009 edition of the International Residential Code as our city's new building code for One- And Two-Family Dwellings, the 2009 edition of the International Building Code as our city's new commercial building code and the 2009 edition of the International Energy Conservation Code as our city's new energy conservation code.

Upon careful review of the aforementioned proposed ordinances and after our public meeting held on April 3, 2013, to further discuss these ordinances with each other and the Chief Building Official, the Building Code Board of Appeals recommends adoption of all three (3) of these proposed ordinances as written.

Thank you for your consideration of this recommendation.

Sincerely,

Building Code Board of Appeals
Bernard Colton, Chairperson

C A R Y L K I N S E Y F O X, AIA, LEED BD+C
4 6 1 P I N E B E N D D R I V E
W I L D W O O D M O 6 3 0 0 5
ckinseyfox@gmail.com
C. 310.428.1357

March 5, 2013

EXHIBIT B

Steve Unser
City of Creve Coeur
300 N. New Ballas Road
Creve Coeur, MO 63141

RE: Adoption of the 2009 I-Codes and International Energy Conservation Code

Dear Steve,

As an Architect, registered in Missouri, New York and California, I serve on the national committee of the AIA, American Institute of Architects, Codes and Standards Committee where I was the 2012 Chair. I am writing in support of Creve Coeur's adoption of the 2009 I-Codes including the International Energy Conservation Code (IECC). These are the codes that have been adopted by the City and County of St. Louis and represent the standard of construction expected by the building industry in the St. Louis Metropolitan area.

The I-Codes are the only set of building codes in the US and represent the best practices as decided by a consensus of the building industry. They are written with public safety in mind and are fully coordinated to address all building conditions. Editing or modifying specific sections of these codes could create serious conflicts or gaps in overall building safety.

For example, when the State of Missouri eliminated the requirement for fire sprinklers, they did not take into consideration that fire separations between occupants was removed from the code. The expectation was that entire buildings would be sprinkled eliminating the need for fire separations. This throws into confusion who becomes liable when fire spreads throughout a building, the builder who talked the owner out of installing the sprinklers or the designer who designed to the building code. For this reason, it is the position of the American Institute of Architects that the building codes should be adopted **without modifications**.

I am also a resident of Wildwood and attend St. Timothy's Episcopal Church at 808 N. Mason Road. Creve Coeur has a great reputation of being a conscientious community with high quality residential construction. For these reasons, I strongly support the adoption of the 2009 IECC.

The Energy Code requires minimum acceptable levels of construction including good insulation, windows and doors, as well as caulking and weatherstripping the gaps in construction. These do not add significantly to the cost of construction but do

contribute to the overall comfort of living in a home. The code also requires programable thermostats as well as efficient lighting, heating and air conditioning systems which lower operational expenses. For these reasons, I consider the IECC to be a type of consumer protection, ensuring that homeowners get a good quality home and lower energy bills for the long term.

Again, I point out that St. Louis City and County have been using the 2009 I-Codes since the end of 2011 and Missouri is one of the few states that does not have a statewide building code. Please take swift action to adopt these newer I-Codes.

Illinois and the Kansas City metro area have adopted the 2012 I-Codes including the Energy Code. Many other municipalities in our region have also adopted the 2009 IECC including, Clayton, Webster Groves, Florissant, Hazelwood, Lake St. Louis, O'Fallon, St. Charles, Troy and Wentzville.

In the end, homeowners are the biggest winners in the adoption of energy codes and for that reason, the American Institute of Architects are firmly in support of Creve Coeur Adopting the 2009 IECC.

Please feel free to contact me with any specific questions you need answered.

Caryl Kinsey Fox, AIA, LEED AP, BD&C

Subject: FW: Proposed New Building Codes (Creve Coeur - Olivette Chamber of Commerce)

EXHIBIT C

From: Unser, Steve
Sent: Thursday, April 11, 2013 5:51 PM
To: Perkins, Mark C.; 'skling@jenkinskling.com'
Cc: Katie Anderbery
Subject: RE: Proposed New Building Codes (Creve Coeur - Olivette Chamber of Commerce)

Mr. Kling;

Please see the building division's responses to your comments in red.

Please let me know if you have any questions.

Thank you.

Steve Unser, Chief Building Official
Building Division / City of Creve Coeur
300 N. New Ballas Rd, Creve Coeur, MO 63141
314.872.2513 Direct / 314.872.2505 Fax
sunser@ci.creve-coeur.mo.us / www.creve-coeur.org

From: Perkins, Mark C.
Sent: Wednesday, April 03, 2013 4:55 PM
To: 'skling@jenkinskling.com'
Cc: Unser, Steve; Katie Anderbery
Subject: RE: Proposed New Building Codes

Steve,

Thank you for your comments, our staff will provide a response. Thanks again for taking the time to review the proposed codes.

Sincerely,

Mark Perkins
City Administrator, ICMA-CM
City of Creve Coeur
300 N. New Ballas Road
Creve Coeur, MO 63141
314.872.2511
www.creve-coeur.org

From: Steve Kling [<mailto:skling@jenkinskling.com>]
Sent: Wednesday, March 27, 2013 2:12 PM
To: Perkins, Mark C.

Cc: Unser, Steve; Katie Anderbery
Subject: RE: Proposed New Building Codes

I have not received any further comments. The below comments are the ones we initially focused and the Chamber collectively thought needed some discussion, PLUS, as I mentioned at the board meeting, some clarification on the changes as to grandfathering and application issues for many of the potentially more costly changes. For example, if a landlord improves one tenant space on a floor, do the requirements kick in for that space, the whole floor or the whole building.

Building Division's Response:

When the city issues a permit for tenant improvements the building code requires that the proposed tenant improvements within the space meet present building code requirements. Examples would include seismic bracing of new ceiling grid, door hardware, travel distances to egress doors, number of egress doors required from the tenant space, emergency egress lights and exit signs, accessible reception deck, etc.

Chapter 5 - I would seek clarification from the city on Chapter 5, the Address Identification number. New and existing buildings will be provided with address numbers and letters, which must be installed on a contrasting background visible from the street. My only concern is that business owners may not want these numbers on their building if they already have an address sign, or if the letters are not of a high quality or detract from the overall look and design of a building. I would consider having the Chamber ask for sample letters to see how they will look.

Building Division's Response:

Section 501.2 Address Identification. This section was added to be consistent with the fire districts' requirements. This section regulates minimum height and width of address numerals and wants address numerals to be clearly visible to emergency response vehicles. There has always been flexibility given to building owners in terms of design, colors, etc.

Chapter 9 - I think it is important for building owners to be aware of the new rules on sprinkler systems in Chapter 9, but I cannot answer on whether there will be concerns about the required installation of sprinkler systems that is described for buildings more than 3 stories. This decision may likely be based on whether or not a significant number of Chamber members would be required to install sprinkler systems, which could be expensive.

Building Division's Response:

For clarification purposes, this requirement would only apply to new buildings more than 3 stories in height. Existing, nonsprinklered buildings more than 3 stories in height would be unaffected. This section has been in the city's building code since 1986. Most new multi-story buildings are equipped with automatic fire sprinklers because of other 'trade-offs' the building code gives for buildings that are fully sprinklered.

For Chapter 10, I think the Chamber should notify their members of the changes relating to exit signs, guards, retaining walls and dead ends in aisles. If members are forced to make these changes, it could be costly.

Building Division Response:

These requirements would apply only to new construction or new tenant improvements. The building division would be happy to meet with the Chamber to discuss any specific concerns there may be.

Chapter 29 – with the changes to the requirements to public access to toilets, this may require that some Chamber members change the route to public toilets or install new public toilets altogether. This seems like a burdensome requirement, especially if it effective when enacted.

Building Division Response:

The city contracts with St. Louis County to enforce the city's plumbing code per Ordinance No. 5214. The building division's

understanding is that the county applies these requirements to “new buildings, additions to existing buildings or changes of occupancy or use in an existing building which results in an increased occupant load.” An example of a change in use that results in an increased occupant load would be when a mercantile use is converted to a restaurant. During plan review for the types of projects noted above, the building division works with the county to proactively communicate to the owner and their architect when these requirements get ‘triggered’ by the proposed scope of work.

Stephen L. Kling, Jr., Esq.

JENKINS & KLING, P.C.
150 North Meramec Avenue
Suite 400
Clayton, Missouri 63105
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(314) 721-5525 (fax)



www.jenkinsklings.com

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From: Perkins, Mark C. [<mailto:MPerkins@ci.creve-coeur.mo.us>]
Sent: Wednesday, March 27, 2013 2:03 PM
To: Steve Kling
Cc: Unser, Steve
Subject: RE: Proposed New Building Codes

Steve,

If you have any comments regarding the proposed building codes, please forward as soon as possible as we in the process of wrapping up our review.

Thanks,

Mark Perkins
City Administrator, ICMA-CM
City of Creve Coeur
300 N. New Ballas Road
Creve Coeur, MO 63141
314.872.2511
www.creve-coeur.org

From: Perkins, Mark C.
Sent: Tuesday, February 19, 2013 10:52 AM
To: Steve Kling (skling@jenkinsklings.com)
Cc: Nancy Gray (ngray@ccochamber.com); Unser, Steve
Subject: Proposed New Building Codes

Steve,

Below is a link to our web page regarding the proposed new building codes, including summaries of the changes for each code. If you have any questions, please feel free to contact Steve Unser or myself.

<http://www.creve-coeur.org/index.aspx?NID=660>

Sincerely,

Mark Perkins
City Administrator, ICMA-CM
City of Creve Coeur
300 N. New Ballas Road
Creve Coeur, MO 63141
314.872.2511
www.creve-coeur.org

If you have received this message by mistake, please notify the City of Creve Coeur Information Systems Manager(314-442-2069)and delete this message from your system. All email to and from the City are checked for viruses. Although this e-mail and any attachment(s) are believed to be free of any virus, worm, or other digital illness or defect that might affect any computer system that receives and opens this message, it is the responsibility of the recipient to make sure that it is free from any virus or other defect. The City does not accept, and specifically disclaims, any responsibility or liability for any loss or damage arising from the receipt or use of this message, and any attachment(s) in any way.



EXHIBIT D

City of Creve Coeur Building Division

Summary of Significant Changes To the City's Present Commercial Building Code (2003 IBC) By the City's Proposed Commercial Building Code (2009 IBC)

Section 422- AMBULATORY HEALTH CARE FACILITIES.

This new section provides additional regulations for outpatient surgery centers. Although patients usually are able to walk in and walk out of these facilities the same day with a quick recovery time after surgery, there is a period of time during surgery and recovery when a potentially large number of people will need physical assistance during an emergency that would require evacuation or relocation. As such, the building code now has specific requirements for smoke barriers, automatic fire sprinkler systems, refuge areas and fire alarm systems for outpatient surgery centers.

Section 423 – STORM SHELTERS.

This new section applies to the construction of storm shelters for the purpose of providing safe refuge from storms that produce high winds such as tornadoes or hurricanes. Storm shelters may be constructed as separate detached buildings or constructed as safe rooms within buildings. Although the building code does not mandate that storm shelters be provided, it does regulate their design if they are constructed.

TABLE 508.2.5 – INCIDENTAL ACCESSORY OCCUPANCIES.

The building code no longer requires fire barriers or smoke partitions between file or storage rooms and office spaces unless the floor area of the file or storage rooms exceed 10 % of the building area of the story on which they are located.

Section 703.6 – MARKING AND IDENTIFICATION.

This new section requires that fire walls, fire barriers, smoke barriers and smoke partitions be permanently identified with signs or stenciling. Such signage shall be located above suspended ceilings or other concealed spaces so as to inform tradespeople, maintenance workers and building inspectors that any existing or new pipes, wires, conduits or ducts penetrating these fire resistance rated walls shall be properly protected with through penetration firestop

systems or fire/smoke dampers. This will help prevent heat, smoke or fire from passing through unprotected openings.

Section 903.2.1.2 GROUP A-2.

This section now requires new restaurants/night clubs with an occupant load of 100 or more persons to be equipped with an automatic fire sprinkler system. The present building code requires restaurants/night clubs with an occupant load of 300 or more persons to be equipped with an automatic fire sprinkler system. The threshold has been lowered because numerous fire deaths have occurred in unsprinklered restaurants/nightclubs that had an occupant load greater than 100 persons but less than 300 persons.

Section 903.3.1.2.2 COMBUSTIBLE ATTICS.

This new section is being proposed as a result of the 7/17/2012 Central West End Apartment fire that destroyed this 4-story apartment building. This fire started in the attic and quickly spread throughout this attic because of the “lumberyard” that was located between each line of draftstopping. If this building’s attic had been protected by fire sprinklers the result would have been repairs being made instead of demolishing and rebuilding the entire building. Missouri Baptist College has decided to sprinkler the attics of their Phase 2 dormitory buildings.

Section 1008.1.9.8 ELECTROMAGNETICALLY LOCKED EGRESS DOORS.

This new section allows the use of a locking system that provides for a greater level of security than offered by other methods addressed in the code. In specific occupancies, doors in the means of egress are now permitted to be locked with an electromagnetic lock provided they are equipped with UL listed hardware that incorporates a built-in switch that interrupts the power supply to the electromagnetic lock that unlocks these doors. This type of locking system cannot be used where panic hardware is required by other sections of the code.

Section 1008.1.10 PANIC AND FIRE EXIT HARDWARE.

This section now requires that egress doors serving restaurants, schools and similar uses with an occupant load of 50 or more persons be equipped with panic hardware. The present building code requires panic hardware on egress doors serving an occupant load of 100 or more persons in restaurants, schools and similar uses.

Section 1011.1 WHERE REQUIRED.

This section requires that additional exit signs be provided in buildings or spaces with more complicated means of egress systems. Where travel direction is not clear within an exit, it creates uncertainty and causes delays in evacuations under threatening conditions. The additional exit signs are required to expedite egress from a building during an emergency.

December 7, 2012

City of Creve Coeur
Building Division's

Draft of a City Ordinance Amending and Adopting
the 2009 International Energy Conservation Code
as the City's New Energy Conservation Code

BILL NUMBER 5423
ORDINANCE NUMBER _____

An Ordinance enacting new ARTICLE X, ENERGY CONSERVATION CODE, of Chapter 500 of the City Code of Ordinances of the City of Creve Coeur.

WHEREAS, the city regulates construction practices and standards by means of technical codes to protect the health, safety and welfare of its citizens, and

WHEREAS, such codes must be updated from time to time, and

WHEREAS, at least one copy of the 2009 International Energy Conservation Code, which is hereby to be adopted by reference, has been filed with the City Clerk's office and made available for public use, inspection and examination for a period of at least 90 days prior to adoption of this ordinance pursuant to Section 67.280 RSMo and notice thereof has been publicly posted, and

WHEREAS, a copy of this ordinance has been available for public inspection in the City Clerk's office and it has been read two times by the City Council as required by the City's Charter prior to adoption.

NOW, THEREFORE, be it ordained by the City Council of the City of Creve Coeur, Missouri as follows:

SECTION 1: ARTICLE X, ENERGY CONSERVATION CODE, of Chapter 500 of the City Code of Ordinances is hereby enacted to be known as "THE ENERGY CONSERVATION CODE". Said ARTICLE to read as follows:

ARTICLE X. ENERGY CONSERVATION CODE

SECTION 500.1010. ADOPTED: A certain document, one copy of which are on file in the office of the City Clerk; such copy being marked and designated as the "INTERNATIONAL ENERGY CONSERVATION CODE, 2009", FIFTH EDITION, is hereby adopted as the Energy Conservation Code of the City of Creve Coeur, Missouri, for the regulation of the design and construction of residential and commercial buildings for the effective use of energy as herein provided; and each and all of the regulations, provisions, penalties, conditions, and terms of the INTERNATIONAL ENERGY CONSERVATION CODE, 2009, FIFTH EDITION, are hereby referred to, adopted and made a part thereof, as if fully set out in this Article, with the additions, insertions, deletions, and changes, prescribed in this Article.

SECTION 500.1020. JURISDICTIONAL TITLES: Throughout the INTERNATIONAL ENERGY CONSERVATION CODE, 2009, FIFTH EDITION, wherever the terms "name of jurisdiction" or "local jurisdiction" appear, it shall be deemed to mean "City of Creve Coeur, Missouri". Likewise, wherever the terms "department of building inspection" or "department of building safety" appear, it shall be deemed to mean "Creve Coeur Building Division". Wherever

the term “code” appears, it shall mean the INTERNATIONAL ENERGY CONSERVATION CODE, 2009, FIFTH EDITION as amended in this Article.

SECTION 500.1030. AMENDMENTS TO CHAPTER 1 OF THE INTERNATIONAL ENERGY CONSERVATION CODE:

– CHAPTER 1 – Administration:

Chapter 1 of the International Energy Conservation Code, 2009, Fifth Edition, is amended as set forth herein. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection or clause number in the code is hereby enacted and added thereto.

109.1 General. In order to hear and decide appeals of orders, decisions or determinations made by the building official relative to the application and interpretation of this code, there is and shall remain a Building Code Board of Appeals. The board shall adopt rules of procedure for conducting its business.

109.2 Limitations on authority. Any person shall have a right to appeal a decision of the building official to the Building Code Board of Appeals. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equivalent form of construction shall be allowed to be used. The board shall have no authority to waive requirements of this code.

109.3 Time limitation and filing procedure. All appeals shall be filed in writing with the building official. A written appeal may not be filed more than thirty days after the affected individuals are notified of the building official's decision.

109.3.1 Filing fee. An application for appeal shall not be filed without full payment of the filing fee of \$150.00. Said filing fee shall be refunded to the applicant if the Board reverses the decision of the building official.

109.4 Membership of board. The Building Code Board of Appeals shall consist of five regular members, who shall be residents of the City of Creve Coeur, appointed pursuant to Section 4.4(i) of the City Charter for three-year staggered terms. To the extent possible, based on applications submitted to the City, members of the Building Code Board of Appeals should be representative of the following professions or disciplines: registered architects, builder or superintendent of building construction with ten years of experience, structural engineer, code enforcement professional, mechanical engineer, electrical engineer, civil engineer, fire protection engineer, mechanical contractor, electrical contractor, plumbing contractor, fire protection contractor, or other disciplines associated with the building trades or design professions.

109.4.2 Chair. The Chair of the Building Code Board of Appeals shall be elected annually by the members of the Building Code Board of Appeals.

109.4.3 Secretary. The City Administrator shall designate a qualified clerk to serve as secretary to the board. The secretary shall file a detailed record of all proceedings in the office of the city administrator.

109.4.4 Compensation of members. Members of the Building Code Board of Appeals shall not be compensated for service but shall be reimbursed for actual expenses pursuant to established City policy.

109.4.5 Code of Ethics for members. All members shall be subject to the city's Code of Ethics.

109.5 Notice of meeting. The Building Code Board of Appeals shall meet upon notice from the chair, within 5 calendar days of the filing of a written appeal with the building official, or at stated periodic meetings.

109.6 Open hearing. All hearings before the Building Code Board of Appeals shall be open to the public. Proper public notice shall be given. The appellant, the appellant's representative, the code official, and any person whose interests are affected shall be given the opportunity to be heard.

109.6.1 Procedure. The Board shall adopt and make available to the public through the secretary procedures under which a hearing will be conducted. The procedures shall not require compliance with strict rules of evidence but shall mandate that only relevant information be received.

109.7 Quorum. Three members of the Building Code Board of Appeals shall constitute a quorum for the purpose of hearing appeals.

109.9 Board decision. The Building Code Board of Appeals shall only reverse or modify the decision of the code official by a majority vote of the quorum present and voting. Otherwise, the decision shall be deemed to be upheld.

109.9.1 Notification of decision. The secretary of the board shall notify the appellant and the building official of the decision in writing.

109.9.2 Administration. The building official shall take immediate action in accordance with the decision of the board.

109.10 Court review: Any aggrieved person, whether or not a previous party of the appeal, shall have the right to apply to the appropriate court for a writ of certiorari to correct errors of law. Application for review shall be made in the manner and time required by law following the filing of the decision of the Building Code Board of Appeals in the office of the City Administrator.

These amendments were made to Sections 109.1 through 109.10 to reflect the city's present requirements.

SECTION 500.1040. AMENDMENTS TO CHAPTER 2 OF THE INTERNATIONAL ENERGY CONSERVATION CODE:

– CHAPTER 2 – Definitions:

Chapter 2 of the International Energy Conservation Code, 2009, Fifth Edition, is adopted without modification.

SECTION 500.1050 AMENDMENTS TO CHAPTER 3 OF THE INTERNATIONAL ENERGY CONSERVATION CODE:

– CHAPTER 3 – GENERAL REQUIREMENTS:

Chapter 3 of the International Energy Conservation Code, 2009, Fifth Edition, is adopted without modification.

SECTION 500.1060 AMENDMENTS TO CHAPTER 4 OF THE INTERNATIONAL ENERGY CONSERVATION CODE:

– CHAPTER 4 – RESIDENTIAL ENERGY EFFICIENCY:

Chapter 4 of the International Energy Conservation Code, 2009, Fifth Edition, is adopted without modification.

SECTION 500.1070 AMENDMENTS TO CHAPTER 5 OF THE INTERNATIONAL ENERGY CONSERVATION CODE:

– CHAPTER 5 – COMMERCIAL ENERGY EFFICIENCY:

Chapter 5 of the International Energy Conservation Code, 2009, Fifth Edition, is adopted without modification.

SECTION 500.1080 AMENDMENTS TO CHAPTER 6 OF THE INTERNATIONAL ENERGY CONSERVATION CODE:

– CHAPTER 6 – REFERENCED STANDARDS:

Chapter 6 of the International Energy Conservation Code, 2009, Fifth Edition, is adopted without modification.

SECTION 2: SAVING CLAUSE: Nothing in this ordinance or in the Energy Conservation Code hereby adopted, shall be construed to affect any suit or proceeding currently pending in any court as of the effective date hereof, or any rights previously acquired or liability previously incurred, or any cause or causes of action existing under any ordinance hereby repealed, as cited herein.

SECTION 3: SEVERABILITY: If any section, subsection, provision, sentence, clause, or phrase of this ordinance or of the ICC International Energy Conservation Code, Fifth Edition, 2009, is, for any reasons held to be unconstitutional or invalid, such decision shall not affect the validity of the remaining portions of this ordinance or of said code, and the City of Creve Coeur City Council hereby declares that it would have passed the same, even though such portion so held to be unconstitutional had not been included therein.

SECTION 4: EFFECTIVE DATE: This ordinance shall become effective **August 1, 2013**, pursuant to section 3.11(g) of the City Charter.

Adopted by the City Council this ___ day of _____, 2013.

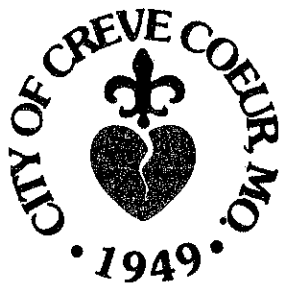
ROBERT HOFFMAN
PRESIDENT OF THE CITY COUNCIL

Approved this ___ day of _____, 2013.

BARRY GLANTZ
MAYOR

ATTEST:

DEBORAH RYAN, MPCC
CITY CLERK



city
of

CREVE COEUR

300 North New Ballas Road • Creve Coeur, Missouri 63141
(314) 432-6000 • Fax (314) 872-2539 • Relay MO 1-800-735-2966
www.creve-coeur.org

EXHIBIT A

April 15, 2011

Mayor and Council Members
Creve Coeur Government Center
300 N. New Ballas Road.
Creve Coeur, MO 63141

RE: Building Code Board of Appeals Review of the Rough Drafts of the City
Ordinances being proposed to adopt the City's New Building Codes.

Dear Mayor and Council Members;

The Building Code Board of Appeals was asked by the Chief Building Official on December 11, 2012, to review the aforementioned ordinances that will amend and adopt the 2009 edition of the International Residential Code as our city's new building code for One- And Two-Family Dwellings, the 2009 edition of the International Building Code as our city's new commercial building code and the 2009 edition of the International Energy Conservation Code as our city's new energy conservation code.

Upon careful review of the aforementioned proposed ordinances and after our public meeting held on April 3, 2013, to further discuss these ordinances with each other and the Chief Building Official, the Building Code Board of Appeals recommends adoption of all three (3) of these proposed ordinances as written.

Thank you for your consideration of this recommendation.

Sincerely,

Building Code Board of Appeals
Bernard Colton, Chairperson

C A R Y L K I N S E Y F O X, A I A, L E E D B D + C c k i n s e y f o x @ g m a i l . c o m
4 6 1 P I N E B E N D D R I V E
W I L D W O O D M O 6 3 0 0 5 C . 3 1 0 . 4 2 8 . 1 3 5 7

March 5, 2013

EXHIBIT B

Steve Unser
City of Creve Coeur
300 N. New Ballas Road
Creve Coeur, MO 63141

RE: Adoption of the 2009 I-Codes and International Energy Conservation Code

Dear Steve,

As an Architect, registered in Missouri, New York and California, I serve on the national committee of the AIA, American Institute of Architects, Codes and Standards Committee where I was the 2012 Chair. I am writing in support of Creve Coeur's adoption of the 2009 I-Codes including the International Energy Conservation Code (IECC). These are the codes that have been adopted by the City and County of St. Louis and represent the standard of construction expected by the building industry in the St. Louis Metropolitan area.

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For example, when the State of Missouri eliminated the requirement for fire sprinklers, they did not take into consideration that fire separations between occupants was removed from the code. The expectation was that entire buildings would be sprinkled eliminating the need for fire separations. This throws into confusion who becomes liable when fire spreads throughout a building, the builder who talked the owner out of installing the sprinklers or the designer who designed to the building code. For this reason, it is the position of the American Institute of Architects that the building codes should be adopted **without modifications**.

I am also a resident of Wildwood and attend St. Timothy's Episcopal Church at 808 N. Mason Road. Creve Coeur has a great reputation of being a conscientious community with high quality residential construction. For these reasons, I strongly support the adoption of the 2009 IECC.

The Energy Code requires minimum acceptable levels of construction including good insulation, windows and doors, as well as caulking and weatherstripping the gaps in construction. These do not add significantly to the cost of construction but do

contribute to the overall comfort of living in a home. The code also requires programable thermostats as well as efficient lighting, heating and air conditioning systems which lower operational expenses. For these reasons, I consider the IECC to be a type of consumer protection, ensuring that homeowners get a good quality home and lower energy bills for the long term.

Again, I point out that St. Louis City and County have been using the 2009 I-Codes since the end of 2011 and Missouri is one of the few states that does not have a statewide building code. Please take swift action to adopt these newer I-Codes.

Illinois and the Kansas City metro area have adopted the 2012 I-Codes including the Energy Code. Many other municipalities in our region have also adopted the 2009 IECC including, Clayton, Webster Groves, Florissant, Hazelwood, Lake St. Louis, O'Fallon, St. Charles, Troy and Wentzville.

In the end, homeowners are the biggest winners in the adoption of energy codes and for that reason, the American Institute of Architects are firmly in support of Creve Coeur Adopting the 2009 IECC.

Please feel free to contact me with any specific questions you need answered.

Caryl Kinsey Fox, AIA, LEED AP, BD&C

EXHIBIT C

February 20, 2013

Honorable Mayor and City Council
300 N New Ballas Rd
Creve Coeur, MO 63141

Re. International Energy Conservation Code

Dear Mayor and Members of the City Council:

On February 20, 2013, the Climate Action Task Force met and discussed the proposed International Energy Conservation Code. The Task Force voted with a unanimous recommendation to the City Council that the IECC be adopted as proposed by City staff. The Task Force has met multiple times to discuss the IECC and advises that its adoption will mark a key step toward enhancing the energy efficiency of new construction in the city and reducing the city's greenhouse gas emissions.

Sincerely,



Sue Baseley
Climate Action Task Force Vice Chair

City of Creve Coeur / Building Division **EXHIBIT D**
COMPARISON TABLE
BETWEEN
PRESENT ENERGY CONSERVATION CODE REQUIREMENTS
AND
2009 INTERNATIONAL ENERGY CONSERVATION CODE REQUIREMENTS.

NOTE: The Building Division will recommend that the 2009 International Energy Conservation Code and Chapter 11 – Energy Efficiency- of the 2009 International Residential Code be adopted as written.

Building Element	Current Requirement	2009 IRC, Chapter 11 Or 2009 IECC, Chapter 4	What St. Louis County Did
Roof R Value	30	38	30
Wall R Value	13	13	13
Floor R Value	19	19	19
Crawl Space R Value	5	10	5
Exposed Duct R Value	5	8	4
Fenestration U- Factor	0.40	0.35	0.40
Programmable Thermostats	Not Required	Required	Required
High Efficiency Light Bulbs	Not Required	Required for 50% of permanent light fixtures	Required for 50% of permanent light fixtures
Thermal Envelope Sealing/Testing	Not Required	Required	Amended 'sealing' Deleted 'testing'
Permanent Energy Conservation Certificate Posted	Not Required	Required	Deleted
Duct Sealing / Testing	Sealing Required	Sealing and Testing Required	Sealing Required. Testing Deleted.
Wood-Burning Fireplaces	Can be open to a room.	Must have gasketed doors and outside air	Deleted
Thermal Cover for Heated Swimming Pools	Not Required	Required	Required
Insulating & Weatherstripping Attic Access Panels	Not Required	Required	Insulating Required Weatherstripping Deleted



FOR NEW HOMES IN
MISSOURI
CLIMATE ZONE 4

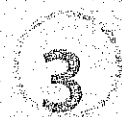
TRUE COST OF THE

2009 INTERNATIONAL ENERGY CONSERVATION CODE

Homes are the biggest investment we make—and everyone deserves a home that meets national minimum energy efficiency standards. While it's true that homeowners can always improve the efficiency of their homes, it is far more cost-effective to upgrade building components during construction, putting in better windows or swapping out one grade of insulation for a better one. Here's what buyers get with the 2009 IECC:



Payback Period
14 months



3-year Profit
\$476.75

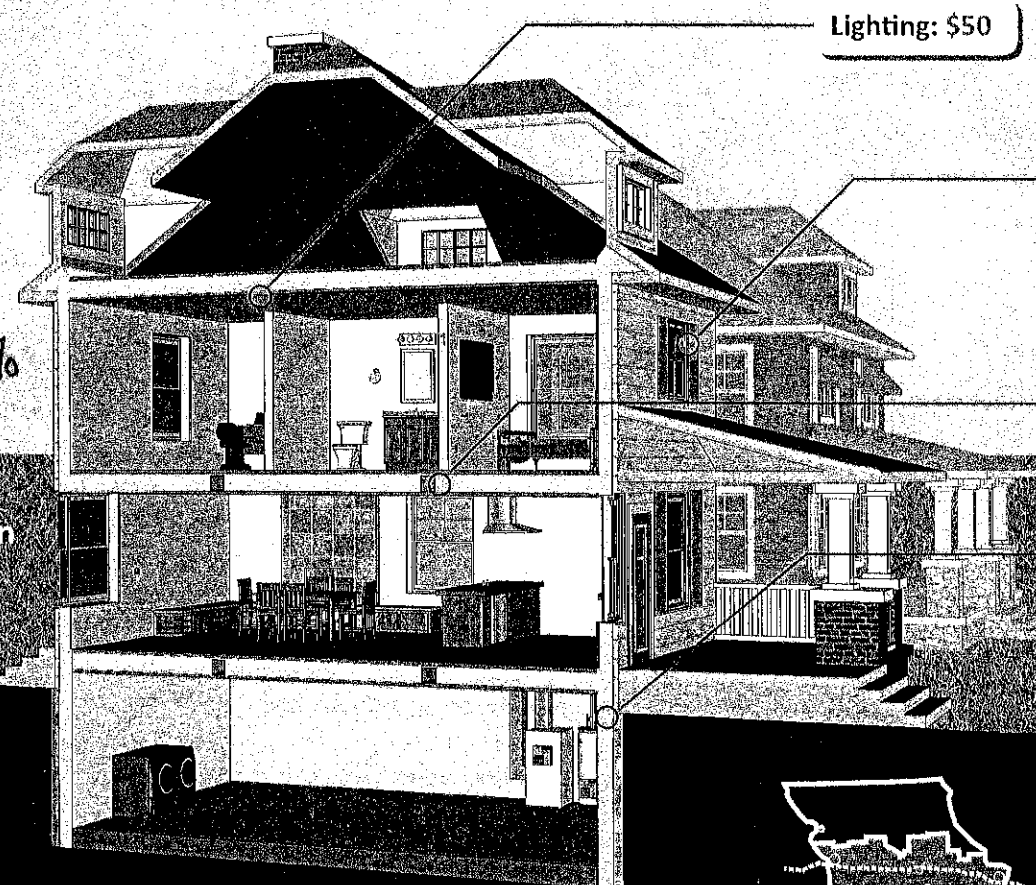


Annual Energy Reduction
18%



5-year Profit
\$992.69

18%



Lighting: \$50

Window Upgrades
CLIMATE ZONE 4: \$735

Duct Sealing and
Testing: \$350

Insulation Upgrades
CLIMATE ZONE 4: \$383



Climate Zone 4 □□□□□□
u-factor: .5 → .35 WINDOW
r-value: 30 → 38 INSULATION
CEILING



MISSOURI
DEPARTMENT OF
NATURAL RESOURCES



For the full Incremental Cost Analysis study, please visit bcap-ocean.org

TRUE COST OF THE



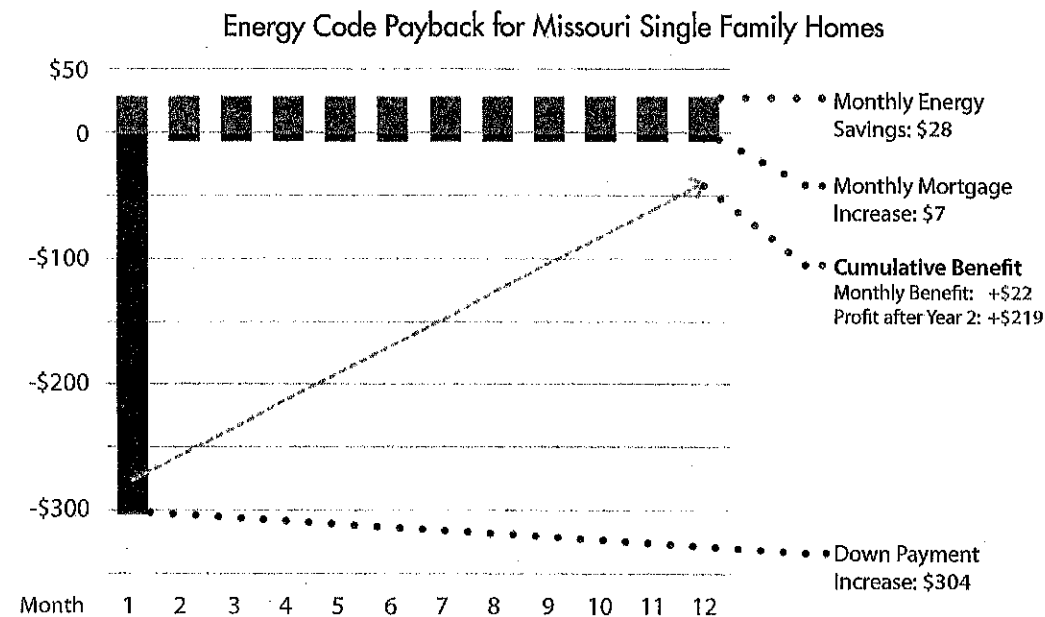
FOR NEW HOMES IN
MISSOURI
CLIMATE ZONE 4

2009 INTERNATIONAL ENERGY CONSERVATION CODE

One of the major barriers to energy code adoption across the country is the concern that new codes will add to the purchase price and potential buyers will not be able to afford the homes they want. In Missouri, upgrading homes to the 2009 International Energy Conservation Code will actually reduce out-of-pocket expenses for homeowners – paying off their initial investment in a matter of months.

For the average new home built in IECC climate zone 4*, BCAP estimates the costs of the new code will add no more than a total of \$1,519 in construction costs—an increase of only 0.6%. When this amount is rolled into the average mortgage, real costs to homebuyers will mean a down payment increase of \$303.72 and \$6.56 extra on monthly mortgage bills.

These added mortgage costs will be offset, however, by monthly energy savings of \$28.06, helping homebuyers pay off their initial investment in only fourteen months. After breaking even in month fourteen, the home will return buyers a profit of \$22 per month—for a total return of \$258 every year. This return on investment is graphed below and presented as a balance sheet at right.



Month	Mortgage Increase	Monthly Energy Savings	Cumulative Cost/Benefit
1	\$303.72	\$28.06	-\$275.66
2	\$6.56	\$28.06	-\$254.17
3	\$6.56	\$28.06	-\$232.67
4	\$6.56	\$28.06	-\$211.17
5	\$6.56	\$28.06	-\$189.67
6	\$6.56	\$28.06	-\$168.18
7	\$6.56	\$28.06	-\$146.68
8	\$6.56	\$28.06	-\$125.18
9	\$6.56	\$28.06	-\$103.68
10	\$6.56	\$28.06	-\$82.19
11	\$6.56	\$28.06	-\$60.69
12	\$6.56	\$28.06	-\$39.19
13	\$6.56	\$28.06	-\$17.69
14	\$6.56	\$28.06	\$3.81 Break Even
15	\$6.56	\$28.06	\$25.30
16	\$6.56	\$28.06	\$46.80
17	\$6.56	\$28.06	\$68.30
18	\$6.56	\$28.06	\$89.80

This model assumes an average sale price of \$267,451 for a 2,400 square foot home. The mortgage is conservatively set at 30 years, with 20% down and the current average nationwide interest rate of 5.05%. With a lower down payment—such as 10% down—consumers will break even on their investment even sooner.

* Missouri's climate zone 4 covers the lower three-fourths of the state, and represents 93% of the state's population

MEMORANDUM

TO: Mark Perkins, City Administrator

CC: Paul Langdon, Director of Community Development

FROM: Steve Unser, Chief Building Official

DATE: May 8, 2013

**RE: Building Division's Draft of a City Ordinance to
Amend and Adopt the 2009 International Energy Conservation
Code as the City's New Energy Conservation Code.**

Please find attached the aforementioned draft for review and comments. Many municipalities within St. Louis County have adopted or are in the process of adopting this energy conservation code as their new energy conservation code. In the interest of code enforcement consistency throughout our region, the building division is recommending that the City of Creve Coeur do the same. This code regulates the design and construction of residential and commercial buildings for the effective use of energy.

The only amendments proposed to this code are in Chapter 1- ADMINISTRATION- Section 109- BOARD OF APPEALS. The reason these amendments are proposed is to make them consistent with the Board of Appeals process outlined in the city's commercial and residential building codes.

On December 11, 2012, this draft of this proposed ordinance was filed with the City Clerk's office and made available for public inspection and examination pursuant to Section 67.280 RSMo. This draft was posted on the city's website for public review on December 11, 2012. Also on December 13, 2012, printed copies of this draft were mailed to members of the city's Building Code Board of Appeals, the Associated General Contractors of St. Louis and the Creve Coeur-Olivette Chamber of Commerce. Printed copies were also made available at the building division's public counter.

See attached Exhibit A for the Building Code Board of Appeals recommendation to adopt this code as proposed.

See attached Exhibit B for Caryl Kinsey Fox's recommendation to adopt this code as proposed.

See attached Exhibit C for the Climate Action Task Force's recommendation to adopt this code as proposed.

The city requested that any comments from all interested parties regarding this draft be submitted to the building division for review within ninety (90) days of the date of it being made public. There were no public comments submitted to the building division regarding this code.

Significant Energy Code Changes

Every 3 years a new energy conservation code is published by the International Code Council. The International Energy Conservation Code is kept up to date through the review of proposed code changes submitted by code enforcement officials, industry representatives, design professionals and other interested parties. Proposed code changes are carefully considered through an open code development process in which all interested and affected parties may participate. A consensus is reached for each proposed code change by a majority vote of members at the ICC Code Change Hearings which are held twice a year (spring/fall) at various cities.

The intent of the city has been to adopt the energy conservation code as written through this model code development process and to ensure that any amendments proposed by the building division will not be less restrictive than the minimum regulations contained in the published International Energy Conservation Code.

While every code change cannot be listed here, please ***see attached Exhibit D for a summary of significant changes that will be made to the city's present energy conservation code (2003 IECC) by the city's adoption of the proposed energy conservation code (2009 IECC).***

Please see attached Exhibit E for the 'true cost' of the 2009 International Energy Conservation Code. These increased construction costs (\$1,519) are based on a 2,400 square foot home. This works out to an increased cost of \$0.63 per square foot. Another increased cost not included in this exhibit is approximately \$300 for the Blower Door Test required to test the air tightness of the building envelope. This would increase the average increased construction cost of a new home to \$1,819 or \$0.75 per square foot. The average size of a new home in Creve Coeur is approximately 3,000 – 4,000 square feet. This works out to be an increased cost of \$2,250 - \$3,000 for a new Creve Coeur home to be built in compliance with the 2009 IECC. This same exhibit points out that the monthly energy savings realized by complying with the 2009 IECC would be \$28.06 for a

2,400 square foot new home. The monthly energy savings for a new home that is 3,000 – 4,000 square feet in size would be approximately \$33- \$44.

Stronger energy – efficient construction helps to reduce pollution by reducing energy consumption.

December 7, 2012 (amended 7/2/13)

City of Creve Coeur
Building Division's Draft of a City Ordinance Amending and Adopting
the 2009 International Residential Code
as the City's New One-and Two-Family Dwellings Building Code

BILL NUMBER 5424
ORDINANCE NUMBER _____

An Ordinance repealing ARTICLE VI, RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS, of Chapter 500 of the City Code of Ordinances of the City of Creve Coeur, and enacting in lieu thereof a new ARTICLE VI, RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS.

WHEREAS, the city regulates construction practices and standards by means of technical codes to protect the health, safety and welfare of its citizens, and

WHEREAS, such codes must be updated from time to time, and

WHEREAS, at least one copy of the 2009 International Residential Code for One- and Two-Family Dwellings, which is hereby to be adopted by reference, has been filed with the City Clerk's office and made available for public use, inspection and examination for a period of at least 90 days prior to adoption of this ordinance pursuant to Section 67.280 RSMo and notice thereof has been publicly posted, and

WHEREAS, a copy of this ordinance has been available for public inspection in the City Clerk's office and it has been read two times by the City Council as required by the City's Charter prior to adoption.

NOW, THEREFORE, be it ordained by the City Council of the City of Creve Coeur, Missouri as follows:

SECTION 1: ARTICLE VI, RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS, of Chapter 500 of the City Code of Ordinances is hereby repealed and a new ARTICLE VI of Chapter 500 is hereby enacted to be known as "THE RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS". Said ARTICLE to read as follows:

ARTICLE VI. RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS

SECTION 500.420 ADOPTED: A certain document, one copy of which is on file in the office of the City Clerk, such copy being marked and designated as the "INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS, 2009", FOURTH EDITION, including "APPENDIX A (IFGC) – SIZING AND CAPACITIES OF GAS PIPING"; "APPENDIX B (IFGC) – SIZING OF VENTING SYSTEMS SERVING APPLIANCES EQUIPPED WITH DRAFT HOODS, CATEGORY I APPLIANCES, AND APPLIANCES LISTED FOR USE AND TYPE B VENTS"; APPENDIX C (IFGC) – EXIT TERMINALS OF MECHANICAL DRAFT AND DIRECT-VENT VENTING SYSTEMS"; "APPENDIX G – SWIMMING POOLS, SPAS AND HOT TUBS"; AND "APPENDIX K – SOUND TRANSMISSION", as published by the International Code Council, Inc., is hereby adopted as the Residential Code of the City of Creve Coeur, Missouri, for regulating and governing the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, removal and demolition of detached one- and two-family dwellings and townhouses not more than three stories above grade plane in height with a separate means of egress and their accessory structures as herein provided; and each and all of the regulations, provisions, penalties, conditions, and terms of the INTERNATIONAL

RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS, 2009, FOURTH EDITION, are hereby referred to, adopted and made a part hereof, as if fully set out in this Article, with the additions, insertions, deletions, and changes, prescribed in this Article.

SECTION 500.430 JURISDICTIONAL TITLES: Throughout the INTERNATIONAL RESIDENTIAL CODE ONE- AND TWO-FAMILY DWELLINGS, 2009, FOURTH EDITION, wherever the terms “name of jurisdiction” or “local jurisdiction” appear, it shall be deemed to mean “City of Creve Coeur, Missouri”. Likewise, wherever the terms “department of building inspection” or “department of building safety” appear, it shall be deemed to mean “Creve Coeur Building Division”. Wherever the term “code” appears, it shall mean the INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS, 2009, FOURTH EDITION as hereby amended.

SECTION 500.440 ADDITIONS, INSERTIONS AND CHANGES: The following subsections are hereby revised as follows:

Section R101.1 Insert: “City of Creve Coeur”.

SECTION 500.450 AMENDMENTS TO CHAPTER 1 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

– CHAPTER 1 – ADMINISTRATION:

Chapter 1 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth herein. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection or clause number in the code is hereby enacted and added thereto.

R101.2 Scope. Add the following: Notwithstanding the provisions of this code, the maximum number of stories for any structure shall be as provided in the City Zoning Code.

Exception: Deleted in its entirety.

This change was made to be consistent with the city zoning code. The IRC, as written, would allow one- and two-family dwellings to be three stories in height. The city zoning code limits these type structures to 2 stories in height. The exception was deleted because the “live/work” concept would allow up to 50 percent of the area of a one or two family dwelling or townhome to be used for business purposes and would allow up to 5 “nonresidential employees” to work there. The city’s zoning code allows only 10 percent of a home to be used as a home occupation and only the home’s owner and family members who live in the home can be employees.

R102.8 Matters not provided for. Any requirements that are essential for the structural, fire or sanitary safety of an existing or proposed building or structure, or for the safety of the occupants thereof, which are not specifically provided for by this code, shall be determined by the building official.

This amendment made to add a new section to this code so as to be consistent with the city’s present building code.

R104.6.1 Interference with building official: No person shall hinder, obstruct, resist, fail to provide entry at reasonable times, or otherwise interfere with the code official in the performance of his official duties.

This amendment made to add a new section to this code so as to be consistent with the city’s present building code.

R104.6.1.1 Disasters. In the event of a disaster such as a windstorm, tornado, flood, fire, earthquake, bomb blast or explosion, the building official is authorized to deputize Missouri Structural Assessment and Visual Evaluation (SAVE) Volunteer Inspectors certified by the Missouri State Emergency Management Agency (SEMA) to conduct emergency post-disaster safety evaluations of buildings.

This amendment made to add a new section to this code that allows the building official to expand the city's inspection capabilities after a disaster. This is consistent with St. Louis County's building code adopting ordinance.

R104.12 Rule-making authority. The building official shall have authority, as necessary in the interest of public health, safety and general welfare, to adopt and promulgate rules and regulations to interpret and implement the provisions of this code, to secure the intent thereof and to designate requirements applicable because of local climatic or other conditions. Such rules shall not have the effect of waiving structural or fire performance requirements specifically provided for in this code or of violating accepted engineering practice involving public safety.

This amendment made to add a new section to this code so as to be consistent with the city's present building code.

R105.2 Work exempt from permit. Exemptions from permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction. Permits shall not be required for the following:

Building:

1. Retaining walls which are not over 2 feet (610mm) in height measured from the top of the proposed finished grade at the non-retained side of the wall to the top of the wall, unless supporting a surcharge or impounding Class I, II or III-A liquids.
2. Painting, tiling, carpeting and similar finish work.
3. Prefabricated swimming pools accessory to a Group R-3 occupancy which have a maximum water depth of 24 inches (610mm), a maximum water volume of 5,000 gallons (18925L) and are installed entirely above ground.

Electrical:

Any work exempted from permits by the Electrical Code.

Gas:

Any work exempted from permits by the Mechanical Code.

Mechanical:

Any work exempted from permits by the Mechanical Code.

Plumbing:

Any work exempted from permits by the Plumbing Code.

This amendment made to clarify when permits are not required.

R105.5 Expiration. Every permit issued shall become invalid unless the work on the site authorized by such permit is commenced within 90 days after its issuance, or if the work authorized on the site by such permit is suspended or abandoned for a period of 90 days after the time the work is commenced, or after one year from the date of issuance if the permit has not otherwise expired. The building official is authorized to grant, in writing, one or more extensions of time, for periods not to exceed 30 days each. An extension shall be requested in writing and justifiable cause must be demonstrated.

This amendment made to reflect the city's present requirements.

R105.5.1 Expiration of demolition permits. Demolition work shall be completed within thirty (30) days after the date of issuance of the demolition permit. The building official may, after receiving a written request from the applicant, grant one or more thirty day extensions to this permit if the applicant presents evidence of justifiable cause.

This amendment made to reflect the city's present requirements.

R105.9 Placement of permit and inspection placard. The building permit or copy shall be kept on the site of the work until the completion of the project. An inspection placard shall be posted on the job site in accordance with Section R109.1.1 of this code.

R105.10 Compliance with permit. All work shall conform to the approved application and the approved construction documents for which the permit has been issued and any approved amendments to the approved application or the approved construction documents.

R105.11 Compliance with codes and ordinances. Neither the granting of a permit, nor the approval of the construction documents, nor inspections made by the building official, or his authorized representative, during the erection of the building, structure, or any alteration or addition thereto, shall in any way relieve the owner or tenant of such building, structure, or property from complying with the requirements of this code, the Creve Coeur Zoning Code or any other governing law or ordinance.

These amendments were made to add new sections 105.9 and 105.11 so as to be consistent with the city's present building code.

R106.1 Construction documents. The application for a permit shall be accompanied by three (3) complete sets of construction documents drawn to scale. The construction documents and site plans shall be prepared and sealed by an architect or an engineer licensed and registered in the State of Missouri to render this service. All construction documents and site plans shall be prepared by the appropriate registered design professional consistent with the professional registration laws of the State of Missouri. All construction documents submitted with an application for a building permit shall bear an original embossed or wet ink seal and an original dated signature of the responsible Missouri registered design professional for each discipline on the front sheet of each discipline within each set of construction documents. In addition, all other sheets of the construction documents, other than the specifications or calculations, shall bear the original embossed or wet ink seal and the original dated signature or the mechanically reproduced seal and dated signature of the responsible Missouri registered design professional. Any addenda or modifications submitted for changes to the construction documents shall also bear the original seal and original dated signature of the responsible Missouri registered design professional. Such changes shall be clearly indicated. The building official may waive these requirements when the scope of the work is of a minor nature and does not involve structural alterations.

This amendment made to reflect the city's present requirements.

R106.1.1.1 Residential Fire Sprinkler Option Form. An application for permit for a one or two family dwelling or residence or townhouse shall be accompanied by the city's Residential Fire Sprinkler Option Form signed by the builder and the purchaser affirming that a fire sprinkler system was offered to the purchaser prior to entering into the purchase contract in conformance with Sections R313.1 and R313.2 of this code. If there is no purchaser at the time of the permit application submittal, then said signed Form shall be submitted as soon as there is a purchaser and prior to the issuance of a certificate of occupancy for the new residence. The provisions of this section shall expire on December 31, 2019.

This amendment made to be consistent with state law.

R106.2.1 All buildings and structures. For all buildings and structures to be constructed, the following additional information shall be shown on the site plan:

- A. The location of all front, side and rear building lines, together with all easements including utilities, drainage and roadways.
- B. The present and proposed finished grades of yards, driveways or walks for drainage in relation to the established first floor elevation including the slope away from the foundation.
- C. The lot number, block (if any), plat or subdivision number, recorded subdivision name, front street and side streets (where applicable) and the north direction arrow.

R106.2.1.1 Private sewage disposal system. The site plan shall indicate the location of a private sewage system when a public sewage system is not available. All technical data and soil data required by the Plumbing Code shall be submitted with the site plan.

R108.2 Schedule of fees. The fees for plan examinations, issuing permits, making inspections, working overtime, issuing certificates of occupancy, establishing escrow funds and other administrative enforcement activities performed by the building department shall be paid in accordance with the fees established in Appendix A, Community Development and Public Works Fee Schedule, of the City Code of Ordinances.

R108.2.1 Building Code Board of Appeals filing fee. A filing fee of \$150.00 shall be paid upon the submittal of the written appeal in order for a quorum of the Building Code Board of Appeals to be notified to convene for the purpose of hearing an appeal of a decision of the building official as set forth in Section R112. The filing fee shall be refunded to the applicant if the Board reverses the decision of the building official.

These amendments were made to Sections R106.2.1 through R108.2.1 to reflect the city's present requirements.

R108.3 Building permit valuations. The applicant for a permit shall provide an estimated construction cost for the project at the time of application. The estimated construction cost shall be for the total value of work, including materials, labor, profit and overhead for all structural, architectural, mechanical, electrical and plumbing work, as it relates to the project for which the permit is to be issued. The estimated construction cost shall not include the cost of land or registered design professional fees. If, in the opinion of the building official, the estimated construction cost is underestimated on the application, the permit shall be denied, unless the applicant can show detailed estimates to meet the approval of the building official. Final building permit valuation shall be set by the building official.

R108.5 Work commencing before permit issuance. Where any work for which a permit is required by this code is started, or proceeded with, prior to obtaining said permit, the normal applicable fee shall be doubled and a penalty fee of up to \$500.00 may be charged by the building official. The payment of said doubled fee or penalty shall not relieve any persons from fully complying with the requirements of this code or from other penalties prescribed herein.

R108.6 Refunds. In the case of revocation of a permit no refund shall be granted. Any excess fee for a project that has not been commenced shall be returned to the permit holder upon written request received no later than twelve (12) months after the date the permit was issued and the permit shall be cancelled. All plan examination fees, permit processing fees, inspection fees and penalties that have been imposed upon the permit holder under the requirements of this code shall be deducted from the refund or paid by the permit holder prior to any refund being granted.

These amendments were made to Sections 108.3 through 108.6 to reflect the city's present requirements.

R109.1.1 Inspection Placard. Work requiring a permit shall not commence until the permittee or his/her agent posts an inspection placard at the job site for recording inspections. Failure to maintain this inspection placard will not relieve the permittee of responsibility as provided by this code. When work has progressed to a point of having windows, or when the job is an alteration or addition, the placard shall be attached to the available glass in view for recording the balance of inspections required by the code. Absence of the inspection placard shall result in the imposition of a penalty fee as set forth in Section R108.2.

R109.2 Preliminary inspection. Before issuing a permit, the building official is authorized to examine or caused to be examined buildings, structures and sites for which an application has been filed.

R109.3 Required inspections. After issuing a building permit, the building official shall conduct inspections as set forth in Sections R109.3.1 through R109.3.11 during and upon completion of the work for which a permit has been issued so as to be able to ensure that substantial compliance with this code and the city-approved construction documents has occurred. A record of all such inspections and any violations of this code shall be maintained by the building official.

R109.3.1 Soil and footing inspection. A soil inspection shall be made after excavation for the building or structure is complete and trenches for footings, spread footings, column pads, grade beams, and other types of footings are crumbed, formed, have the reinforcing steel tied in place, and are ready for concrete. A City-approved barrier shall be in place around the excavation until backfilling has occurred. No concrete shall be placed without this inspection.

R109.3.1.1 Lowest floor elevation. Any building or structure permitted to be constructed on property designated as a flood hazard area shall have an elevation certification (as required by Section R322.1.910 and prepared and sealed by a registered design professional) which certifies the lowest floor elevation, including the basement, submitted to the building official prior to the required foundation inspection. No foundation inspection shall be approved until said submittal is made.

R109.3.2 Foundation inspection. A foundation inspection shall be made after the top of the footing has been cleaned, the foundation forms have been properly set, the reinforcing steel has been cleaned and tied in place, and the proper anchor bolts are on site. A City-approved barrier shall be in place around the excavation until backfilling has occurred. No concrete shall be placed without this inspection.

R109.3.3 Pier inspection. A pier inspection shall be made where special foundations such as drilled and poured-in-place concrete piers, caissons, driven piles of all types, and other extraordinary types of foundations are required. Additional pier inspections shall be made when the code official determines the size of the project warrants it. Reinforcing steel required in the above cases shall be placed to allow for adequate inspections. A City-approved barrier shall be placed around the excavation until backfilling has occurred. No concrete shall be placed without this inspection.

R109.3.4 Structural concrete slab and under-floor inspection. Structural concrete slab and under-floor inspections shall be made after in-slab or under-floor reinforcing steel and building service equipment, conduit, piping accessories and other ancillary equipment items are in place, but before any concrete is placed or floor sheathing installed, including the sub-floor.

R109.3.5 Exterior wall sheathing inspection. An exterior wall sheathing inspection shall be made prior to the building wrap being installed over the braced wall panels or portal frames.

R109.3.6 Mechanical rough-in inspection. A mechanical rough-in inspection shall be made after all supply air ducts, return air ducts / plenums and appliance vents have been installed.

R109.3.7 Framing inspection. A framing inspection shall be made after the plumbing, mechanical and electrical rough-in inspections have been made and approved by those inspection departments and their dated approval signatures have been noted on the posted inspection placard; and after all masonry walls, fireplace chimneys, vents, and all framing (including the floor, wall, and roof structures, fireblocking, bracing and sheathing) are completed. Protection of joints and penetrations in fire-resistance rated assemblies shall not be concealed from view until inspected and approved. No mechanical, electrical, plumbing, or framing systems shall be concealed before this inspection is made and approved by the code official.

R109.3.8 Ceiling cover inspection. A ceiling cover inspection shall be made after the plumbing, mechanical and electrical rough-in inspections have been made and approved by those inspection departments and their dated approval signatures have been noted on the posted inspection placard; and after all masonry walls, fireplace chimneys, vents, ceiling grid and hanger wires, and all framing (including the floor and/or roof structures, fireblocking, bracing and sheathing) are completed. Protection of joints and penetrations in fire-resistance rated assemblies shall not be concealed from view until inspected and approved.

R109.3.9 Energy efficiency inspections. Inspections shall be made to determine compliance with Chapter 11 of this Code and shall include, but not be limited to, inspections for envelope insulation R and U values, fenestration U value, duct system R value, duct sealing, building envelope air tightness and HVAC and water heating equipment efficiency.

R109.3.10 Gypsum board and plaster. The following ceiling and wall gypsum board or plaster inspections shall be performed as specified:

- A) A lath inspection shall be made after all lathing, interior and exterior, is in place and before any plaster is applied.
- B) A gypsum board inspection shall be made after all gypsum board sheets are in place and properly fastened and before any joint compound is applied over joints and fasteners.

Each layer of a multi-layered fire-resistance rated assembly shall be inspected and approved prior to the next layer being applied. Protection of joints and penetrations in fire-resistance rated assemblies shall not be concealed from view until inspected and approved.

R109.3.11 Rough grading inspection. A rough grading inspection shall be made after the site has been graded to the elevations and contours shown on the city-approved plans. No ground cover shall be planted or placed until this inspection has been approved.

R109.3.12 Final grading inspection. A final grading inspection shall be made after ground cover has been established and erosion of soil will no longer occur from the site.

R109.3.13 Supplemental inspections. In addition to the inspections specified above, the building official is authorized to make or require other inspections or re-inspections of any construction work to ascertain compliance with the provisions of this code, the city's zoning code and the city's code of ordinances.

R109.3.14 Final inspection. A final building inspection shall be made after the prior required inspections have been completed and the final mechanical, electrical, and plumbing inspections have been made and approved by those inspection departments.

These amendments were made to Sections R109.1.1 through R109.3.14 to be more specific in content. The more specific language as to when inspections are required and what the inspector will be looking for will assist contractors with the field inspection process.

R109.4 Inspection agencies. No change in content. Re-numbered from R109.2.

R109.5 Inspection requests. No change in content. Re-numbered from R109.3.

R109.5.1 Duty to request a final inspection and obtain final approval: Upon completion of the work described in the permit application and on the approved construction documents, the permit holder shall request a final inspection and obtain final approval before any occupancy of the building or structure shall occur. Failure of the permit holder to make a timely request for a final inspection and obtain final approval shall constitute a violation of the building code, shall subject the permit holder to penalties as set forth in Section R113.4, and shall result in forfeiture to the City of any funds deposited in escrow in connection with the permit if the failure continues after 30 days written notice sent by certified mail to the last known address of the permit holder, in order to offset at least some of the costs incurred by the City as a result of such continuing failure. The building official shall be responsible for sending such notices, including to all permit holders that have failed to make a timely request for a final inspection as of the effective date of these provisions. Unless the permit holder applies in signed writing for segregated investment of its escrow deposit at the time of permit application, an escrow deposit may be invested by the City with other municipal funds and any income derived there from may be used for general revenue purposes at any time. If the permit holder applies by timely signed writing for segregated investment of its escrow deposit, the City shall segregate such funds and invest them in the same manner as allowed for municipal funds, to the extent practicable given the amount of the escrow; however, no return is assured and the City shall have no liability whatsoever other than to pay any income actually derived from such investment in the event of return of such escrow deposit. In the event of a forfeiture of an escrow deposit, any income from segregated investment shall also be forfeited.

R109.6 Approval required. No change in content. Re-numbered from R109.4.

R109.7 Coordination of inspections. Whenever in the enforcement of this code or another code or ordinance, the responsibility of more than one code official of the jurisdiction is involved, it shall be the duty of the code officials involved to coordinate their inspections and administrative orders as fully as practicable. Whenever an inspector from any agency or department observes an apparent or actual violation of some provision of some law, ordinance or code not within the inspector's authority to enforce, the inspector shall report the findings to the code official having jurisdiction.

These amendments were made to Sections R109.5.1 and R109.7 to reflect the city's present requirements.

R110.1.1 Required certificate of occupancy. Failure of the owner or tenant of a structure to obtain a certificate of occupancy as required by Section R110.1 shall be deemed a violation of this code and shall subject said owner or tenant to penalties as set forth in Section R113.4.

R110.5 Revocation of the certificate of occupancy: The certificate of occupancy shall always be subject to this code and other laws enforced by the building official. Non-compliance with the regulations of this code and other laws enforced by the building official shall be deemed a violation subject to the penalties set forth herein, and, in addition, the building official shall be empowered to revoke the certificate of occupancy issued for the building in question, until such time as the violations are corrected and the building is in compliance with this code and the Zoning Ordinance of Creve Coeur, Missouri. The issuance of a certificate of occupancy shall not relieve the owner or tenant from compliance with all regulations of this code and other applicable regulations.

R110.6 Permanent address numbers: Every dwelling unit within the City of Creve Coeur shall have the correct street number permanently affixed on said dwelling unit so as to be clearly visible from the street in front of the property. The street number shall be a minimum of four (4) inches in height when displayed on a dwelling unit. Said street number shall be contrasting in color to that of the structure and shall be placed in proximity to the main entrance into the

structure. Permanent address numbers shall be permanently affixed on a dwelling unit prior to the issuance of a certificate of occupancy.

These amendments were made to Sections R110.1.1 through R110.6 to reflect the city's present requirements.

R112.1 General. In order to hear and decide appeals of orders, decisions or determinations made by the building official relative to the application and interpretation of this code, there is and shall remain a Building Code Board of Appeals. The board shall adopt rules of procedure for conducting its business.

R112.2 Limitations on authority. Any person shall have a right to appeal a decision of the building official to the Building Code Board of Appeals. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equivalent form of construction should be allowed to be used. The board shall have no authority to waive requirements of this code.

R112.3 Time limitation and filing procedure. All appeals shall be filed in writing with the building official. A written appeal may not be filed more than thirty days after the affected individuals are notified of the building official's decision.

R112.3.1 Filing fee. An application for appeal shall not be filed without full payment of the filing fee as set forth in Section R108.2.1. Said filing fee shall be refunded to the applicant if the Board reverses the decision of the building official.

R112.4 Membership of board. The Building Code Board of Appeals shall consist of five regular members, who shall be residents of the City of Creve Coeur, appointed pursuant to Section 4.4(i) of the City Charter for three-year staggered terms. To the extent possible, based on applications submitted to the City, members of the Building Code Board of Appeals should be representative of the following professions or disciplines: registered architects, builder or superintendent of building construction with ten years of experience, structural engineer, code enforcement professional, mechanical engineer, electrical engineer, civil engineer, fire protection engineer, mechanical contractor, electrical contractor, plumbing contractor, fire protection contractor, or other disciplines associated with the building trades or design professions.

R112.4.2 Chair. The Chair of the Building Code Board of Appeals shall be elected annually by members of the Building Code Board of Appeals.

R112.4.3 Secretary. The City Administrator shall designate a qualified clerk to serve as secretary to the board. The secretary shall file a detailed record of all proceedings in the office of the city administrator.

R112.4.4 Compensation of members. Members of the Building Code Board of Appeals shall not be compensated for service but shall be reimbursed for actual expenses pursuant to established City policy.

R112.4.5 Code of Ethics for members. All members shall be subject to the city's Code of Ethics.

R112.5 Notice of meeting. The Building Code Board of Appeals shall meet upon notice from the chair, within 5 calendar days of the filing of a written appeal with the building official, or at stated periodic meetings.

R112.6 Open hearing. All hearings before the Building Code Board of Appeals shall be open to the public. Proper public notice shall be given. The appellant, the appellant's representative, the

building official, and any person whose interests are affected shall be given the opportunity to be heard.

R112.6.1 Procedure. The Board shall adopt and make available to the public through the secretary procedures under which a hearing will be conducted. The procedures shall not require compliance with strict rules of evidence but shall mandate that only relevant information be received.

R112.7 Quorum. Three members of the Building Code Board of Appeals shall constitute a quorum for the purpose of hearing appeals.

R112.9 Board decision. The Building Code Board of Appeals shall only reverse or modify the decision of the building official by a majority vote of the quorum present and voting. Otherwise, the decision of the building official shall be deemed to be upheld.

R112.9.1 Notification of decision. The secretary of the board shall notify the appellant and the building official of the decision in writing.

R112.9.2 Administration. The building official shall take immediate action in accordance with the decision of the board.

R112.10 Court review: Any aggrieved person, whether or not a previous party of the appeal, shall have the right to apply to the appropriate court for a writ of certiorari to correct errors of law. Application for review shall be made in the manner and time required by law following the filing of the decision of the Building Code Board of Appeals in the office of the City Administrator.

These amendments were made to Sections R112.1 through R112.10 to reflect the city's present requirements.

R113.4 Violation, penalties. Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who erects, constructs, alters or repairs a building or structure in violation of the approved construction documents or directive of the building official, or of a permit or certificate issued under the provisions of this code, shall be guilty of an ordinance violation, punishable by a fine of not more than \$500, or by imprisonment not exceeding 90 days, or both such fine and imprisonment. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

R114.1.1 Mud, debris or an excessive amount of surface water on streets and adjacent properties. After a verbal warning to the owner or contractor, the building official shall have the authority to issue a stop work order to any project which is causing mud, debris or an excessive amount of surface water to be transferred to any street or adjacent property.

R114.2 Unlawful continuance. Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be subject to penalties as set forth in Section R113.4.

These amendments were made to Sections R113.4 through R114.3 to reflect the city's present requirements.

SECTION R115

UNSAFE STRUCTURES AND EQUIPMENT

R115.1 Unsafe conditions. Structures or existing equipment that are or hereafter become unsafe, unsanitary or deficient because of inadequate means of egress facilities, inadequate light and ventilation, or which constitute a fire hazard, or are otherwise dangerous to human life or the public welfare, or that involve illegal or improper occupancy or inadequate maintenance, shall be

deemed an unsafe condition. Unsafe structures shall be taken down and removed or made safe, as the building official deems necessary and as provided for in this Section R115. A vacant structure that is not secured against entry shall be deemed unsafe.

R115.2 Record. The building official shall cause a report to be filed when there is an unsafe condition. The report shall state the occupancy of the structure and the nature of the unsafe condition.

R115.3 Notice. If an unsafe condition is found, the building official shall serve on the owner, agent or person in control of the structure, a written notice that describes the condition deemed unsafe and specifies the required repairs or improvements to be made to abate the unsafe condition, or that requires the unsafe structure to be demolished within a stipulated time. Such notice shall require the person thus notified to declare immediately to the building official acceptance or rejection of the terms of the order.

R115.4 Method of service. Such notice per Subsection R115.3 shall be deemed properly served if a copy thereof is (a) delivered to the owner personally; (b) sent by certified or registered mail to the owner at the last known address with the return receipt requested; or (c) delivered in any other manner as prescribed by local law. If the certified or registered letter is returned showing that the letter was not delivered, a copy thereof shall be posted in a conspicuous place in or about the structure affected by such notice. Service of such notice in the foregoing manner upon the owner's agent or upon the person responsible for the structure shall constitute service of notice upon the owner.

R115.5 Restoration. The structure or equipment determined to be unsafe by the building official shall be restored to a safe condition, unless demolition has been ordered. To the extent that repairs, alterations or additions are made or a change in occupancy occurs during the restoration of the structure, such repairs, alterations, additions or change of occupancy shall comply with the requirements of Section R105.2.2 of this code and Chapter 34 of 2003 edition of the International Building Code, as adopted by the City.

SECTION R116 EMERGENCY MEASURES

R116.1 Imminent danger. When, in the opinion of the building official, there is imminent danger of failure or collapse of a building or structure or any part thereof which endangers life, or when any structure or part of a structure has fallen and life is endangered by the occupation of the building or structure, the building official is hereby authorized and empowered to order and require the occupants to vacate the same forthwith. The building official shall cause to be posted at each entrance to such structure a notice reading as follows: "This Structure is Unsafe and its Occupancy has been Prohibited by the Building Official." It shall be unlawful for any person to enter such structure except for the purpose of making the required repairs or of demolishing the same, which work shall be done at such persons' own risk.

R116.2 Temporary safeguards. When, in the opinion of the building official, there is imminent danger due to an unsafe condition, the building official may cause the necessary work to be done in an effort to render such structure secure and/or temporarily safe, whether or not the legal procedure described herein has been instituted, but neither the city nor its officials and employees shall be deemed to have guaranteed such security or safety or have any liability related to actions or omissions hereunder.

R116.3 Closing streets. When necessary for the public safety, the building official shall temporarily close structures and close, or order the authority having jurisdiction to close, sidewalks, streets, public ways, and places adjacent to unsafe structures, and prohibit the same from being used.

R116.4 Emergency repairs. For the purpose of Section R116, the building official shall employ the necessary labor and materials to perform the required work as expeditiously as possible.

R116.5 Costs of emergency repairs. Costs incurred in the performance of emergency work shall be paid by the city on approval from the building official. The city attorney of the jurisdiction shall institute appropriate action against the owner of the premises where the unsafe structure is or was located for purpose of recovering such costs and may cause a special tax lien to be placed against the property for such purposes.

These amendments were made to add Sections R115.1 through R116.5 to this code so as to be consistent with the city's present building code. St. Louis County made the same building code amendment.

SECTION 500.460 AMENDMENTS TO CHAPTER 2 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO FAMILY DWELLINGS:

– CHAPTER 2 – DEFINITIONS:

Chapter 2 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

R201.3 Terms defined in other codes. Where terms are not defined in this code and are defined in the International Building Code, International Fire Code, St. Louis County Mechanical Code, St. Louis County Electrical Code, St. Louis County Plumbing Code, International Energy Conservation Code or International Property Maintenance Code, such terms shall have the meanings ascribed to them as in those codes.

This amendment made to correctly identify the city's mechanical, electrical, and plumbing codes.

SECTION 500.470 AMENDMENTS TO CHAPTER 3 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

– CHAPTER 3 – BUILDING PLANNING:

Chapter 3 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set forth below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

**TABLE R301.2(1)
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA**

Ground Snow Load (lbs/sf)	Wind Speed (d) (mph)	Topo-Graph-ical Effects (k)	Seismic Design Category (f)	Weathering (a)	Frost Line Depth (b)	Termite (c)	Winter Design Temp (e)	Ice Barrier Under-layment Required(h)	Flood Hazards (g)	Air Freezing Index (i)	Mean Annual Temp (j)
20	90	NO	C	Severe	30 inches	Moderate to Heavy	2 Degrees F	YES	8/2/1995	1500 days	54 Degrees F

For SI: 1 pound per square foot = 0.0479 k/Pa, 1 mile per hour = 0.477 m/s.

Notes a. through k. No changes proposed.

The blanks in this Table were filled-in to reflect the climatic and geographic conditions of this area of the country.

R302.2 Townhouses. Each townhouse shall be considered a separate building and shall be separated by fire-resistance-rated wall assemblies meeting the requirements of Section R302.1 for exterior walls.

Exceptions:

1. A common 1-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 or UL 263 is permitted for townhouses protected by an automatic residential fire sprinkler system if such walls do not contain plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be installed in accordance with Chapters 34 through 43. Penetrations of electrical outlet boxes shall be in accordance with Section R302.4.
2. A common 2-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 or UL 263 is permitted for townhouses not protected by an automatic residential fire sprinkler system if such walls do not contain plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be installed in accordance with Chapters 34 through 43. Penetrations of electrical outlet boxes shall be in accordance with Section R302.4.

Exception 2 was added because state law prohibits mandating the installation of an automatic fire sprinkler system in townhouses per Section R313.1. As a result, if someone chooses not to install a fire sprinkler system in their townhome Exception 2 requires the additional hour of fire-resistance-rated wall construction which was previously required per the 2003 IRC.

R302.2.4 Structural independence. No changes made to the contents of this section.

Exceptions:

- 1 through 4. No changes made.
5. Townhomes separated by a common 1-hour or 2-hour fire-resistance-rated wall as provided in Section R302.2.

Exception 5 was amended to be consistent with Exception 2 of Section R302.2.

**TABLE R302.6
DWELLING/GARAGE SEPARATION**

SEPARATION	MATERIAL
From the residence and attic	Not less than ½ -inch Type X gypsum board or equivalent applied to the garage side
From all habitable rooms above the garage	Not less than 5/8 -inch Type X gypsum board or equivalent applied to garage ceiling joists
Structure(s) supporting floor/ceiling assemblies used for separation required by this section	Not less than 5/8 -inch Type X gypsum board or equivalent applied to supporting structure(s)
Garages located less than 3 feet from a dwelling unit on the same lot.	Not less than ½ -inch Type X gypsum board or equivalent applied to the interior side of the exterior walls that are within this area.

This Table amended to be consistent with the city's present building code.

R302.6.1 Garage attic access. An attic access located in a garage shall meet the requirements of Section R807.1 and the Type X gypsum board attic access panel shall be supported by minimum 2 inch thick by 4 inch wide nominal size lumber or by other materials approved by the building official.

This amendment was made to ensure that the attic access panel would stay in place as long as the garage ceiling during a garage fire.

R302.7 Under-stair protection. The underside of stair stringers shall be protected with a layer of ½ -inch Type X gypsum board. Enclosed accessible space under stairs shall have their walls, under-stair surface and any soffits protected on the enclosed side with ½ -inch Type X gypsum board.

This amendment was made to be consistent with the city's present building code.

R302.11 Fireblocking. No change to section language.

Amend Location 4 to read as follows:

4. At openings around vents, pipes, ducts, cables and wires at ceiling and floor levels, with an approved fire caulk tested in accordance with ASTM E814 or UL 1479 or approved noncombustible materials tested in accordance with ASTM E136 to resist the free passage of flame and products of combustible.

Add Location 7 to read as follows:

7. To separate an unfinished basement area from a finished basement ceiling or soffit area.

This amendment was made to be consistent with the city's present building code.

R302.14 Fire protection of floors. Floor assemblies, not required elsewhere in this code to be fire-resistance rated, shall be provided with ½-inch gypsum wallboard membrane, 5/8-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, NFPA 13D, 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.
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.

This amendment was made to add fire-resistance protection to the underside of lightweight engineered wood products such as I-joists. When subjected to fire, these types of floor assemblies fail much sooner than floor assemblies built of dimensional lumber. During tests, Underwriter's Laboratories has found that wooden I-joists fail within 6 minutes of fire ignition. That time frame is typically less than the fire department response time from fire ignition to arrival of the fire department. Often times these lightweight floors are near the point of collapse upon arrival of the fire department. It has been documented that there is little warning of their impending collapse even with the use of thermal imaging cameras. As a result, there is an increasing number of firefighter deaths and injuries being caused by the collapse of floors that are built of lightweight, wooden I-joists. The ½-inch gypsum wallboard membrane will provide an additional 20 minutes of fire-resistance protection. This requirement will provide additional safety to firefighters and occupants which is the intent of the code per Section R101.3. Also, this section is part of the 2012 edition of the IRC.

R303.9 Kitchen exhaust. All kitchens shall be provided with a mechanical exhaust system above or adjacent to the cooking range in accordance with Section M1503 and Section M1507.3.

R305.1 Minimum height. No changes made to the contents of this section.

Exceptions:

- 1 and 2. No changes made.
3. Beams and girders spaced not more than 4 feet on center may project not more than 6 inches below the required ceiling height.

Exception 3 was added to be consistent with the city's present building code.

R306.5 Hose bibb. Every dwelling unit shall be provided with a minimum of one exterior, frost-proof hose bibb. Hose bibbs shall be protected from backflow in accordance with the St. Louis County Plumbing Code.

R306.6 Floor drain. A floor drain shall be installed within 15 feet of and in the same room as the heating/cooling system(s) and the hot water heater(s). Floor drains shall be installed in accordance with the St. Louis County Plumbing Code.

New Code Sections R303.9, R306.5 and R306.6 were added to be consistent with St. Louis County's adopting ordinance.

R308.4 Hazardous locations. The following shall be considered specific hazardous locations for the purposes of glazing:

- 1 through 3. No changes.
4. All glazing in railings regardless of an area or height above a walking surface. Included are structural baluster panels and nonstructural in-fill panels. The minimum nominal thickness of this type of glazing shall be ¼ inch.

5 through 8. No changes.

This amendment was made to add the ¼ inch thickness requirement which had been deleted.

R311.2.1 Interior egress doors. Interior egress doors shall have a minimum clear width of 29 ¾ inches and a minimum height of 78 inches. The clear width of door openings at swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees. Where a door opening includes two door leaves without a mullion, one leaf shall provide a clear opening width of 29 ¾ inches. Door openings to storage closets, bathrooms and all other nonhabitable spaces shall not be limited by the minimum width.

This amendment was made to be consistent with the city's present code. The only door the the 2009 IRC regulates is a dwelling unit's required exit door to the exterior. The minimum width or height of a dwelling unit's interior egress doors serving bedrooms, offices, recreation rooms, etc. would not be regulated unless this section were added.

R311.7.4.1 Riser height. No change to the original section. ADD:

Exception: Where the bottom riser adjoins a sloping walk or driveway which has an established grade and serves as a landing, a variation in the height of the bottom riser shall not exceed 3 inches in every 3 feet of stairway width.

This amendment was made to include the exception which had been deleted.

R312.1.1 Guards required at retaining walls. Retaining walls with differences in grade level on either side of the wall in excess of 30 inches which are located closer than 2 feet to a walk, path or driveway on the high side shall be provided with guards or other approved protective measures.

This amendment was made because the 2009 IRC is silent on this issue. This amendment is also consistent with the city's present code.

R312.3 Guard opening limitations. Required guards shall not have openings from the walking surface to the required guard height which allow passage of a sphere 4 inches (102 mm) in diameter. Guards shall not have an ornamental pattern that would that would provide a ladder effect. Angular intermediate balusters shall be installed at an angle 45 degrees or greater to an adjacent walking surface or stair tread. Exceptions 1 and 2. No changes made.

This amendment was made to be consistent with the city's present code as it relates to the 'ladder effect' language. The code as written does not define ladder effect. The proposed language does. This amendment is identical to the amendment approved when the city adopted the 2003 IRC in 5/2007.

R313.1 Townhouse automatic fire sprinkler systems. A builder of townhomes shall offer any purchaser on or before the time of entering into the purchase contract the option, at the purchaser's cost, to install fire sprinklers in the townhouse. Notwithstanding any other provision of law to the contrary, no purchaser of such townhouse shall be denied the right to choose or decline to install a fire sprinkler system in such townhouse being purchased. The provisions of this section shall expire on December 31, 2019.

Exception: No changes made.

R313.2 One- and two-family dwellings automatic fire sprinkler systems. A builder of one- and two-family dwellings shall offer any purchaser on or before the time of entering into the purchase the option, at the purchaser's cost, to install fire sprinklers in the dwelling. Notwithstanding any other provision of law to the contrary, no purchaser of such one- or two-family dwelling shall be denied the right to choose or decline to install a fire sprinkler in such dwelling being purchased. The provisions of this section shall expire on December 31, 2019.

Exception: No changes made.

The amendments were made to Sections R313.1 and R313.2 to be consistent with state law.

R317.3.1 Fasteners for preservative-treated wood. Fasteners for preservative-treated wood shall be of hot-dipped zinc-coated galvanized steel, stainless steel, silicon bronze or copper. Coating types and weights for connectors in contact with preservative-treated wood shall be in accordance with the manufacturer's recommendations. In the absence of manufacturer's recommendations, a minimum of ASTM A 653 type zinc-coated galvanized steel, or equivalent, shall be used.

Exceptions:

1. Deleted.
2. Re-numbered to Exception 1.

The proposed exception, which would allow steel bolts of one-half-inch diameter or greater to be unprotected against corrosion, does not consider the new ACQ or CB preservative-treated wood manufacturers' recommendations that all fasteners be hot-dipped galvanized steel or stainless steel.

R322.1.7 Protection of water supply and sanitary sewage systems. Substitute the reference made to the "International Private Sewage Disposal Code" with the "St. Louis County Plumbing Code".

**SECTION 500.480 AMENDMENTS TO CHAPTER 4 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:
– CHAPTER 4 – FOUNDATIONS:**

Chapter 4 of the International Residential Code for One- and Two- Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

R403.1.4.1 Frost protection. No change to content of this subsection.

Exceptions:

1. Freestanding accessory structures with an area of 100 square feet or less and an eave height of 10 feet or less shall not be required to be protected.
2. Decks not supported by a dwelling need not be provided with footings that extend below the frost line.

This amendment was made to be consistent with the city's present code which states that structures 100 sf or less in area do not need frost protection instead of the 400 sf area and 600 sf area allowed by the IRC.

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 to daylight or be connected to an approved sump 15 inches in diameter and 18 inches deep with a fitted cover. A sump located in a basement with a finished area shall have a sump pump and piping installed to discharge the water to daylight. Gravel or crushed stone drains shall extend at least 1 foot beyond the outside edge of the footing and 6 inches 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 roofing paper, and the drainage tiles or perforated pipe shall be placed on a minimum of 2 inches of washed gravel or crushed rock at least one sieve larger than the tile joint opening or perforation and covered with not less than 6 inches 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 United Soil Classification System, Group 1 Soils, as detailed in Table R405.1.

R405.3 Special conditions. Drainage tiles, gravel or crushed stone drains, perforated pipe, or other approved systems or materials shall be placed on both the inside and the outside of the foundation in areas where a high water table exists, other severe soil-water conditions exists or water is present in the excavation. The drainage system shall be discharged by gravity to daylight or connected to an approved sump having a sump pump and piping to discharge the water to daylight.

Sections R405.1 and R405.3 were amended to be consistent with the city's present code.

R405.4 Enclosure of surface water run-off. Surface water run-off concentrated into an enclosed pipe system shall not be discharged closer than ten (10) feet to any property line without prior approval from the building official. If this method of discharge causes a drainage nuisance to an adjacent property, an alternate drainage method shall be proposed for approval by the building official.

Exception: This subsection shall not apply to enclosed pipe storm water systems of twelve (12) inches or greater in diameter that are under the jurisdiction of the City of Creve Coeur or the Metropolitan Sewer District.

This Section was added to prevent drainage nuisances caused by downspouts, footing drains, etc.

SECTION 500.490 AMENDMENTS TO CHAPTER 5 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

– CHAPTER 5 – FLOORS:

Chapter 5 of the International Residential Code for One- and Two- Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

R502.11.1 Design. Wood trusses shall be designed in accordance with approved engineering practice. The design and manufacture of metal plate connected wood trusses shall comply with ANSI/TPI 1. The truss design drawings shall be prepared and sealed by a Missouri Registered Professional Engineer.

This amendment was made to be consistent with the city's present code.

R502.11.4 Truss design drawings. Truss design drawings, prepared in compliance with Section R502.11.1, shall be provided to the building official and approved prior to the issuance of

the building permit. Truss design drawings shall include, at a minimum, the information specified below:

No changes proposed to Items 1 through 12.

This section was amended to be consistent with the city's present building code.

SECTION 500.500 AMENDMENTS TO CHAPTER 6 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

– CHAPTER 6 – WALL CONSTRUCTION:

Chapter 6 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is adopted without modification.

SECTION 500.510 AMENDMENTS TO CHAPTER 7 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS

– CHAPTER 7 – WALL COVERING:

Chapter 7 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition is adopted without modification.

SECTION 500.520 AMENDMENTS TO CHAPTER 8 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

– CHAPTER 8 – ROOF-CEILING CONSTRUCTION:

Chapter 8 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

R802.10.1 Truss design drawings. Truss design drawings, prepared in compliance with R802.10.2, shall be provided to the building official and approved prior to the issuance of the building permit. Truss design drawings shall include, at a minimum, the information specified below:

No changes proposed to Items 1 through 12.

R802.10.2 Design. Wood trusses shall be designed in accordance with approved engineering practice. The design and manufacture of metal plate connected wood trusses shall comply with ANSI/TPI 1. The truss design drawings shall be prepared and sealed by a Missouri Registered Professional Engineer.

Sections R802.10.1 and R802.10.2 were amended to be consistent with the city's present code.

SECTION 500.530 AMENDMENTS TO CHAPTER 9 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

– CHAPTER 9 – ROOF ASSEMBLIES:

Chapter 9 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

R903.4.1 Overflow drains and scuppers. Delete the reference to the “International Plumbing Code” and substitute the “St. Louis County Plumbing Code”.

SECTION 500.540 AMENDMENTS TO CHAPTER 10 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

– CHAPTER 10 – CHIMNEYS AND FIREPLACES:

Chapter 10 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

R1004.5 Chimney separation. Factory-built chimneys shall be separated from the interior and attic spaces by a minimum layer of ½ -inch Type X gypsum board. This gypsum board shall be secured to the interior of the chimney chase from the top of the firebox to the underside of the roof deck. A minimum clearance of 2 -inches shall be maintained between the factory-built chimney and the gypsum board. All joints shall be tight and fire-taped.

R1005.7 Fireplace separation. Factory-built fireplaces shall be enclosed on all sides with a minimum layer of ½ -inch Type X gypsum board. A minimum clearance of 1 -inch shall be maintained between the factory-built fireplace and the gypsum board. All joints shall be tight and fire-taped.

Sections R1002.7 and 1004.5 were added to be consistent with the city's present code and fire district requirements.

SECTION 500.550 AMENDMENTS TO CHAPTER 11 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

– CHAPTER 11 – ENERGY EFFICIENCY:

Chapter 11 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is adopted without modification.

SECTION 500.560 AMENDMENTS TO CHAPTER 12 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

– CHAPTER 12 – MECHANICAL ADMINISTRATION:

Chapter 12 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is adopted without modification.

SECTION 500.570 AMENDMENTS TO CHAPTER 13 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

– CHAPTER 13 – GENERAL MECHANICAL SYSTEM REQUIREMENTS:

Chapter 13 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is adopted without modification.

SECTION 500.580 AMENDMENTS TO CHAPTER 14 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS.

– CHAPTER 14 – HEATING AND COOLING EQUIPMENT:

Chapter 14 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

M1401.3 Sizing. Heating and cooling equipment shall be sized in accordance with ACCA Manual S based on building load calculations in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies. The design temperatures for the City of Creve Coeur shall be in accordance with Table M1401.3.

**TABLE M1401.3
DESIGN TEMPERATURES**

	Outdoor	Inside
Winter	DB 2 degrees F	DB 70 degrees F
Summer	DB 95 degrees F WB 76 degrees F	DB 78 degrees F

SECTION 500.590 AMENDMENTS TO CHAPTER 15 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

– CHAPTER 15 – EXHAUST SYSTEMS:

Chapter 15 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

M1503.1 General. All kitchens shall be equipped with a means of mechanical exhaust directly over, or immediately adjacent to, a range or cook top. Range hoods shall discharge directly to the outdoors through a single-wall duct. The duct serving the hood shall have a smooth interior surface, shall be air-tight and shall be equipped with a backdraft damper. Ducts serving range hoods shall not terminate in an attic or crawl space or areas inside the building.

Exception: Where installed in accordance with the manufacturer's installation instructions, and where mechanical or natural ventilation is otherwise provided, listed and labeled ductless range hoods shall not be required to discharge to the outdoors.

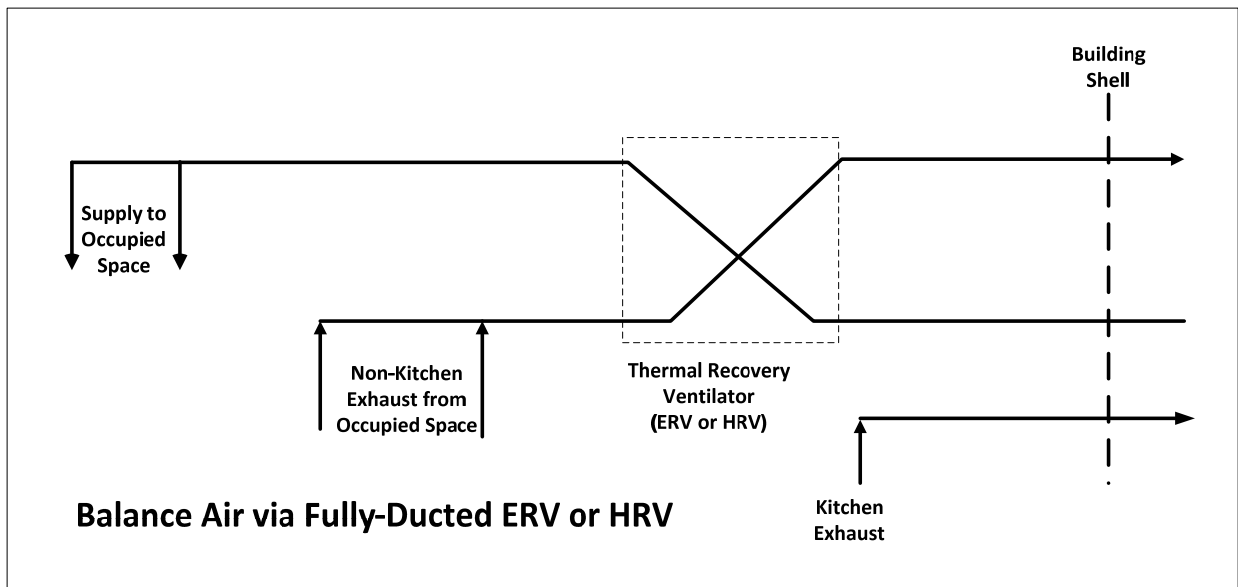
This amendment was made to clarify that kitchen ranges or cook tops are always required to have a range hood above or near them. St. Louis County made a similar amendment.

M1503.4 Makeup air required. Kitchen exhaust hood systems capable of exhausting in excess of 400 cubic feet per minute or 15 cfm per 100 square feet of finished floor area, whichever is greater, shall be provided with makeup air. The makeup air system shall supply tempered outside air at a rate equal to the exhaust air minus 400cfm. The makeup air system shall be equipped with a means of closure and shall be electrically interlocked with the kitchen exhaust fan to operate whenever the kitchen exhaust fan is operating. Makeup air shall be heated to 50 degrees Fahrenheit by an inline duct heater.

Makeup air shall not be required where there is no possibility of back-drafting carbon monoxide gas into the living area and at least one (1) of the following conditions is met:

1. There are no fossil fuel-fired heating appliances, other than cooking appliances, within the dwelling unit.
2. All fossil fuel-fired heating appliances have sealed combustion systems that are isolated from the dwelling unit.

3. An engineered, fully-ducted Energy Recovery Ventilator or Heat Recovery Ventilator is provided to admit and temper outside air in accordance with the following diagram or other substantially equivalent system.



Research has shown that kitchen exhaust systems with an exhaust flow rate in excess of 400 cfm for an individual dwelling unit are greatly oversized. The HVI (Home Ventilating Institute) recommends a minimum exhaust rate of 40 cfm per linear foot of range and a maximum of 100 cfm per linear foot of range for wall-mounted hoods and a minimum of 50cfm/ft and a maximum of 150 cfm/ft for island installations. These are exhaust rates they say will satisfactorily capture and remove moisture, airborne contaminants and odors created during cooking. The continued operation of a kitchen exhaust system with an exhaust flow rate in excess of 400 cfm can "depressurize" an airtight home to the point that 'backdrafting' of carbon monoxide gases from fossil fuel-fired appliances back into the home can occur.

SECTION 500.600 AMENDMENTS TO CHAPTER 16 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

–CHAPTER 16 – DUCT SYSTEMS:

Chapter 16 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition is adopted without modification.

SECTION 500.610 AMENDMENTS TO CHAPTER 17 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

– CHAPTER 17 – COMBUSTION AIR:

Chapter 17 of the International Residential Code for One- and Two-Family Dwellings, 2003, Second Edition is adopted without modification.

SECTION 500.620 AMENDMENTS TO CHAPTER 18 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

– CHAPTER 18 – CHIMNEYS AND VENTS:

Chapter 18 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a

corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

M1801.1 Venting required. Add "Exception: Unvented appliances where the manufacturer's instructions require a window to be open during the operation of the appliance shall be prohibited."

SECTION 500.630 AMENDMENTS TO CHAPTER 19 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

– CHAPTER 19 – SPECIAL FUEL-BURNING EQUIPMENT:

Chapter 19 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is adopted without modification.

SECTION 500.640 AMENDMENTS TO CHAPTER 20 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

– CHAPTER 20 – BOILERS AND WATER HEATERS :

Chapter 20 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is adopted without modification.

SECTION 500.650 AMENDMENTS TO CHAPTER 21 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

-- CHAPTER 21 – HYDRONIC PIPING:

Chapter 21 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set forth below without a corresponding section, subsection or clause number in the code is hereby enacted and added thereto.

M2101.11 Joints between different piping materials. Joints between different piping materials shall be made with approved adapter fittings. Joints between different metallic piping materials shall be made with approved dielectric fittings or brass converter fittings.

This amendment was made for clarification purposes. St. Louis County has the same amendment.

SECTION 500.660 AMENDMENTS TO CHAPTER 22 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TW-FAMILY DWELLINGS:

– CHAPTER 22 – SPECIAL PIPING AND STORAGE SYSTEMS:

Chapter 22 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is adopted without modification.

SECTION 500.670 AMENDMENTS TO CHAPTER 23 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

– CHAPTER 23 – SOLAR SYSTEMS:

Chapter 23 of the International Residential Code for One- and Two-Family dwellings, 2009, Fourth Edition, is adopted without modification.

SECTION 500.680 AMENDMENTS TO CHAPTER 24 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

– CHAPTER 24 – FUEL GAS:

Chapter 24 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection or clause number in the code is hereby enacted and added thereto.

G2402.3 (201.3) Terms defined in other codes. Where terms are not defined in this code and are defined in the International Building Code, St. Louis County Electrical Code, St. Louis County Plumbing Code, St. Louis County Mechanical Code, International Energy Conservation Code or International Fire Code such terms shall have the meanings ascribed to them in those codes.

This amendment was made to properly reference St. Louis County's electrical, plumbing and mechanical codes.

G2439.5.5.1 (614.6.5.1) Specified length. The maximum length of the exhaust duct shall be 25 feet (7620 mm) from the connection to the transition duct from the dryer to the outlet terminal. Where fittings are used, the maximum length of the exhaust duct shall be reduced in accordance with Table G2439.5.5.1.

This amendment was made so that the 25 feet exhaust duct length would be consistent with Section 1502.4.4.1.

SECTION 500.690 AMENDMENTS TO CHAPTER 25 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

– CHAPTER 25 – PLUMBING ADMINISTRATION:

Chapter 25 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection or clause number in the code is hereby enacted and added thereto.

P2501.1 Scope. The St. Louis County Plumbing Code shall regulate plumbing administration.

P2501.2 through P2503.9. Delete.

These amendments were made to identify the St. Louis County Plumbing Code as the plumbing code that regulates plumbing work within our city.

SECTION 500.700 AMENDMENTS TO CHAPTER 26 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

– CHAPTER 26 – GENERAL PLUMBING REQUIREMENTS:

Chapter 26 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, sub-section, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section, or clause number in the code is hereby enacted and added thereto.

P2601.1 Scope. The St. Louis County Plumbing Code shall regulate general plumbing requirements.

P2601.2 through P2608.5. Delete.

These amendments were made to identify the St. Louis County Plumbing Code as the plumbing code that regulates plumbing requirements within our city.

SECTION 500.710 AMENDMENTS TO CHAPTER 27 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

– CHAPTER 27 – PLUMBING FIXTURES:

Chapter 27 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection or clause number in the code is hereby enacted and added thereto.

P2701.1 Scope. The St. Louis County Plumbing Code shall regulate the installation of plumbing fixtures.

P2702.1 through P2724.1. Delete.

These amendments were made to identify the St. Louis County Plumbing Code as the plumbing code that regulates the installation of plumbing fixtures within our city.

SECTION 500.720 AMENDMENTS TO CHAPTER 28 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

– CHAPTER 28 – WATER HEATERS:

Chapter 28 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection or clause number in the code is hereby enacted and added thereto.

P2801.1 Scope. The St. Louis County Plumbing Code shall regulate the installation of water heaters.

P2801.2 through P2803.7. Delete.

These amendments were made to identify the St. Louis County Plumbing Code as the plumbing code that regulates the installation of water heaters within our city.

SECTION 500.730 AMENDMENTS TO CHAPTER 29 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

– CHAPTER 29 – WATER SUPPLY AND DISTRIBUTION:

Chapter 29 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection or clause number in the code is hereby enacted and added thereto.

P2901.1 Scope. The St. Louis County Plumbing Code shall regulate the installation of water supply and distribution systems.

P2902.1 through P2908.3. Delete.

These amendments were made to identify the St. Louis County Plumbing Code as the plumbing code that regulates the installation of water supply and distribution systems within our city.

SECTION 500.740 AMENDMENTS TO CHAPTER 30 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

– CHAPTER 30 – SANITARY DRAINAGE:

Chapter 30 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

P3001.1 Scope. The St. Louis County Plumbing Code shall regulate the installation of sanitary drainage systems.

P3001.2 through P3008.5. Delete.

These amendments were made to identify the St. Louis County Plumbing Code as the plumbing code that regulates the installation of sanitary drainage systems within our city.

SECTION 500.750 AMENDMENTS TO CHAPTER 31 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

– CHAPTER 31 -- VENTS :

Chapter 31 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

P3101.1 Scope. The St. Louis County Plumbing Code shall regulate the installation of plumbing vent systems.

P3101.2 through P3114.8. Delete.

These amendments were made to identify the St. Louis County Plumbing Code as the plumbing code that regulates the installation of plumbing vent systems within our city.

SECTION 500.760 AMENDMENTS TO CHAPTER 32 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

– CHAPTER 32 – TRAPS:

Chapter 32 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

P3201.1 Scope. The St. Louis County Plumbing Code shall regulate the installation of plumbing traps.

P3201.2 through P3201.7. Delete.

These amendments were made to identify the St. Louis County Plumbing Code as the plumbing code that regulates the installation of plumbing traps within our city.

SECTION 500.770 AMENDMENTS TO CHAPTER 33 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

-- CHAPTER 33 – STORM DRAINAGE:

Chapter 33 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

P3301.1 Scope. The St. Louis County Plumbing Code shall regulate the materials, design, construction and installation of storm drainage.

P3302.1 through P3303.1.4. Delete.

These amendments were made to identify the St. Louis County Plumbing Code as the plumbing code that regulates the materials, design, construction and installation of storm drainage within our city.

SECTION 500.780 AMENDMENTS TO CHAPTER 34 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

– CHAPTER 34 – GENERAL ELECTRICAL REQUIREMENTS:

Chapter 34 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

E3401.2 Scope. The St. Louis County Electrical Code shall regulate general electrical requirements.

E3401.3 through E3407.4.2. Delete.

These amendments were made to identify the St. Louis County Electrical Code as the electrical code that regulates general electrical requirements within our city.

SECTION 500.790 AMENDMENTS TO CHAPTER 35 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

– CHAPTER 35 – ELECTRICAL DEFINITIONS:

Chapter 35 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

E3501.1 Scope. The St. Louis County Electrical Code shall regulate definitions applicable to electrical requirements.

DEFINITIONS. Delete.

These amendments were made to identify the St. Louis County Electrical Code as the electrical code that regulates electrical definitions as they pertain to electrical work within our city.

SECTION 500.800 AMENDMENTS TO CHAPTER 36 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

-- CHAPTER 36 -- ELECTRICAL SERVICES:

Chapter 36 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

E3601.1 Scope. The St. Louis County Electrical Code shall regulate the installation of electrical services.

E3601.2 through E3611.5. Delete.

These amendments were made to identify the St. Louis County Electrical Code as the electrical code that regulates the installation of electrical services within our city.

SECTION 500.810 AMENDMENTS TO CHAPTER 37 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

-- CHAPTER 37 -- ELECTRICAL BRANCH CIRCUITS AND FEEDER REQUIREMENTS:

Chapter 37 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

E3701.1 Scope. The St. Louis County Electrical Code shall regulate the installation of electrical branch circuits and feeders.

E3701.2 through E3706.5. Delete.

These amendments were made to identify the St. Louis County Electrical Code as the electrical code that regulates the installation of electrical branch circuits and feeders.

SECTION 500.820 AMENDMENTS TO CHAPTER 38 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

-- CHAPTER 38 -- ELECTRICAL WIRING METHODS:

Chapter 38 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

E3801.1 Scope. The St. Louis County Electrical Code shall regulate electrical wiring methods.

E3801.2 through E3803.11. Delete.

These amendments were made to identify the St. Louis County Electrical Code as the electrical code that regulates electrical wiring methods within our city.

SECTION 500.830 AMENDMENTS TO CHAPTER 39 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

-- CHAPTER 39 – ELECTRICAL POWER AND LIGHTING DISTRIBUTION:

Chapter 39 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

E3901.1 Scope. The St. Louis County Electrical Code shall regulate the installation of electrical power and lighting distribution systems.

E3901.2 through E3909.4. Delete.

These amendments were made to identify the St. Louis County Electrical Code as the electrical code that regulates electrical power and lighting distribution systems within our city.

SECTION 500.840 AMENDMENTS TO CHAPTER 40 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

-- CHAPTER 40 – ELECTRICAL DEVICES AND LUMINAIRES:

Chapter 40 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

E4001.1 Scope. The St. Louis County Electrical Code shall regulate the installation of electrical devices and luminaries.

E4001.2 through E4005.6. Delete.

These amendments were made to identify the St. Louis County Electrical Code as the electrical code that regulates the installation of electrical devices and luminaries within our city.

SECTION 500.850 AMENDMENTS TO CHAPTER 41 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

-- CHAPTER 41 – ELECTRICAL APPLIANCE INSTALLATION:

Chapter 41 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below.. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

E4101.1 Scope. The St. Louis County Electrical Code shall regulate the installation of electrical appliances.

E4101.2 through E4101.7. Delete.

These amendments were made to identify the St. Louis County Electrical Code as the electrical code that regulates the installation of electrical appliances within our city.

SECTION 500.860 AMENDMENTS TO CHAPTER 42 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

-- CHAPTER 42-- SWIMMING POOLS:

Chapter 42 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

E4201.1 Scope. The St. Louis County Electrical Code shall regulate the installation of electrical wiring and equipment associated with swimming pools, wading pools, hot tubs and spas and fountains.

E4201.2 through E4209.4. Delete.

These amendments were made to identify the St. Louis County Electrical Code as the electrical code that regulates the installation of electrical wiring and equipment associated with swimming pools, etc. within our city.

SECTION 500.870 AMENDMENTS TO CHAPTER 43 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

-- CHAPTER 43 -- CLASS 2 REMOTE-CONTROL, SIGNALING AND POWER-LIMITED CIRCUITS:

Chapter 43 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

E4301.1 Scope. The St. Louis County Electrical Code shall regulate the installation of electrical Class 2 remote-control, signaling and power-limited circuits.

E4301.2 through E4304.5. Delete.

These amendments were made to identify the St. Louis County Electrical Code as the electrical code that regulates the installation of wiring and circuits associated with thermostats, door bells, security systems, etc.

SECTION 500.875 AMENDMENTS TO CHAPTER 44 OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

-- CHAPTER 44 -- REFERENCED STANDARDS:

Chapter 44 of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code

that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, and amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

This chapter lists the standards that are referenced in various sections of this document. The standards are listed herein by the promulgating agency of the standard, the standard identification, the effective date and title, and the section or sections of this document that reference the standard. The application of the referenced standards shall be as specified in Section R102.4.

R4401.1 Deleted sections. The standards referenced by sections previously deleted by this amending ordinance are also hereby deleted.

ICC – International Code Council
5203 Leesburg Pike, Suite 600
Falls Church, VA 22041

Standard reference number	Title	Referenced in code section number
DELETE: IPC – 09	International Plumbing Code	
ADD: Plumbing Code – City Ordinance No. 5214	St. Louis County Plumbing Code	No changes made.

No other changes to this referenced standard are proposed.

NFPA – National Fire Protection Association
Batterymarch Park
Quincy, MA 02269

Standard reference number	Title	Referenced in code section number
DELETE: 70-08	National Electrical Code	
No other changes to this referenced standard are proposed.		
ADD: Electrical Code – City Ordinance No. 5214	St. Louis County Electrical Code	No changes made.

These amendments were made to be consistent with other amendments previously made.

SECTION 500.880 AMENDMENTS TO APPENDIX G OF THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS:

-- APPENDIX G – SWIMMING POOLS, SPAS AND HOT TUBS:

Appendix G of the International Residential Code for One- and Two-Family Dwellings, 2009, Fourth Edition, is amended as set forth below. Each section, subsection, or clause of the code that numerically corresponds to one of the following numbered provisions is hereby deleted where so noted, or amended to read as set forth below. Each provision set out below without a corresponding section, subsection, or clause number in the code is hereby enacted and added thereto.

AG103.4 Drainage systems. The swimming pool shall be equipped to be emptied completely of water and the equipment shall be equipped to be properly flushed. Any discharged or flushed water shall be disposed of onto an adjacent street or in an approved manner that will not create a nuisance to adjoining property.

This section was added so that the city could regulate the disposal of pool water in an approved manner. The city's present building code is silent on this manner.

AG105.2 Outdoor swimming pool. An outdoor swimming pool, including an in-ground, aboveground or on-ground pool, hot tub or spa shall be provided with a barrier which shall comply with the following:

Items 1 through 9. No changes proposed.

Item 10. Where an aboveground pool structure is used as a pool barrier or where the barrier is mounted on top of the pool structure, and the means of pool access is a ladder or steps, then the ladder or steps shall be surrounded by a barrier which meets the requirements of Section AG105.2, Items 1 through 9. A removable ladder shall not constitute an acceptable alternate to enclosure requirements.

Item 11. There shall be a clear zone of at least 4 feet between the barrier and any permanent structures or pool equipment located outside of the pool, hot tub or spa area that can be used to climb the barrier.

Item 10 was amended to not allow removable ladders to as part of the barrier. This is consistent with the city's present code. St. Louis County also amended this section.

Item 11 was added to clarify the fact that there should be no permanent structures (retaining walls, pool equipment, play equipment, etc.) close enough to a pool barrier that would enable a child to use the structure to climb over the barrier. St. Louis County made this same addition.

SECTION 2: SAVING CLAUSE: Nothing in this ordinance or in the Building Code hereby adopted, shall be construed to affect any suit or proceeding currently pending in any court as of the effective date hereof, or any rights previously acquired or liability previously incurred, or any cause or causes of action existing under any ordinance hereby repealed, as cited herein.

SECTION 3: SEVERABILITY: If any section, subsection, provision, sentence, clause, or phrase of this ordinance or of the ICC International Residential Code for One- and Two-Family Dwellings, Fourth Edition, 2009, is, for any reason held to be unconstitutional or invalid, such decision shall not affect the validity of the remaining portions of this ordinance or of said code, and the City of Creve Coeur City Council hereby declares that it would have passed the same , even though such portion so held to be unconstitutional had not been included therein.

SECTION 4: EFFECTIVE DATE: This ordinance shall become effective **August 1, 2013**, pursuant to section 3.11(g) of the City Charter.

Adopted by the City Council this ___ day of _____, 2013.

ROBERT HOFFMAN
PRESIDENT OF THE CITY COUNCIL

Approved this ___ day of _____, 2013.

BARRY GLANTZ
MAYOR

ATTEST:

DEBORAH RYAN, MPCC
CITY CLERK

MEMORANDUM

TO: Mark Perkins, City Administrator

FROM: Steve Unser, Chief Building Official

CC: Paul Langdon, Director of Community Development

DATE: May 8, 2013 (amended 5/23/13) (amended 7/2/13)

RE: Building Division's Draft of a City Ordinance to
Amend and Adopt the 2009 International Residential Code as
the City's New Building Code for One- and Two-Family
Dwellings.

Please find attached the aforementioned draft for review, comments and approval. St. Louis County and the majority of municipalities within St. Louis County have adopted or are in the process of adopting this building code as their new building code for One- and Two-Family Dwellings. In the interest of code enforcement consistency throughout our region, the building division is recommending that the City of Creve Coeur do the same. This code regulates the construction, alteration, movement, enlargement, replacement, repair, location and demolition of detached one- and two-family dwellings and townhouses not more than 3 stories in height with a separate means of egress. Residential dwelling units more than 3 stories in height or that share a means of egress are regulated by the 2009 International Building Code.

Please note that an explanation for each amendment is written in *italics* and underlined after each proposed amendment. These "explanations" will be removed from the body of the ordinance prior to its adoption.

On December 11, 2012, this draft of this proposed ordinance was filed with the City Clerk's office and made available for public inspection and examination pursuant to Section 67.280 RSMo. On December 11, 2012, this draft was posted on the city's website for public review. Also on December 13, 2012, printed copies of this draft were mailed to members of the city's Building Code Board of Appeals and the Homebuilder's Association of Greater St. Louis. Printed copies were also made available at the building division's public counter.

See attached Exhibit A for the Building Code Board of Appeals recommendation to adopt this code as proposed.

See attached Exhibit B for Caryl Kinsey Fox's recommendation to adopt this code as proposed.

The city requested that any comments from all interested parties regarding this draft be submitted to the building department for review within thirty (30) days of the date of it being made public. These review comments will be shared with the city administrator and city council for possible inclusion into a revised draft.

See attached Exhibit C for the 2/13/13 comments from the Homebuilders Association of Greater St. Louis and the 3/13/13 responses from the Building Division.

See attached Exhibit M for the 4/17/13 letter from the HBA regarding city staff's disapproval of HBA's recommendations.

See attached Exhibit D for the 3/8/13 comments from Richard Kutta and the 4/8/13 responses from the Building Division.

See attached Exhibit AA for the Building Code Board of Appeals decisions made at their 6/25/13 public meeting regarding 16 of HBA's recommendations and 3 of Richard Kutta's recommendations.

The building division surveyed Creve Coeur's twelve (12) comparator cities and found that Chesterfield, Kirkwood and St. Peters incorporated some of HBA's recommendations into their most recent residential building codes. The cities of Ballwin, Brentwood, Clayton, Frontenac, Ladue, Maryland Heights, Olivette, Richmond Heights and Town & Country did not.

AMENDMENTS OF NOTE

There are numerous amendments proposed during a new building code adoption process. While most of these amendments are administrative or technical in nature, some merit additional attention.

Referenced page numbers are from the proposed ordinance.

Section R106.1.1.1 Residential Fire Sprinkler Option Form (See page 4.)

This amendment was made to be consistent with a state law that prohibits cities from mandating that new homes and townhomes be equipped throughout with an automatic fire sprinkler system as required by Sections R313.1 and R313.2 of the 2009 IRC. This form needs to be signed by the homebuilder and the purchaser

affirming that a fire sprinkler system was offered to the purchaser prior to the purchase contract.

Section R108.2.1 Building Code Board of Appeals filing fee. (See page 5.)
Applicant will have the filing fee refunded if the board rules in the applicant's favor.

Sections R109.3 through R109.3.14 Required inspections. (See pages 6 and 7.)
More specific language was added to better communicate field inspection requirements to contractors so as to expedite the building inspection process.

Sections R112.1 through 112.10 Board of Appeals. (See pages 9 and 10.)
These amendments were made to 'streamline' the appeals process.

R302.2 Townhouses. (See page 13)
Exception 2 was added because state law prohibits mandating the installation of an automatic fire sprinkler system in townhouses. See further explanation in *italics*.

R302.14 Fire protection of floors. (See page 15)
This amendment was made to add fire-resistant protection to the underside of lightweight engineered wood products such as I-joists. When subjected to fire, these types of floor assemblies fail much sooner than floor assemblies built of dimensional lumber. During tests, Underwriter's Laboratories has found that unprotected wood I-joists fail within 6 minutes of fire ignition (**See Exhibit E**). That time frame is typically less than the fire department response time from fire ignition to their arrival. Often times, these lightweight floors are near the point of collapse upon arrival of the fire department. As a result, there are an increasing number of firefighter injuries and deaths being caused by the collapse of lightweight, wooden I-joist floor systems involved in a fire (**See Exhibit F**). By comparison, unprotected dimensional lumber floor systems (using 2 x 10 floor joists) do not fail until 18 minutes 45 seconds after fire ignition (**See Exhibit E**). The ½ -inch gypsum wallboard membrane required by this code section will provide an additional 20 minutes of fire-resistant protection. This requirement will provide additional safety to firefighters and residents during a fire event. The additional costs of installing this gypsum wallboard membrane will be more than offset by the additional safety it will provide to firefighters during rescue operations and to residents attempting to escape during a home fire.

NOTE: This code section already appears in the 2012 edition of the International Residential Code. When this code change was proposed at the 2010 International Code Council's Code Change Hearings, one of its proponents was the National Association of Home Builders (**See Exhibit G**). APA- The Engineered Wood Association, who helps to oversee the manufacturing and performance of engineered wood products (including I-joists) recommended in their November 2007 TECHNICAL TOPICS publication "the use of a single layer of ½ -inch thick gypsum on the underside of all I-joists used in floor/ceiling assemblies over habitable spaces" to increase the fire resistance of I-joist floor systems (**See Exhibit H**). Since the city is not adopting the 2012 edition of the IRC, the building

division believes that this code section's inclusion into the proposed building code is necessary.

See also Exhibit I - Creve Coeur Fire Protection District's approval of this proposed code section. The 3/18/2013 article reference in this letter is EXHIBIT F.

See also Exhibit J- Monarch Fire Protection District's approval of this proposed code section.

Other jurisdictions that have made this same amendment are as follows:

- City of Frontenac
- City of Richmond Heights
- Fenton Fire Protection District

SIGNIFICANT BUILDING CODE CHANGES

Every 3 years a new residential building code is published by the International Code Council. The International Residential Code is kept up to date through the review of proposed code changes submitted by code enforcement officials, industry representatives, design professionals and other interested parties. Proposed code changes are carefully considered through an open code development process in which all interested and affected parties may participate. A consensus is reached for each proposed code change by a majority vote of members at the ICC Code Change Hearings which are held twice a year (spring/fall) at various cities.

The intent of the city has been to adopt the building code as written through this model code development process and to ensure that any amendments proposed by the building division will not be less restrictive than the minimum regulations contained in the published International Residential Code.

R312.1 GUARDS WHERE REQUIRED

This code change clarifies that when determining the required minimum height of a guard, fixed seating (built-in benches on a deck) is considered a walking surface and the required guard height is measured from the seat to the top of the guard. Also, in determining when a guard is required, the vertical distance from the walking surface to the grade or floor below is measured to the lowest point within 36 inches horizontally from the edge of the open-sided walking surface.

R315 CARBON MONOXIDE ALARMS

This new section requires that within new homes and within existing homes where work requiring a building permit occurs, a carbon monoxide detector shall be installed in the immediate vicinity of the bedrooms. The intent of this section is to reduce accidental deaths from carbon monoxide poisoning. The carbon monoxide detectors are not required to be hard-wired or interconnected like smoke detectors. UL listed, plug-in or battery-powered CO detectors are acceptable.

R323 STORM SHELTERS

This new section does not require storm shelters to be built. However, if installed they are required to be constructed in accordance with this section. Storm shelters protect persons from injury due to flying debris during a tornado, hurricane or other high-wind event.

R612.2 WINDOW SILLS

This new section requires that operable windows have a minimum sill height of 24 inches above the finish floor when the sill is more than 72 inches above the finished grade or surface below. This requirement is intended to prevent small children from falling out of open windows. The minimum sill height may be lowered if the window meets one of the four exceptions listed.

CHAPTER 11 ENERGY EFFICIENCY

Please see **Exhibit K - for a summary of significant changes that will be made to Chapter 11 of the city's present residential code (2003 IRC) by the city's adoption of the proposed residential code (2009 IRC).**

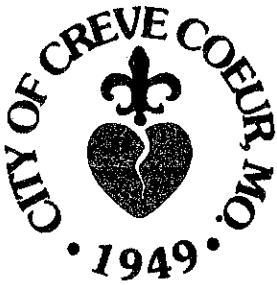
Please see **Exhibit L - for a summary of the 'true cost' of the 2009 International Energy Conservation Code and Chapter 11 – Energy Efficiency – of the 2009 International Residential Code.** These increased construction costs (\$1,519) are based on a 2,400 square foot home. This works out to be an increased cost of \$0.63 per square foot. Another increased cost not included in this exhibit is approximately \$300 for the Blower Door Test required to test the air tightness of the building envelope. This would increase the average increased construction cost of a new 2,400 square foot home to \$1,819 or \$0.75 per square foot. The average size of a new home in Creve Coeur is approximately 3,000 – 4,000 square feet. This works out to be an increased cost of \$2,250 - \$3,000 for a new Creve Coeur home to be built in compliance with the 2009 IECC or Chapter 11 – Energy Efficiency – of the 2009 IRC. This same exhibit points out that the monthly energy savings realized by complying with these new requirements would be \$28.06 for a 2,400 square foot new home. The monthly energy savings for a new home that is 3,000 – 4,000 square feet in size would be approximately \$33 - \$44.

Stronger energy –efficient construction also helps to reduce pollution by reducing energy consumption.

M1503.4 MAKE-UP AIR REQUIRED

This code change reduces the maximum exhaust rate allowed for kitchen exhaust systems from 600 cfm to 400 cfm as the threshold for requiring make-up air. Research has shown that kitchen exhaust systems with an exhaust flow rate greater than 400 cubic feet per minute are oversized and their continued operation can 'depressurize' an airtight home to the point where 'backdrafting' of carbon monoxide gas from gas-fired appliances and wood burning fireplaces can occur.

This 'depressurization' could also affect indoor air quality by drawing air from garages, mechanical rooms and storage rooms.



city
of

CREVE COEUR

300 North New Ballas Road • Creve Coeur, Missouri 63141
(314) 432-6000 • Fax (314) 872-2539 • Relay MO 1-800-735-2966
www.creve-coeur.org

EXHIBIT A

April 15, 2011

Mayor and Council Members
Creve Coeur Government Center
300 N. New Ballas Road.
Creve Coeur, MO 63141

RE: Building Code Board of Appeals Review of the Rough Drafts of the City
Ordinances being proposed to adopt the City's New Building Codes.

Dear Mayor and Council Members;

The Building Code Board of Appeals was asked by the Chief Building Official on December 11, 2012, to review the aforementioned ordinances that will amend and adopt the 2009 edition of the International Residential Code as our city's new building code for One- And Two-Family Dwellings, the 2009 edition of the International Building Code as our city's new commercial building code and the 2009 edition of the International Energy Conservation Code as our city's new energy conservation code.

Upon careful review of the aforementioned proposed ordinances and after our public meeting held on April 3, 2013, to further discuss these ordinances with each other and the Chief Building Official, the Building Code Board of Appeals recommends adoption of all three (3) of these proposed ordinances as written.

Thank you for your consideration of this recommendation.

Sincerely,

Building Code Board of Appeals
Bernard Colton, Chairperson

C A R Y L K I N S E Y F O X, AIA, LEED BD+C
4 6 1 P I N E B E N D D R I V E
W I L D W O O D M O 6 3 0 0 5
ckinseyfox@gmail.com
C. 310.428.1357

March 5, 2013

EXHIBIT B

Steve Unser
City of Creve Coeur
300 N. New Ballas Road
Creve Coeur, MO 63141

RE: Adoption of the 2009 I-Codes and International Energy Conservation Code

Dear Steve,

As an Architect, registered in Missouri, New York and California, I serve on the national committee of the AIA, American Institute of Architects, Codes and Standards Committee where I was the 2012 Chair. I am writing in support of Creve Coeur's adoption of the 2009 I-Codes including the International Energy Conservation Code (IECC). These are the codes that have been adopted by the City and County of St. Louis and represent the standard of construction expected by the building industry in the St. Louis Metropolitan area.

The I-Codes are the only set of building codes in the US and represent the best practices as decided by a consensus of the building industry. They are written with public safety in mind and are fully coordinated to address all building conditions. Editing or modifying specific sections of these codes could create serious conflicts or gaps in overall building safety.

For example, when the State of Missouri eliminated the requirement for fire sprinklers, they did not take into consideration that fire separations between occupants was removed from the code. The expectation was that entire buildings would be sprinkled eliminating the need for fire separations. This throws into confusion who becomes liable when fire spreads throughout a building, the builder who talked the owner out of installing the sprinklers or the designer who designed to the building code. For this reason, it is the position of the American Institute of Architects that the building codes should be adopted **without modifications**.

I am also a resident of Wildwood and attend St. Timothy's Episcopal Church at 808 N. Mason Road. Creve Coeur has a great reputation of being a conscientious community with high quality residential construction. For these reasons, I strongly support the adoption of the 2009 IECC.

The Energy Code requires minimum acceptable levels of construction including good insulation, windows and doors, as well as caulking and weatherstripping the gaps in construction. These do not add significantly to the cost of construction but do

contribute to the overall comfort of living in a home. The code also requires programable thermostats as well as efficient lighting, heating and air conditioning systems which lower operational expenses. For these reasons, I consider the IECC to be a type of consumer protection, ensuring that homeowners get a good quality home and lower energy bills for the long term.

Again, I point out that St. Louis City and County have been using the 2009 I-Codes since the end of 2011 and Missouri is one of the few states that does not have a statewide building code. Please take swift action to adopt these newer I-Codes.

Illinois and the Kansas City metro area have adopted the 2012 I-Codes including the Energy Code. Many other municipalities in our region have also adopted the 2009 IECC including, Clayton, Webster Groves, Florissant, Hazelwood, Lake St. Louis, O'Fallon, St. Charles, Troy and Wentzville.

In the end, homeowners are the biggest winners in the adoption of energy codes and for that reason, the American Institute of Architects are firmly in support of Creve Coeur Adopting the 2009 IECC.

Please feel free to contact me with any specific questions you need answered.

Caryl Kinsey Fox, AIA, LEED AP, BD&C

EXHIBIT C

RECEIVED

FEB 13 2013

RECEIVED

FEB 13 2013

BUILDING DEPT.

HBA Recommended Change to ~~Creve Coeur~~ Draft Ordinance

Recommendation 1:

Revise as follows:

R302.2 Townhouses. Each townhouse shall be considered a separate building and shall be separated by fire-resistance-rated wall assemblies meeting the requirements of Section R302.1 for exterior walls.

Exceptions:

1. A common 1-hour fire-resistance-rate wall assembly tested in accordance with ASTM E 119 or UL 263 is permitted for townhouses protected by an automatic residential fire sprinkler system if such walls do not contain plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be installed in accordance with Chapters 34 to 43. Penetrations of electrical outlet boxes shall be in accordance with Section R302.4.
2. A common 2-hour fire-resistance-rates wall assembly or a two 1-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 or UL 263 is permitted for townhouses not protected by an automatic residential fire sprinkler system if such walls do not contain plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be installed in accordance with Chapters 34 through 43. Penetrations of electrical outlet boxes shall be in accordance with Section R 302.4.

Reason:

The HBA agrees with the intent of the code change. However, the HBA has recommended the option of a two one-hour fire-rated wall assemblies to help address concerns with property law. Technically, there is a property line between townhomes that runs through the middle of the shared interior wall. Therefore, by allowing two one-hour walls, residents will be able to address issues to their property without affecting their neighbors.

Cost Impact:

Minimal

City's Response:

The recommended change to Exception 2 is unnecessary. Section R302.2's reference to Section R302.1 for exterior walls already accomplishes what is recommended.

1.

2.

Recommendation 2:

Revise as follows:

R302.7 Under-stair protection. The underside of stair stringers shall be protected with a layer of ½ inch Type X gypsum board. Enclosed accessible space under stairs shall have their walls, under-stair and any soffits protected on the enclosed side with ½ inch Type X gypsum board.

Reason:

HBA recommends the deletion of the Type X requirement in order to match the code change recommended in 302.14, as regular gypsum will still provide additional protection for stairways in the event of a fire.

Cost Impact:

\$300.00 to \$500.00 depending on whether it is a straight run or switch back stair run.

City's Response:

The requirement for Type X gypsum board at this location has been in the city's building code since 5/29/2007. ½ inch gypsum board provides 15 minutes of protection to the stair stringers when exposed to a fire. ½ inch Type X gypsum board provides 25 minutes of protection to the stair stringers when exposed to a fire. That's 10 additional minutes of escape time for residents and 10 additional minutes of rescue time for firefighters during the course of a home fire.

Recommendation 3:

Revise as follows:

R302.14 Fire protection of floors. ~~Floor assemblies, not required elsewhere in this code to be fire-resistance-rated, shall be provided with ½ inch gypsum wallboard membrane, 5/8-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, NFPA 13D, 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:
 - ~~a. The aggregate area of the unprotected portions shall not exceed 80 square feet per story.~~
 - ~~b. 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.~~~~

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.~~

Reason:

HBA members and staff would appreciate the opportunity to discuss the reasoning behind this recommended code change in person.

Cost Impact:

Varies with home size and design but approximately \$4,000 to \$5,000.

City's Response:

The city's amendment to add new section R302.14 was made to add fire resistance rating to the underside of lightweight engineered wood products such as I-joists. When subjected to fire, these types of floor assemblies fail much sooner than floor assemblies built of dimensional lumber. During tests, Underwriter's Laboratories found that wooden I-joists fail within 6 minutes of fire ignition. That time frame is typically less than the fire department response time from fire ignition to arrival of the fire department. Often times these lightweight floors are near the point of collapse upon arrival of the firefighters. It has been documented there is little warning of their impending collapse even with the use of thermal imaging cameras. As a result, there is an increasing number of firefighter deaths and injuries being caused by the collapse of floors that are built of lightweight, wooden I-joists. The ½ inch gypsum wallboard membrane will provide an additional 20 minutes of fire-resistance protection. This requirement will provide additional safety to firefighters and residents which is the intent of the building code per section R101.3. Also this section is part of the 2012 edition of the IRC.

Recommendation 4:

R311.2.1 Interior egress doors. Interior egress doors shall have a minimum clear width of 29 ¾ inches and a minimum height of 78 inches. The clear width of door openings at swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees. Where a door opening includes two door leaves without a mullion, one leaf shall provide a clear opening width of 29 ¾ inches. Door openings to storage closets, bathrooms, and other non-habitable spaces shall not be limited by the minimum width.

Reason:

Necessity for this code requirement is unclear.

Cost Impact:

Varied

City's Response:

This code requirement has been in the city's building code since 1995. The only door the 2009 IRC regulates is the dwelling unit's required exit door to the exterior. The minimum

width or height of a dwelling unit's interior egress doors serving bedrooms, offices, recreation rooms, etc. would not be regulated unless this section were added.

Recommendation 5:

R1004.5 Chimney separation. Wood burning factory built chimneys shall be separated from the interior and attic spaces by a minimum layer of ½-in Type X gypsum board. This gypsum board shall be secured to the interior of the chimney chase from the top of the firebox to the underside of the rood deck. A minimum clearance of 2-inches shall be maintained between the factory-built chimney and the gypsum board. All joints shall be tight and fire-taped. Gas appliance direct-vent or vent-free fire places shall be installed as per manufacturer's directions.

Reason:

It has been the experience of industry experts that it is best to install factory built chimneys as per manufacturer's instructions.

Cost Impact:

Varied

City's response:

There are factory-built fireplaces that are UL listed to burn wood or house gas-fired log heaters (appliances). Since a resident may burn wood or install a gas-fired appliance in the same factory-built fireplace, the city believes that when a factory-built chimney is initially installed it should be protected to the most hazardous condition that may occur.

Recommendation 6:

R1005.7 Fireplace separation. Factory-built wood-burning fire places shall be enclosed on all sides with a minimum layer of ½-inch Type X gypsum board. A minimum clearance of 1-inch shall be maintained between the factory-built fireplace and the gypsum board. All joints shall be tight and fire taped. Gas appliances that are direct-vent or vent-free shall be installed as per manufacturer's instructions.

Reason:

It has been the experience of industry experts that it is best to install factory built chimneys as per manufacturer's instructions.

Cost Impact:

Varied

City's Response:

See response to Section R1004.5 above.

Recommendation 7:

M1401.3 Sizing. Heating and cooling equipment shall be sized in accordance with ACCA Manual S based on building load calculations in accordance with ACCA Manual

5.

J and other approved heating and cooling calculation methodologies. The design temperatures for the City of Creve Coeur shall be in accordance with Table M1401.3.

Table M1401.3
Design Temperatures

	Outdoor	Inside
Winter	DB 2 degrees F	DB 70 degrees F
Summer	DB 95 degrees F WB 76 degrees F	DB 78 degrees F

Reason:

The HBA believes that the manuals listed provide more than adequate methodologies, and industry experts noted that the temperatures outlined here will not change the load design of the HVAC system of the home.

Cost Impact:

N/A

City's Response:

This amendment proposed by the city is consistent with the amendment made by St. Louis County when they adopted the 2009 IRC.

Recommendation 8:

~~**M1503.4 Makeup air required.** Exhaust hood systems capable of exhausting in excess of 400 cubic feet per minute shall be provided with makeup air at a rate equal to the exhaust air rate. The cumulative exhaust flow rate to the kitchen exhaust system(s) may exceed 400 cfm if the range hood or down-draft exhaust system provided is equipped with a built-in mechanical makeup air system that will provide an amount of makeup air equal to the amount of exhaust air interlocked with the kitchen exhaust fan so as to operate whenever the kitchen exhaust fan is operating. Makeup air shall be tempered by an inline duct heater.~~

Reason:

See HBA recommended code amendment 1503.4.

City's Response:

Research has shown that kitchen exhaust systems with an exhaust flow rate in excess of 400 cfm for an individual dwelling unit are greatly oversized. The industry recommendation is a minimum 40 cfm exhaust rate per linear foot of cooktop. A 48 inch wide cooktop can be adequately served by an exhaust system that has an exhaust system rate of 160 cfm. The continued operation of a kitchen exhaust system with an exhaust flow rate in excess of 400 cfm can "depressurize" an air-tight home to the point that "backdrafting" of carbon monoxide gases from gas-fired appliances and woodburning fireplaces can occur. This code requirement is recommended by several mechanical contractors who have stated that the 400 cfm threshold is reasonable and that any exhaust system greater than 400 cfm resembles a commercial-type range hood that is required to be provided with make-up air.

6.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: 2009 International Residential Code

Code Section: R106.3.1

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

Approval of Construction documents. When the *building official* issues a *permit*, the *construction documents* shall be *approved* in writing or by a stamp which sets "REVIEWED FOR CODE COMPLIANCE." One set of *construction documents* so reviewed shall be retained by the building official. The other set shall be returned to the applicant, ~~shall be kept at the site of work~~ may be kept at the site of work or made available at time of inspection and shall be open to inspection by the building official or his or her authorized representative.

Reason:

Unfortunately, it is not always possible to maintain records on a construction site, especially in the beginnings of the construction process when materials and other important documents are easily subject to theft. However, records are always maintained and can be made available to any building official or representative upon request.

Cost Impact:

Copy costs \$7 to \$60 – varies with complexity of copy and administrative costs (delivery and return of annotated copy costs approximately \$20).

City's Response:

The city has always required that the city-approved plans be kept on site until the final inspection is approved. The inspectors need to refer to these approved plans during the course of their inspections.

7.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: 2009 *International Residential Code*

Code Section: R108.6

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

Work commencing before permit issuance. Any person who commences work requiring a *permit* on a building, structure, electrical, gas, mechanical or plumbing system before obtaining the necessary permits shall be subject to a fee established by the applicable governing authority that shall be in addition to the required *permit* fees.

Exemptions:

1. Earthwork
2. Stakeouts and other necessary planning procedures

Reason:

These exemptions allow for planning and other preliminary procedures that do not consist of the erection of a building to commence as permits and other important paper work are processed. This will also allow builders to install necessary construction Best Management Practices to comply with municipal Stormwater Phase II requirements.

Cost Impact:

No cost impact.

City's Response:

The city may issue a grading permit or a footing/foundation permit prior to the issuance of a building permit. Recommended exemptions are unnecessary.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: 2009 International Residential Code

Code Section: Chapter 2: Definitions – Story Above Grade Plane

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

STORY ABOVE GRADE PLANE. Any *story* having its finished floor surface entirely above the *grade plane*, except that a *basement* shall be considered as a *story above grade plane* where the finished surface of the floor above the *basement* meets ~~any one~~ of the following:

1. Is more than 6 feet (1829 mm) *above grade plane*, and
2. Is more than 6 feet (1829 mm) above the finished ground level for more than 50 percent of the total building perimeter, and
3. Is more than 12 feet (3658 mm) above the finished ground level at any point.

Reason:

The 2009 IRC requirements would dramatically effect current building design requirements and put restrictions on three-story homes.

Cost Impact:

This definition will have a significant impact on the cost of construction.

City's Response:

The building division disagrees with this recommendation. This definition, as written, has been in the city's building code since 1992. It gives clear parameters as to when a basement becomes a story above grade plane. If any one of the criteria listed is met, the basement is considered a story above grade plane. As recommended, all 3 criteria have to be met before a basement becomes a story above grade. Per the recommended definition a basement would almost never be considered a story above grade plane.

9.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: 2009 International Residential Code

Code Section: Table R 301.2(1) – Note h.

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

Ground Snow Load	Wind Design		Seismic Design Category	Subject to Damage From			Winter Design Temp	Ice Barrier Underlayment Required	Flood Hazards	Air Freezing Index	Mean Annual Temp
	Speed (mph)	Topographic Effect		Weathering	Frost Line Depth	Termite					
					<u>30 Inches</u>			<u>NO</u>			

h. ~~In accordance with Section R905.2.7.1, R905.4.3.1, R905.6.3.1, R905.7.3.1 and R905.8.3.1, where there has been a history of local damage from the effects of ice damming, the~~ The jurisdiction shall fill in this part of the table with “YES.” “NO.”
~~Otherwise, the jurisdiction shall fill in this part of the table with “NO.”~~

Reason:

St. Louis County does not have a climate that would warrant an ice barrier underlayment and the frost depth for the area is 30 inches.

Cost Impact:

Estimated cost savings for this amendment range from \$350 to \$750 depending on the size and design of the home.

City's Response:

The building division agrees that the frost line depth in our area is 30 inches. The building division disagrees that our climate would not warrant an ice barrier underlayment. Ice has formed along roof eaves in this area and the ice barrier helps to prevent damage to the roof sheathing along the edge of the roof.

10.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: *2009 International Residential Code*

Code Section: R301.2.2

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

R301.2.2 Seismic provisions. The seismic provisions of this code shall apply to buildings constructed in Seismic Design Categories C, D₀, D₁ and D₂, as determined in accordance with this section.

Exemption: Detached one- and two-family dwellings located in Seismic Design Category C and D₀ are exempt from the seismic requirements of this code.

Reason:

 **Cost Impact:**

City's Response:

The building division does not believe this change is necessary. St. Louis County has been determined to be in Seismic Design Category C.

11.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: 2009 International Residential Code

Code Section: R302.1

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

R302.1 Exterior walls. Construction, projections, openings and penetrations of exterior walls of dwellings and accessory buildings shall comply with Table R302.1.

Exceptions:

1. Walls, projections, openings or penetrations in walls perpendicular to the line used to determine the fire separation distance.
2. Walls of dwellings and accessory structures located on the same lot.
3. Detached tool sheds and storage sheds, playhouses and similar structures exempted from permits are not required to provide wall protection based on location on the lot. Projections beyond the exterior wall shall not extend over the lot line.
4. Detached garages accessory to a dwelling located within 2 feet (610 mm) of a lot line are permitted to have roof eave projections not exceeding 4 inches (102 mm).
5. Foundation vents installed in compliance with this code are permitted.
6. Cantilevered manufactured fireplaces.
7. Roof eave overhangs.
8. Uncovered decks.

Reason:

Exception 6 includes a product that poses no serious health or safety risk.

Exception 7 has been added as it is often impossible to predict construction projections within a few inches. Including specific distances for roof eave overhangs is also unnecessary as the constructed exterior wall will be in compliance with the noted distance separations and all portions of the vertical wall above the sheathing are fire rated.

Exception 8 includes a structure that poses no serious health or safety risk.

Cost Impact:

The additions to R302.1 would be a significant cost savings.

12.

City's Response:

The building division does not think this change is needed. The city's zoning code does not allow the walls of dwellings or accessory structures to be located closer than 5 feet to any property line.

13.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: 2009 International Residential Code

Code Section: R303.3

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

R303.3 Bathrooms. Bathrooms, water closet compartments and other similar rooms shall be provided with aggregate glazing area in windows of not less than 3 square feet (0.3 m²), one-half of which must be openable.

Exception:

1. The glazed areas shall not be required where artificial light and a mechanical *ventilation* system are provided. The minimum *ventilation* rates shall be 50 cubic feet per minutes (24 L/s) for intermittent *ventilation* or 20 cubic feet per minute (10 L/s) for continuous *ventilation*. *Ventilation* air from the space shall be exhausted directly to the outside or to an attic gable vent or ventilated soffit

Reason:

This code comment is offered to help builders maintain current building practices.

Cost Impact:

City's Response:

The building division disagrees with this recommendation. The intent of the code is to exhaust moisture-laden air directly to the outside through the soffit, through the attic gable vent or through the roof.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: *2009 International Residential Code*

Code Section: R303.4.2

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

R303.4.2 Exhaust openings. Exhaust air shall not be directed below 6 feet and 8 inches onto a public walkway.

Reason:

Keeping exhaust air above 6 feet and 8 inches protects the health and safety of the passerby, while maintaining design flexibility.

Cost Impact:

Addition to the code would save approximately \$400 per exhaust opening.

City's Response:

The building division disagrees with this recommendation. The intent of this code section is to prevent moisture-laden air from bathroom, kitchen or dryer vents from creating a slipping hazard on all walkways, not just public walkways.

15.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: 2009 *International Residential Code*

Code Section: R311.3

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

R311.3 Floors and landings at exterior doors. There shall be a landing or floor on each side of at each required egress exterior door. The width of each landing shall not be less than the door served. Every landing shall have a minimum dimension of 36 inches (914 mm) measured in the direction of travel. Exterior landings shall be permitted to have a slope not to exceed $\frac{1}{4}$ unit of vertical in 12 units horizontal (2-percent).

Exception: Exterior balconies less than 60 square feet (5.6 m^2) and only accessible from a door are permitted to have a landing less than 36 inches (914 mm) measured in the direction of travel.

Reason:

Landing requirements should only apply toward required egress openings, not all egress doors. This maintains the importance of safety while allowing for a greater freedom with design.

Cost Impact:

The proposed amendment to the code would save approximately \$300 to \$2,000 per home. The cost savings varies with the home's design and number of exterior egress doors.

City's Response:

The building division disagrees with this recommendation. The intent of the building code is to have a landing of the proper size at all exterior doors.

16.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: 2009 *International Residential Code*

Code Section: R311.3.2

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

R311.3.2 Floor elevations for other exterior doors. Doors other than the required egress door shall be provided with landing or floors not more than 7 ¾ inches (196 mm) below the top of the threshold.

Exception: A landing is not required where a stairway of ~~two~~ four or fewer risers is located on the exterior side of the door, provided the door does not swing over the stairway.

Reason:

The change from two to four or fewer risers makes this provision compatible with other requirements regulating conditions for risers outlined in R311.7.7.

 Cost Impact:

City's Response:

The building division disagrees with this recommendation. The code does not want a resident to walk out through their exterior door directly onto a stairway that has more than 2 risers. Section R311.7.7 has nothing to do with stairways in proximity to exterior doors. It requires handrails to be provided on at least one side of stairways with 4 or more risers.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: 2009 *International Residential Code*

Code Section: R311.7.4

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

R311.7.4 Stair treads and risers. Stair treads and risers shall meet the requirements of this section. For the purposes of this section all dimensions and dimensioned surfaces shall be exclusive of carpets, rugs or runners.

R311.7.4.1 Riser height. The maximum riser height shall be $7\frac{3}{4}$ 8 $\frac{1}{4}$ inches (196 228.6 mm). The riser shall be measured vertically between leading edges of the adjacent treads. The greatest riser height within any flight of stairs shall not exceed the smallest by more than $\frac{3}{8}$ inch (9.5 mm).

R311.7.4.2 Tread depth. The minimum tread depth shall be 10 $\frac{1}{2}$ inches (254 228.6 mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than $\frac{3}{8}$ inch (9.5 mm). Consistently shaped winders at the walkline shall be allowed within the same flight of stairs as rectangular treads and do not have to be within $\frac{3}{8}$ inch (9.5 mm) of the rectangular tread depth.

Winder treads shall have minimum depth of 10 $\frac{1}{2}$ inches (254 228.6 mm) measured between the vertical planes of the foremost projection of adjacent treads at the intersections with the walkline. Winder treads shall have a minimum tread depth of 6 inches (152 mm) at any point within the clear width of the stair. Within any flight of stairs, the largest winder tread depth at the walkline shall not exceed the smallest winder tread by more than $\frac{3}{8}$ inch (9.5 mm).

Reason:

The purpose of this amendment is to retain the stair geometry requirements to those that have historically been allowed under the Building Officials and Code Administrators National Building Code (BOCA). This amendment will allow for the continued use of the 8 $\frac{1}{4}$ " x 9" geometry, which is also the historically accepted requirement of many other state and local jurisdictions across the country. Many others actually adopt stair geometry requirements of 8 $\frac{1}{4}$ " x 9."

These dimensions, originally accepted in the First Draft of the International Residential Code (IRC) and the historic dimensions in the Council of American Building Officials' CABO One- and Two-family Building Code, adequately provide for stair safety in residential occupancies.

The 8 1/4" x 9" geometry has always adequately provided for occupant safety in residential occupancies. No sound documentation or data has ever been presented demonstrating that the 8 1/4" x 9" geometry is any less safe than a stair geometry of 7 3/4" x 10" or other even more stringent geometries. More specifically, there is no sound data showing or otherwise indicating a stair geometry of 8 1/4" x 9" is a contributing factor in accidental residential falls anymore than a stair geometry of 7 3/4" x 10" or any other stair geometry that has been proposed.

The safety benefits of the 7 3/4" riser and 10" tread stair geometry are technically unsubstantiated and are not practical in many home designs. If the footprint of the house must be increased to accommodate the additional space needed for 7 3/4" x 10" vs. an 8 1/4" x 9" geometry, adequately sized living spaces are sacrificed without any demonstrated gain. This can lead to an economic hardship upon first-time homebuyers of smaller homes, and in particular for construction on smaller lots, in-fill projects, and townhomes.

As outlined in Section R101.3 of the IRC, the purpose the requirements in the code are to provide minimum requirements for occupant safety and health. There is adequate substantiation to show that 8 1/4" x 9" geometry provides this minimum level of occupant safety.

Cost Impact:

Revisions would have a potential cost savings of approximately \$100 to \$350 per home (varies with style, design and number of stair cases).

City's Response:

The 7 3/4" maximum riser height / 10" minimum tread width stair geometry has been part of the BOCA National Building Code since 1996, the International Residential Building Code since 2000 and the city's building code since 2/2002. It has been demonstrated by various studies and code-change committees that the less steep 7 3/4" / 10" stair geometry provides for a safer stair and an easier stair to ascend and descend than a stair with the 8 1/4" / 9" stair geometry. This is an important factor as our society gets older. The building division believes these recommendations should not be included in the city's new building code.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: 2009 *International Residential Code*

Code Section: R311.7.5 Landings for Stairways

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

R311.7.5 Landings for stairways. There shall be a floor or landing at the top and bottom of each stairway.

Exception: A floor or landing is not required at the top of an interior or exterior flight of stairs, including stairs in an enclosed garage, provided a door does not swing over the stairs. A flight of stairs shall not have a vertical rise larger than 12 feet (3658 mm) between floor levels or landings. The width of each landing shall not be less than the width of the stairway served. Every landing shall have a minimum dimension of 36 inches (914 mm) measured in the direction of travel.

Reason:

Direction of travel does not require a landing to safely open a door.

Cost Impact:

Proposed code amendment would save approximately \$918.75 to \$1,225 per home (cost varies with the price of the landing and value of home per square foot.)

City's Response:

The building division does not believe this recommendation is necessary. There are other code sections (R311.3 through R311.3.2) that regulate landings at exterior doors. Also, there is code language in the exception that appears to have been moved from the body of Section R311.7.5 for no apparent reason.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: 2009 International Residential Code

Code Section: R 313.2

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

R 313.2 One- and two-family dwellings automatic fire systems. ~~Effective January 1, 2011, an automatic residential fire sprinkler system shall be installed in one- and two-family dwellings. A builder of a single family dwellings or residences or multi-unit dwellings of four or fewer units shall offer to any purchaser on or before the time of entering into the purchase contract the option, at the purchaser's cost, to install or equip fire sprinklers in the dwelling, residence, or unit. Notwithstanding any other provision of law to the contrary, no purchaser of such a single family dwelling, residence, or multi-unit dwelling shall be denied the right to choose or decline to install a fire sprinkler system in such dwelling or residence being purchased by any code, ordinance, rule, regulation, order, or resolution by any county or other political subdivision. Any county or other political subdivision shall provide in any such code, ordinance, rule, regulation, order, or resolution the mandatory option for purchasers to have the right to choose and the requirement that builders offer to purchasers the option to purchase fire sprinklers in connection with the purchase of any single family dwelling, residence, or multi-unit dwelling of four or fewer units.~~

Exception: An automatic residential fire sprinkler system shall not be required for additions or alterations to existing buildings that are not already provided with an automatic residential sprinkler system.

Reason:

Amendment above brings St. Louis County Building Code into compliance with the Missouri's Revised Statutes.

Cost Impact:

Estimated cost savings range from \$9,688.81 to \$22,725.42.

City's Response:

The city attorney has reviewed and approved the city's proposed amending language to this section and determined it to be in compliance with state law.

21.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: *2009 International Residential Code*

Code Section: R403.1.4

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

R403.1.4.1 Frost Protection. Except where otherwise protected from frost, foundation walls, piers, and other permanent supports of buildings and structures shall be protected from frost by one or more of the following methods:

1. ~~Extended below the frost line specified in Table R301.2.(1)~~ Extend 30 inches below finish grade;
2. Constructing in accordance with Section R403.3;
3. Constructing in accordance with ASCE 32; or
4. Erected on solid rock.

 **Reason:**

City's Response:

The 30 inch depth is already specified in Table R301.2.(1).

Cost Impact:

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: 2009 International Residential Code

Code Section: R404 Tables

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

R404.1.1 (1) Concrete Foundation Walls

Max. Wall Height	Max. Depth of Unbalanced Backfill	Min. Nominal Wall Thickness
7'-0"	6'-0" or less 7'-0"	8" 10" Note a
8'-0"	6'-0 or less 7'-0" 8'-0"	8" Note a 8" Note a 8" Note a
9'-0"	6'-0" or less 7'-0" 8'-0" 9'-0"	10" 10" 10" Note b 10" Note b
10'-0"	9'-0"	12" Note c

Note a: Concrete foundation walls may be constructed a minimum of nominal 8" thick where the wall height from the top of the footing to the top of the wall does not exceed 8'. A minimum of (2) #4 reinforcing bars shall be placed horizontally in top and bottom of the foundation wall. A minimum of (2) #5 reinforcing bars shall be provided around all window and door openings in concrete foundation and basement walls; bars shall extend a minimum of 24" beyond the corners of the openings.

Note b: Concrete foundation walls may be constructed a minimum of nominal 10" thick. A minimum of (2) #5 reinforcing bars shall be placed horizontally in the top, middle, and bottom of the foundation wall. A minimum of (2) #5 reinforcing bars shall be provided around all window and door openings in concrete foundation and basement walls; bars shall extend a minimum of 24" beyond the corners of the openings.

Note c: Concrete foundation walls may be constructed a minimum of nominal 12" thick. A minimum of (3) #5 reinforcing bars shall be placed horizontally in the top, middle, and bottom of the foundation wall. A minimum of (2) #5 reinforcing barts shall be provided around all window and door openings in

concrete foundation and basement walls; bars shall extend a minimum of 24" beyond the corners of the openings.

The concrete minimum nominal wall thickness shall be 8 inches for foundation walls in soil classes SC, MH, ML-MC and inorganic CL when the maximum wall height is 8 feet.

The concrete minimum wall thickness shall be 10 inches for foundation walls in soil classes SC, MH, ML-CL and inorganic CL when the maximum wall height is 9 feet.

The concrete minimum wall thickness shall be 12 inches for foundation walls in soil classes SC, MH, ML-CL and inorganic CL when the maximum wall height is 10 feet.

Reason:

Richard W. Stephenson, P.E. Ph.D. stated on a study vetted during the 2003 code cycle (copy available), "there are no stability problems with nominally 8-inch thick foundation walls for residential construction. Consequentially, there is no compelling justification to require 10-inch foundation walls. Similarly, current reinforcements for steel reinforcement are adequate." The same conditions exist today and, therefore, this proposal allows for current construction practices to continue.

Cost Impact:

Proposed code changes would yield a potential cost savings of \$1,200 to \$4,000 depending on the size of the foundation.

City's Response:

The building division believes this recommendation is unnecessary. Table R404.1.2(1) through Table 404.1.2(8) more than adequately regulate the construction of concrete foundation walls.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: 2009 *International Residential Code*

Code Section: R405.1

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

405.1 Concrete or masonry foundations. Drains shall be provided around all concrete or masonry foundation that retain earth and enclose habitable or usable space 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, and the drainage tiles or perforated pipe shall be placed on a minimum of 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.

Exceptions:

1. 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 1 Soils, as detailed in Table R405.1.
2. Drains provided as detailed in Section R405.1.2 are approved as an alternative method to meet the requirements of this Section.

R405.1.2 Soil Evaluations. An evaluation of the soil for the presence or absence of ground water is required. The evaluation report shall be based on either a subsurface soil investigation or satisfactory data from adjacent areas together with an inspection of the excavation prior to pouring concrete.

R405.1.2.1 Groundwater present. Provide drain tile, perforated pipe, or other approved foundation drainage systems (such as water channel system) around perimeter of the outside of the foundation and inside the foundation. Drain discharge shall be by gravity to daylight or be connected to a basement floor sump.

R405.1.2.2 No ground water present. Provide drain tile, perforated pipe, or other approved foundation drainage systems (such as water channel system) around

perimeter of the outside of the foundation or inside the foundation. Drain discharge shall be by gravity to daylight or be connected to a basement floor sump.

R405.1.2.3 Filter membranes. An approved filter membrane shall be placed over the top of the joints/pipe perforations. The tile/pipe shall be placed on 2" minimum gravel or crushed stone and have 6" minimum cover.

R405.1.2.4 Drainage system. Drainage system shall discharge by gravity to daylight or be connected to an approved sump (15" in diameter x 18" deep with fitted cover). A sump pump shall be provided if basement is finished or partially finished with pump discharge by an approved method.

Reason:

The proposed code change has been an alternative used in the past that is an effective draining method for foundations.

Cost Impact:

The proposed code change will save approximately \$300 to \$400 per home.

City's Response:

The city's amending language in the proposed adopting ordinance has similar requirements organized in a different manner.

26.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: 2009 International Residential Code

Code Section: R502.2.2.3

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

R502.2.2.3 Deck lateral load connection. The lateral load connection required by Section R502.2.2 shall be permitted to be in accordance with Figure R502.2.2.3. Hold-down tension devices shall be installed in not less than two locations per deck, and each device shall have an allowable stress design capacity of not less than 1500 pounds (6672N).

Exception: All decks that are 100 square feet or less.

Reason:

Decks that are less than 100 square feet do not need the extra support required in the code as published. This requirement exempts the new stringency for the decks that do not require it and maintains the new safety allowance for the decks that might need the additional support.

Cost Impact:

The proposed code amendment would save approximately \$180. It costs \$90 per device (two required per deck); price includes \$25 for materials and \$65 for additional hour of labor for installation of each device.

City's Response:

The building division believes there is no substantiated basis for this recommendation (exception) to be included in the city's new building code.

Creve Coeur
Building Code Review

Code Change Proposal Form

Code: 2009 International Residential Code

Code Section: R602.3

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

R602.3 Design and construction. Exterior walls of wood-frame construction shall be designed and constructed in accordance with the provisions of this chapter and Figures R602.3(1) and R602.3(2) or in accordance with AF&PA's NDS. Components of exterior walls shall be fastened in accordance with Tables R602.3(1) through R602.3(4). Structural wall sheathing shall be fastened directly to structural framing members. Exterior wall coverings shall be capable of resisting the wind pressures listed in Table R301.2(2) adjusted for height and exposure using Table R301.2(2) adjusted for height and exposure using Table R301.2(3). Wood structural panel sheathing used for exterior wall shall conform to the requirement of Table R602.3(3).

Studs shall be continuous from support at the sole plate to a support at the top plate to resist loads perpendicular to the wall. The support shall be a foundation on floor, ceiling or roof diaphragm or shall be designed in accordance with accepted engineering practice.

Exceptions:

1. Jack studs, trimmer studs and cripple studs at openings in walls that comply with Tables R502.5(1) and R502.5(2).
2. Headers can be on top of an opening in a wall.

Reason:

Provides increased shear properties and avoids "hinged" lateral complications with no adverse structural effects. This change serves to clarify the approval of this detail as there have been interpretations denying such configurations in the past. The code change also conforms to standard construction practices and helps to facilitate shear wall calculations.

Cost Impact:

Estimated cost savings are minimal.

City's Response:

The building division believes this recommendation is unnecessary. Figure R602.3(2) and Tables R502.5(1) and R502.5(2) allow headers across the top of openings in exterior walls.

28.

**City of Creve Coeur
Code Change Proposal Form**

Code: 2009 International Residential Code

Code Section: R602.10.1.1

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

R602.10.1.1 Braced wall panels. Braced wall panels shall be constructed in accordance with the intermittent bracing methods specified in Section R602.10.2, or the continuous sheathing methods specified in Sections R602.10.4, [and] R602.10.5, and R602.10.10. With the exception of the bracing method detailed in Section R602.10.10 [M] mixing of bracing method shall be permitted as follows:

1. Mixing bracing methods from story to story is permitted.
2. Mixing bracing methods from braced wall line to braced wall line within a story is permitted, except that continuous sheathing methods shall conform to the additional requirements of Sections R602.10.4 and R602.10.5.
3. Mixing bracing methods within a braced wall line is permitted only in Seismic Design Categories A and B, and detached dwellings in Seismic Design Category C. The length of required bracing for the braced wall line with mixed sheathing types shall have the higher bracing length requirement, in accordance with Tables R602.10.1.2(1) and R602.10.1.2(2), of all types of bracing used.

R602.10.1.2 Length of bracing. The length of bracing along each braced wall line shall be the greater of that required by the design wind speed and braced wall line spacing in accordance with Table R602.10.1.2(1) as adjusted by the factors in the footnotes or the Seismic Design Category and braced wall line length in accordance with Table R602.10.1.2(2) as adjusted by the factors in Table R602.10.1.2(3) or braced wall panel location requirements of Section R602.10.1.4. Only walls that are parallel to the braced wall line shall be counted toward the bracing requirement of that line, except angled walls shall be counted in accordance with Section R602.10.1.3. In no case shall the minimum total length of bracing in a braced wall line, after all adjustments have been taken, be less than 48 inches (1219 mm) total.

Exception: Structures braced using Section R602.10.10.

R602.10.10 Simplified bracing method for one- and two-family dwellings when the entire structure is sheathed with wood structural panels and located in wind exposure A or B. The construction documents shall detail the locations and widths of all braced wall panels in accordance with this section.

R602.10.10.1 Wood structural sheathing. The building exterior walls shall be sheathed with 7/16 inch (11.1 mm) or thicker plywood or OSB wood structural panels. The wood structural panels shall be applied to all exterior walls, gable ends, and band boards. All vertical joints between panels shall be blocked. Horizontal joints in braced wall panels shall be blocked.

R602.10.10.2 Braced wall panel locations. Braced wall panels shall be located in every exterior braced wall line in accordance with the following criteria:

1. The outside edge of the first braced wall panel meeting the width established in Table R602.10.10.3 shall be a maximum of 12.5 feet (3810 mm) or less from each end of the braced wall line. The outside stud of the first braced wall panels closest to the end of the braced wall line shall be secured with a hold-down device securing the end stud to the foundation with a minimum uplift design value of 800 pounds.

Exception: The 800 pound hold-down device is not required when the braced wall panel is placed at the end of the braced wall line and there is a 24 inch (610) wide full height sheathed wall placed 90 degrees to the end of the braced wall line and panel.

2. The centerline spacing of braced wall panels in a braced wall line may not exceed 25 feet (7620 mm).

R602.10.10.3 Braced wall panel widths. Braced wall panel locations shall be shown on the floor plans or the elevation views and meet the widths established in Table R602.10.10.3.

**TABLE 602.10.10.3
SIMPLIFIED BRACING PANEL WIDTHS**

		WIDTH OF SOLID PANEL ^{a, b}			
		8' wall height	9' wall height	10' wall height	12' wall height
Plywood/OSB Panel	3:1	32"	36"	40"	48"
Simplified Portal Wall ^c	6:1	16" ^d	18" ^d	20" ^d	24" ^d

a. Linear interpolation is permitted.

b. Wall height is the vertical distance from the bottom of the sole/sill plate to the top of the double top plate. An additional 2 inch (50.8 mm) variation in height is allowed for pre-cut stud framing.

c. The Simplified Portal Wall, if applicable, shall be constructed in accordance with the applicable detail in Figure R602.10.10.3. The designer shall provide this detail on the construction documents.

d. The Simplified Portal Wall width assumes the beam is placed under the top plate of the wall. A smaller width may be calculated for a lower top of beam height using the 6:1 height to width ratio.

R602.10.10.4 Corner framing. The exterior wall corners shall be constructed in accordance with the applicable detail in Figure R602.10.10.4.

Exception: Braced wall panels located in accordance with Section R602.10.10.2.

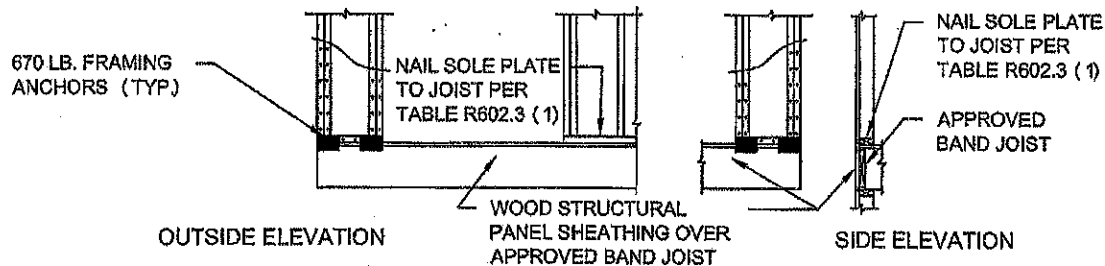
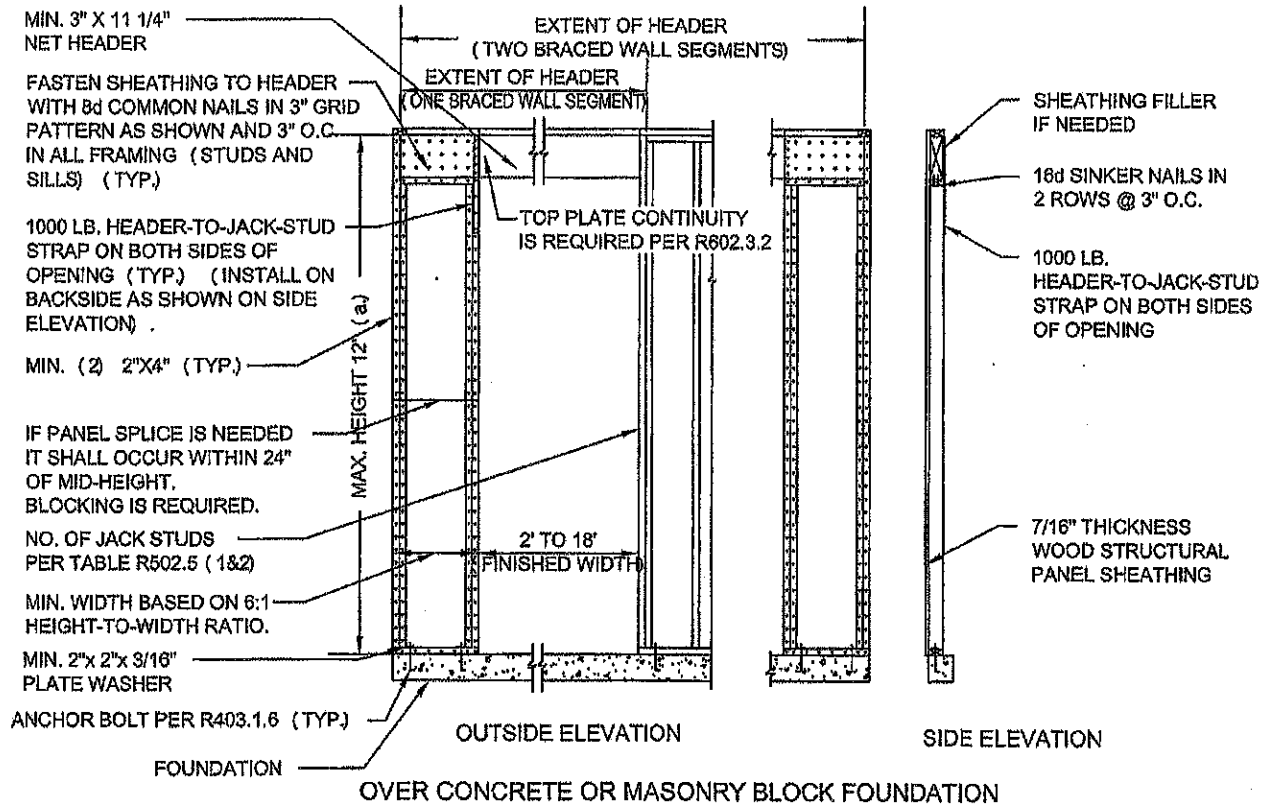
R602.10.10.5 Braced wall line spacing. When the perpendicular distance between the exterior braced wall lines exceeds 50 feet (15240 mm), the registered design professional shall include the following certification on the drawings:

30.

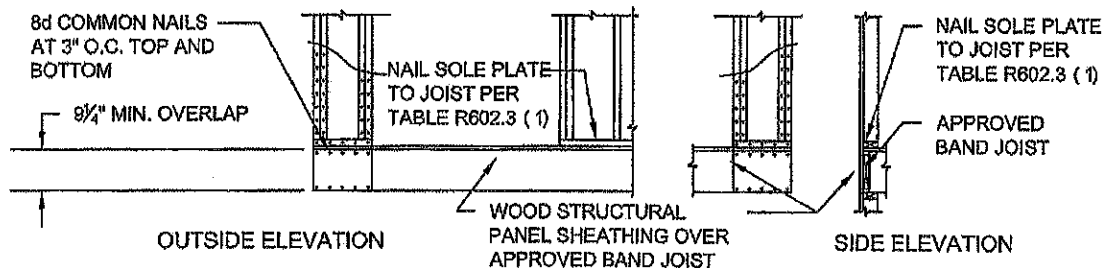
The interior and exterior wall configuration braces the structure in accordance with or equivalent to the lateral bracing provisions of Section R602.10 of the International Residential Code, 2009 edition or Section 2305 of the International Building Code, 2009 edition.

R602.10.10.6 Maximum wall height. Wall height may not exceed 12 feet (3658 mm) (12 feet 2 inches (3708 mm) actual). Walls greater than 12 feet (3658 mm) in height shall be designed and detailed by the registered design professional to resist wind loads in both the longitudinal and transverse directions.

31.



OVER RAISED WOOD FLOOR OR SECOND FLOOR
FRAMING ANCHOR OPTION



OVER RAISED WOOD FLOOR OR SECOND FLOOR
WOOD STRUCTURAL PANEL OVERLAP OPTION

FIGURE R602.10.10.3
SIMPLIFIED PORTAL WALL

- a. CRIPPLE WALL FRAMING CONSISTING OF STUD FRAMING, SINGLE BOTTOM PLATE, AND DOUBLE TOP PLATE MAY BE ADDED TO THE TOP OF THE NARROW PORTAL WALL AS LONG AS THE COMBINED HEIGHT OF THE TWO WALLS IS LESS THAN OR EQUAL TO 12 FEET AND THE TWO WALLS ARE STRAPPED TOGETHER ON THE INTERIOR SIDE WITH A 18GAUGE METAL 1 1/2 INCH WIDE BY 21 INCH LONG STRAP. A MINIMUM 10 INCHES OF THE STRAP SHALL BE CONNECTED TO EACH WALL OR GABLE TRUSS WITH 9 - 16D NAILS FOR A TOTAL OF 18-16D NAILS IN THE ENTIRE STRAP. STRAPS SHALL BE LOCATED AT EACH END OF THE CONNECTED WALLS OR WALL AND GABLE TRUSS WHERE SPACE ALLOWS FOR THE 10 INCH LENGTH OF STRAP. THE SPACING BETWEEN THE STRAPS MAY NOT EXCEED 4 FEET ON CENTER. THE STRAPS SHALL NOT BE BENT HORIZONTALLY TO ACCOMMODATE WOOD FRAMING. IF APPLICABLE, NAILERS SHALL BE ADDED TO ONE OF THE WALLS OR GABLE END USING A MINIMUM OF 9-16D NAILS TO CREATE THE VERTICAL PLANE NEEDED TO MOUNT THE STRAP.

MINIMUM 24" WIDE FULL HEIGHT
7/16" WOOD STRUCTURAL PANEL
8d NAIL AT 6" O.C. ON ALL
FRAMING MEMBERS AT PANEL EDGES
AND 12" O.C. ON ALL FRAMING
MEMBERS NOT AT PANEL EDGES

2-16d NAILS AT 24" O.C.

8d NAIL AT 6" O.C.
(ALL PANEL EDGES)

GYPSUM WALL BOARD INSTALLED IN
ACCORDANCE WITH TABLE R602.3(1)

WOOD STRUCTURAL
PANEL INSTALLED IN
ACCORDANCE WITH
TABLE 602.10.10.3

8d NAIL AT 12" O.C. ON ALL
FRAMING MEMBERS NOT AT PANEL EDGES

OUTSIDE CORNER DETAIL

GYPSUM WALL BOARD INSTALLED IN
ACCORDANCE WITH TABLE R602.3(1)

2-16d NAILS AT 24" O.C.

WOOD STRUCTURAL
PANEL INSTALLED IN
ACCORDANCE WITH
TABLE 602.10.10.3

MINIMUM 24" WIDE FULL HEIGHT 7/16" WOOD
STRUCTURAL PANEL 8d NAIL AT 6" O.C.
ON ALL FRAMING MEMBERS AT PANEL EDGES
AND 12" O.C. ON ALL FRAMING MEMBERS NOT
AT PANEL EDGES

INSIDE CORNER DETAIL

MINIMUM 24" WIDE FULL
HEIGHT 7/16" WOOD
STRUCTURAL PANEL

8d NAIL AT 6" O.C. IN ALL
PANEL EDGES AND 12" O.C.
ON ALL FRAMING MEMBERS
NOT AT PANEL EDGES THAT
IS NOT PART OF PORTAL FRAME

(2) 16d NAILS AT 24" O.C.

FRAMING BOARD FOR GYPSUM
WALL BOARD (OPTIONAL), THIS
STUD MAY BE ROTATED 90°

SIMPLIFIED PORTAL FRAME
WALL SEE FIGURE R602.10.10(3)

CORNER DETAIL

USED IN CONJUNCTION WITH SIMPLIFIED PORTAL WALL

FIGURE R602.10.10.4
SIMPLIFIED BRACING EXTERIOR CORNER FRAMING

- a. END STUD INDICATED ON THE ABOVE DETAILS MAY BE SHIFTED 7/16" TO ALLOW STUD FACE TO BE ALIGNED WITH SHEATHING, OR AN OPTIONAL NON-STRUCTURAL FILLER PANEL MAY BE USED.

33.



City's response:

The building division believes these recommendations are unnecessary. Sections R602.10 through R602.10.9.2, as written, more than adequately address wall bracing. Also, Section R301.1.3 Engineered Design, allows another wall bracing option if the prescriptive requirements in Sections R602.10 through R602.10.9.2 cannot be met.

Creve Coeur
Building Code Review

Code Change Proposal Form

Code: 2009 International Residential Code

Code Section: R602.10.3.3

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

R602.10.3.3 Method PFH: Portal frame with hold-downs. Method PFH *braced wall panels* constructed in accordance with one of the following provisions are also permitted to replace each 4 feet (1219 mm) of *braced wall panel* as required by Section R602.10.3 for use adjacent to a window or door opening with a full-length header:

1. Each panel shall be fabricated in accordance with Figure R602.10.3.3. The wood structural panel sheathing shall extend up over the solid sawn or glued-laminated header and shall be nailed in accordance with Figure R602.10.3.3. A spacer, if used with a built-up header, shall be placed on the side of the built-up beam opposite the wood structural panel sheathing. The header shall extend between the inside faces of the first full-length outer studs of each panel. One anchor bolt not less than $\frac{5}{8}$ ½ inch-diameter (16 12.7 mm) and installed in accordance with Section R403.1.6 shall be provided in the center of each sill plate. The hold-down devices shall be embedded-strap type, installed in accordance with the manufacturer's recommendations. The panels shall be supported directly on a foundation which is continuous across the entire length of the braced wall line. The foundation shall be reinforced as shown on Figure R602.10.3.2. The reinforcement shall be lapped not less than 15 inches (381 mm) with the reinforcement required in the continuous foundation located directly under the braced wall line.
2. In the first *story* of the two-story buildings, each wall panel shall be braced in accordance with item one above, except that each panel shall have a length of not less than 24 inches (610 mm).

Exception: The minimum width of a portal frame in the first story of a two-story building may be approved if it is constructed at a 1:6 ratio and the maximum height of a structure may extend to 12 feet (3657.6 mm).

Reason:

This addition is a standard building practice and accepting this exception would allow for this method to continue.

Cost Impact:

35.



City's Response:

The building division believes this exception is unnecessary. Sections R602.10.3.3 through R602.10.4.1.1, as written, adequately address portal frame construction. Section R301.1.3 Engineered Design, also gives another option if the prescriptive requirements of the sections noted above cannot be met.

36.

Creve Coeur
Building Code Review

Code Change Proposal Form

Code: 2009 International Residential Code

Code Section: R612.2

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

~~**R612.2 Window sills.** In dwelling units, where the opening of an operable window is located more than 72 inches (1829 mm) above the finished grade or surface below, the lowest part of the clear opening of the window shall be a minimum of 24 inches (610 mm) above the finished floor of the room in which the window is located. 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 24 inches (610 mm) of the finished floor.~~

~~Exceptions:~~

- ~~1. Windows whose openings will not allow a 4-inch diameter (102 mm) sphere to pass through the opening when the opening is in its largest position.~~
- ~~2. Openings that are provided with window fall prevention devices that comply with Section R612.3.~~
- ~~3. Openings that are provided with fall prevention devices that comply with ASTM 2090.~~
- ~~4. Windows that are provided with opening limiting devices that comply with Section R612.4.~~

~~**R612.3 Window fall prevention devices.** Window fall prevention devices and window guards, where provided, shall comply with requirements~~

~~**R612.4 Window opening limiting devices.** When required elsewhere in this code, window opening limited devices shall comply with the provisions of this section.~~

~~**R612.4.1 General requirements.** Window opening limiting devices shall be self acting and shall be positioned so as to prohibit the free passage of a 4.0-in. (102 mm) diameter rigid sphere through the window opening when the window opening limiting device is installed in accordance with the manufacturer's instructions.~~

~~**R612.4.2 Operation for emergency escape.** Window opening limiting devices shall be designed with release mechanisms to allow for emergency escape through the window opening without the need for keys, tools or special knowledge. Window opening limiting devices shall comply with all of the following:~~

1. ~~Release of the window opening limiting device shall require no more than 15 pounds (66 N) of force.~~
2. ~~The window opening limiting device release mechanism shall operate properly n all types of weather.~~
3. ~~Window opening limiting devices shall have their release mechanisms clearly identified for proper use in an emergency.~~
4. ~~The window opening limiting device shall not reduce the minimum net clear opening area of the window unit below what is required by Section R310.1.1 of the code.~~

Reason:

This amendment is offered as the proposed language conflicts with egress requirements. Additionally, these requirements will not allow for double hung windows and other features requested by potential home owners.

Cost Impact:

The proposed amendment offers minimal cost savings.

City's Response:

The building division disagrees with this recommendation that these sections be deleted in their entirety. The intent of these provisions is to prevent small children from falling out of open windows with sills located more than 6 feet above grade that have a sill height of less than 24 inches from the finished floor. These provisions do not prohibit double-hung windows and they do not conflict with emergency escape and rescue opening requirements.

38.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: *2009 International Residential Code*

Code Section: R903.5

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

~~R903.5 Section R903.5 Hail Exposure.~~ ~~Hail exposure, as specified in Sections 903.5.1 and R903.5.2, shall be determined using figure R903.5.~~

~~R903.5.1 Moderate Hail Exposure.~~ ~~One or more hail days with hail diameters larger than 1.5 inches (38mm) in a 20-year period.~~

~~R903.5.2 Severe Hail Exposure.~~ ~~One or more hail days with hail diameters larger than or equal to 2.0 inches (51mm) in a 20-year period."~~

Reason:

Amendment offered as these requirements are unnecessary in the St. Louis area.

 **Cost Impact:**

City's Response:

The building Division believes this recommendation is unnecessary. The map in Figure R903.5 shows this area as having no moderate or severe exposure.

Creve Coeur
Building Code Review

Code Change Proposal Form

Code: 2009 International Residential Code

Code Section: R905.2.8.2

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

R905.2.8.2 Valleys. Valley linings shall be installed in accordance with the manufacturer's installation instructions before applying shingles. Valley linings of the following types shall be permitted:

1. For open valleys (valley lining exposed) lined with metal, the valley lining shall be at least 24 inches (610 mm) wide and of any of the corrosion-resistant metals in table R905.2.8.2.
2. For open valleys, valley lining of two plies of mineral surfaced roll roofing, complying with ASTM D 3909 or ASTM D 6380 Class M, shall be permitted. The bottom layer shall be 18 inches (457 mm) and the top layer a minimum of 36 inches (914 mm) wide.
3. For closed valleys (valley covered with shingles), valley lining of ~~one~~ two ply of ~~smooth roll roofing 15 pound felt~~ complying with ~~ASTM D 6380 and at least 36 inches wide (914 mm)~~ ASTM D 226 Type I, ASTM D 4869 Type I, or ASTM D 6757 or valley lining as described in Items 1 and 2 above shall be permitted. Self adhering polymer modified bitumen underlayment complying with ASTM D 1970 shall be permitted in lieu of the lining material.

Reason:

This amendment is proposed as it maintains the existing construction practices and preserves the esthetic integrity of the roof.

Cost Impact:

Estimated cost impacts are minimal.

 City's Response:

The building division disagrees with this recommendation. This section, as written, requires a heavier roofing material for the valley lining. This lining is installed under the roof shingles and will have no aesthetic impact on a roof.

40.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: *2009 International Residential Code*

Code Section: R1006.1.1

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

R1006.1.1 Factory-built fireplaces. Exterior combustion air ducts for factory-built fireplaces shall be a listed component of the fireplace or equivalent and shall be installed according to the fireplace manufacturer's instructions.

Reason:

The proposed amendment provides purchasers options but maintains that all fire place duct work is properly suited and installed.

Cost Impact:

Estimated cost impact is minimal.

 City's Response:

The building division disagrees with this recommendation. The 'listed component' requirement ensures the air duct is compatible with the fireplace. 'Or equivalent' is vague language that would be difficult to enforce.

Creve Coeur
Building Code Review

Code Change Proposal Form

Code: 2009 International Residential Code

Code Section: R1006.2

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

R1006.2 Exterior air intake. The exterior air intake on masonry fireplaces shall be capable of supplying ~~all~~ *combustion air* from the exterior of the *dwelling* or from spaces within the *dwelling* ventilated with outside air such as non-mechanically ventilated crawl or attic spaces. The exterior air intake shall not be located within the garage or *basement* of the *dwelling* nor shall the air intake be located at an elevation higher than the firebox. The exterior air intake shall be covered with a corrosion-resistant screen of ¼ inch (6 mm) mesh.

Reason:

The amendment was proposed to provide clarification.

Cost Impact:

No cost impact.

City's Response:

The building division disagrees with this recommendation. The intent of the code is that exterior air (for combustion) be provided for both factory-built and masonry fireplaces. See Section R1006.1.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: 2009 International Residential Code

Code Section: N1101.9

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

N1101.9 Certificate. ~~A permanent certificate shall be posted on or near in the electrical distribution panel. The certificate shall not cover or obstruct the visibility of the circuit directory label, or service disconnect label or other required labels. The certificate shall be completed by the builder or registered design professional. The certificate shall list the predominant R-values of insulation installed in or on ceiling/roof, walls, foundation (slab, basement wall, crawlspace wall and/or floor) and ducts outside conditioned spaces; U-factors for fenestration; and the solar heat gain coefficient (SHGC) of fenestration. Where there is more than one value for each component, the certificate shall list the value covering the largest area. The certificate shall list the types of efficiencies of heating, cooling, and service water heating equipment. Where a gas-fired unvented room heater, electric furnace and/or baseboard electric heater is installed in the residence, the certificate shall list "gas-fired unvented room heater," electric furnace" or "baseboard electric heater," as appropriate. An efficiency shall not be listed for gas-fired unvented room heaters, electric furnaces or electric baseboard heaters.~~

Reason:

Information is already available on each product installed. If not, labels can be added as appropriate. There is also a concern over the details of the permanent certificate. How is permanence defined and assured? Who certifies the structure?

Cost Impact:

Approximate cost savings by deleting this portion of the code \$200.

City's Response:

The building division disagrees with this recommendation. This section is intended to increase the consumer's awareness of the energy efficiency ratings for various building elements in their home. The buyer can quickly determine that the home complies with the

43.

energy conservation code. If this section is deleted, the same section would need to be deleted from the adopting ordinance for the 2009 IECC.

44.

Creve Coeur
Building Code Review

Code Change Proposal Form

Code: 2009 International Residential Code

Code Section: Table N1102.1

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows: Table 1102.1 Insulation and Fenestration Requirements by Component

Climate Zone	Fenestration U-Factor	Skylight U-Factor	Glazed Fenestration SHGC	Ceiling R-Value	Wood Frame Wall R-Value	Mass Wall R-Value	Floor R-Value	Basement Wall Value	Slab R-Value and Depth	Crawl Space Wall R-Value
1	1.2	0.75	0.35	30	13	3/4	13	0	0	0
2	0.65	0.75	0.35	30	13	4/6	13	0	0	0
3	0.5	0.65	0.35	30	13	5/8	19	5/13 0	0	5/13 0
4 except Marine	0.35-0.40	0.60	NR	38 30	13	5/10	19	10/13 0	10, 2 ft	10/13 0
5 and Marine 4	0.35	0.60	NR	38	20 or 13 + 5 ^h	13/17	30 ^f	10/13	10, 2 ft	10/13
6	0.35	0.60	NR	49	20 or 13 + 5 ^h	15/19	30 ^g	10/13	10, 4 ft	10/13
7 and 8	0.35	0.60	NR	49	21	19/21	30 ^g	10/13	10, 4 ft	10/13

- R-values are minimums. U-factors and solar heat gain coefficient (SHGC) are maximums. R-19 batts compressed into nominal 2x6 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.
- The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestration.
- The first R-value applies to continuous insulation, the second to framing cavity insulation; either insulation meets the requirement.
- R-5 shall be added to the required slab edge R-values for heated slabs. Insulation depth shall be the depth of the footing or 2 feet, whichever is less, in zones 1 through 3 for heated slabs.
- There are not SHGC requirements in the Marine Zone.
- Basement wall insulation is not required in warm-humid locations as defined by Figure N1101.2 or Table N1101.2.
- Or insulation sufficient to fill the framing cavity, R-19 minimum.
- "13+5" means R-13 cavity insulation plus R-5 insulated sheathing. If structural sheathing covers 25% or less of the exterior, R05 sheathing is not required where structural sheathing is used. If structural sheathing covers more than 25% of the exterior, structural sheathing shall be supplemented with insulated sheathing of at least R-2.

- i. For impact-related fenestration complying with Section R301.2.1.2, the maximum U-factor shall be 0.75 in zone 2 and 0.65 in zone 3.
- j. For impact-resistant fenestration complying with Section R301.2.1.2 of the International Residential Code, the maximum SHGC shall be 0.40.
- k. The second R-value applies when more than half of the insulation is on the interior.
- l. Exception: Unfinished basements may have up to a maximum of 20% of the total basement wall area exposed above the outside finished grade/ground level as un-insulated concrete foundation walls. The foundation wall area above the outside finished grade/ground level that may be un-insulated is determined by the formula .20 times the basement wall height of all walls (including insulated exterior frame walls for walkout basements and walls common to both basement and attached garages) times the perimeter of these basement walls. In unfinished areas the basement foundation wall insulation shall extend down to the basement floor slab or to a minimum of 24 inches below outside finished grade when the grade is above the floor slab elevation.

Reason:

Requiring excessive insulation will lead to a number of health and safety issues for consumers living in the dwelling for years to come, especially when mandated, as a poorly constructed but tight thermal envelope can lead to mold and other toxins in the dwelling. The changes in this table allow for efficiency concerns to be more than adequately addressed while still allowing for the appropriate amount of ventilation in the dwelling to protect consumer health. Generally, except for two of the changes, the revised table above echoes the provisions of the 2006 IRC and adds footnote "1" that is from the current St. Louis County Building Code Ordinance (N1102.1 "Thermal Performance Criteria – Minimum R-Values").

Cost Impact:

The proposed amendments to the table would save approximately \$500 to \$1,200 per home (cost will vary with size and design of the home).

City's Response:

The building division disagrees with this recommendation. The lower Fenestration U-Factor and higher R values for ceilings, basement and crawl space walls will result in higher energy conservation and lower energy costs for residents of new homes and room additions in Creve Coeur (Climate Zone 4). The building division is unaware of any studies or other evidence substantiating the "mold and other toxins" concern. The deletion of these requirements would also have to be made to the adopting ordinance for the 2009 IECC.

46.

Creve Coeur
Building Code Review

Code Change Proposal Form

Code: 2009 International Residential Code

Code Section: N1102.2.3

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

N1102.2.3 Access hatches and doors. Access doors from *conditioned spaces* to unconditioned spaces (e.g., attics and crawl) spaces shall be ~~weather-stripped and~~ insulated to a level equivalent to the insulation on the surrounding surfaces. Access shall be provided to all *equipment* which prevents damaging or compressing the insulation. A wood framed or equivalent baffle or retainer is required to be provided when loose fill insulation is installed, the purpose of which is to prevent the loose fill insulation from spilling into the living space when the *attic* access is opened and to provide the permanent means of maintaining the installed R-value of the loose fill insulation.

Reason:

Requiring weather access doors be weather stripped will create technical problems and impede door function. Insulation should provide adequate protection to meet regulation's intent.

 **Cost Impact:**

Approximate cost savings from proposed code change \$235.

City's Response:

The building division disagrees with this recommendation. The portion of a ceiling used for an attic access door is a weak part of the thermal envelope. Insulating and weather stripping the attic access door will prevent loss of energy through this opening. Deletion of the weather stripping would also need to be made to the adopting ordinance of the 2009 IECC.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: 2009 International Residential Code

Code Section: N1102.4.1

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

N1102.4.1 Building thermal envelope.—The building thermal envelope shall be durably sealed to limit infiltration. The sealing methods between dissimilar materials shall allow for differential expansion and contraction. The following shall be caulked, gasketed, 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.~~ 1. Openings between window and door assemblies and their respective jambs and framing.
- ~~4.~~ 2. Utility penetrations.
- ~~5. Dropped ceilings or chases adjacent to the thermal envelope.~~
- ~~6. Knee walls.~~
- ~~7.~~ 3. Walls and ceilings separating the garage from conditioned spaces.
- ~~8.~~ 4. Behind tubs and showers on exterior walls.
- ~~9.~~ 5. Common walls between dwelling units.
- ~~10. Attic access openings.~~
- ~~11.~~ 6. Rim joists junction.
- ~~12.~~ 7. Other sources of infiltration.

Reason:

There is great concern that enforcing these requirements and results not always anticipated by the code. Results include mold and other hazardous toxins which may later cause serious health problems for the dwelling's occupants. Therefore out of concern for the health and well being of the future occupant, it is best to let the builder exceed a minimum code and build a home according to their own level of skill and expertise.

Cost Impact:

Approximate savings, as per code change recommended above, \$500 to \$1,800 varies with home size and design.

48.

City's Response:

The city sees no reason to delete the sealing of certain sources of air infiltration through the thermal envelope. It is the continuity created by sealing all the barrier penetrations that will ensure the building's thermal envelope will be properly sealed against air infiltration. The city is not aware of any studies or other evidence substantiating that health problems will be caused by sealing the thermal envelope. These deletions would also need to be made to the adopting ordinance for the 2009 IECC.

49.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: 2009 *International Residential Code*

Code Section: N1102.4.2

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

N1102.4.2 Air sealing and insulation. At the builder's discretion, Bbuilding envelope air tightness and insulation installation shall be demonstrated to comply with one of the following options given by Section N1102.4.1 or N1102.4.2.2.

Reason:

A performance path for the thermal envelope provides a better use of the thermal envelope than a prescriptive path that enforces requirements not always anticipated by the code, which may later cause serious health problems for the dwelling's occupants. There are concerns over the number of qualified professionals in Missouri to conduct such testing.

Cost Impact:

Amendment could decrease costs by \$2,000 but that would be at the builder's discretion to choose, and it does not outweigh the code requirements in Chapter 11 that will significantly increase the cost of building.

City's Response:

The building division disagrees with this recommendation. Instead of a code requirement, the proposed language makes compliance with this section voluntary. The provisions of this section are intended to reduce the energy lost to infiltration and to improve insulation installation. This section includes 2 methods for demonstrating a home has a moderate level of air control. The building division is unaware of any studies or other evidence that shows sealing the building thermal envelope "may later cause serious health problems for the dwelling's occupants". The building division is also unaware of any shortage of qualified professionals who can conduct these tests.

Creve Coeur
Building Code Review

Code Change Proposal Form

Code: 2009 International Residential Code

Code Section: N1102.4.2.2

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

N1102.4.2.2 Visual inspection option. The items listed in Table N1102.4.2, applicable to the method of construction, are field verified. Where required by the code official, an approved party independent from the installer of the insulation or builder representative, shall inspect the air barrier and insulation.

Reason:

This amendment is suggested as there is a serious shortage of qualified professionals to administer such test, which would lead to serious set backs in building and potential problems with unqualified personnel falsifying their training.

Cost Impact:

No estimated cost impact.

City's Response:

The building division disagrees with this recommendation. This section specifies a second option for verifying the air tightness of the building thermal envelope. The intent of this section is for a city-approved, independent, third-party to make this inspection. The building division is unaware of any shortages of qualified professionals capable of making this visual inspection.

51.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: 2009 International Residential Code

Code Section: N1102.4.3

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

~~**N1102.4.3 Fireplaces.** New wood burning fireplaces shall have gasketed doors and outdoor combustion air.~~

Reason:

Typically, wood burning fire places do not have doors, and builders cannot be expected to comply with a code when manufacturers do not produce a product being mandated. Also, forcing a fire box or fire place to comply with regulations that are recommended by the code but not the manufacturer would void the warranty on the product and be a serious risk to health and safety.

Cost Impact:

Removing the requirement from the code could save anywhere from \$6,000 to \$10,000 – price varies with size and style of fireplace.

City's Response:

The building division disagrees with this recommendation. Wood-burning fireplaces are a large source of air leakage when not in use. Loss of energy from fireplaces can be reduced by having gasketed doors that can be closed when not in use. Combustion air is already required by other sections of the code. If this section is deleted, the same section would need to be deleted from the city's adopting ordinance for the 2009 IECC.

52.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: 2009 *International Residential Code*

Code Section: N1103.2.1

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

N1103.2.1 Insulation. Supply ducts in attics and all other ducts shall be insulated to a minimum of R-8 R-4. ~~All other ducts shall be insulated to a minimum of R-6.~~

Reason:

Insulation to meet the requirement of a minimum R-8 and R-6 are not currently available in the St. Louis market and would require costly provisions to make those supplies available. R-4 materials are readily available, affordable for homeowners and provide adequate insulation for St. Louis' climate.

Cost Impact:

The proposed amendment will save approximately \$300 to \$500 per home.

City's Response:

The building division sees no reason for these less restrictive requirements to be included in the city's new residential building code. In speaking with area HVAC contractors, the R-6 and R-8 duct insulation is available. The initial cost will be offset by long-term energy cost savings to the buyers.

53.

Creve Coeur
Building Code Review

Code Change Proposal Form

Code: 2009 International Residential Code

Code Section: N1103.2.2

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

N1103.2.2 Sealing. Ducts, air handlers, filter boxes and building cavities used as ducts shall be sealed. Joints and seams shall comply with Section M1601.4. ~~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 (3.78 L/s) per 100 ft² (9.29 m²) of conditioned floor area or total leakage less than or equal to 12 cfm (5.66 L/s) per 100 ft² (9.29 m²) of conditioned floor area when tested at a pressure differential of .1 inch w.g. (25 Pa) across the entire system, including the manufacturer's air handler end closure. 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 (2.83 L/s) per 100 ft² (9.29 m²) of conditioned floor area when tested at a pressure differential of 0.1 inch w/g/ (25 Pa) across the roughed in enclosure. All register boots 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 (1.89 L/s) per 100 ft² (9.29 m²) of conditioned floor area.~~
- Exception:** Duct sealing and tightness test is not required if the air handler and all most ducts are located within *conditioned space*.

Reason:

Provision is irrelevant as little residential equipment is located in the attic. But, it is a serious concern that there are few qualified individuals to conduct such tests, and these provisions will dramatically increase the cost of housing if mandated.

Cost Impact:

Estimated cost savings of amendment is \$800 per home.

City's Response:

The building division disagrees with this recommendation. If a new home has ducts or equipment located in an attic or crawl space these leakage tests will determine if conditioned air is being lost (leaked) to unconditioned spaces resulting in higher energy costs to the buyer.

54.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: 2009 International Residential Code

Code Section: R1305.1.4.1

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

M1305.1.4.1 Ground clearance. *Equipment and appliances* supported from the ground shall be level and firmly supported on a concrete slab or other *approved* material extending not less than 3 2 inches (76 50.8 mm) above the adjoining ground. Such support shall be in accordance with the manufacture's installation instructions. *Appliances* suspended from the floor shall have a clearance of not less than 6 inches (152 mm) from the ground.

Reason:

The extra inch of ground clearance offers no life or safety benefit to the homeowner. But, it does raise the cost of air conditioning systems as current concrete lifts do not meet this provision of the code and would require stacking and other expensive manipulations to achieve 3" above grade.

Cost Impact:

Cost savings:

Extra slab of concrete \$75 per inch/per unit

Custom concrete slab \$150 to 450 per unit

City's Response:

The building division disagrees with this recommendation. The intent of the 3 inches above grade is to keep the appliance being supported well above grade and protected from prolonged exposure to moisture and soil. The 3 inch minimum also provides some protection against settling of the slab.

55.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: *2009 International Residential Code*

Code Section: R1411.6

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

M1411.6 Locking access port caps. Refrigerant circuit access ports located outdoors shall be fitted with non-locking-type tamper-resistant caps.

Reason:

Locking type tamper-resistant caps are not currently available through manufacturers. Requiring this provision will not only increase the costs more than just the cost of the specific cap as it will require additional tools and training for installation and use.

Cost Impact:

If amended, then cost would decrease approximately \$100 per device – cap, installation, new equipment and training.

City's Response:

The building division disagrees with this recommendation. The locking cap requirement is intended to address a new type of substance abuse where people intentionally inhale refrigerant gases for the intoxicating effect. In some cases, this inhalant abuse has resulted in the death of an individual. The locking-type caps are designed such that wrenches, pliers and fingers cannot be used to remove the caps without a special tool/key.

56.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: 2009 *International Residential Code*

Code Section: M1503.4

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

M 1503.4 Make up air required. Exhaust hood systems capable of exhausting in excess of 400 600 cubic feet per minute ($0.19\text{m}^3/\text{s}$) shall be provided with makeup air systems shall be equipped with a means of closure and shall be automatically controlled to start and operate simultaneously with the exhaust system.

Reason:

This new regulation increasing the requirement for make-up air would lower the threshold to the point that almost all kitchens would require make-up air. All of the provisions associated with installing such a system – connections to exhaust systems, electrical interlocking, fan requirements and a conditioner – would dramatically increase the cost of construction with little to no health or safety benefit for the homeowner.

 Cost Impact:

City's Response:

Research has shown that kitchen exhaust systems with an exhaust flow rate in excess of 400 cfm for an individual dwelling unit are greatly oversized. The industry recommendation is a minimum of 40 cfm exhaust rate per linear foot of cooktop. A 48 inch wide cooktop can be adequately served by an exhaust system that has an exhaust rate of 160 cfm. The continued operation of a kitchen exhaust system with an exhaust flow rate in excess of 400 cfm can "depressurize" an air-tight home to the point that "backdrafting" of carbon monoxide gases from gas-fired appliances and woodburning fireplaces can occur. This code requirement is recommended by several mechanical contractors who have stated that the 400 cfm threshold is reasonable and that any exhaust system greater than 400 cfm resembles a commercial-type range hood that is required to be provided with make-up air.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: 2009 *International Residential Code*

Code Section: Table M1601.1.1(2)

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

Duct Size	Minimum Thickness Inches and (mm)	Equivalent Galvanized Sheet No.	Minimum Thickness (in.)
Round Ducts and enclosed rectangular ducts			
14 inches or less	0.0157 (0.3950 mm)	28	0.0175
16 and 18 inches	0.0187 (0.4712 mm)	26	0.018
20 inches and over	0.0236 (0.6010 mm)	24	0.023
Exposed rectangular ducts			
14 inches or	0.0157 (0.3950 mm)	28	0.0175
Over 14 inches	0.0187 (0.4712 mm)	26	0.018

Type of Duct	Size (inches)	Minimum Thickness (inch)	Equivalent Galvanized Sheet Gauge	Approximate Aluminum B & S Gauge
<u>Round ducts and enclosed rectangular ducts</u>				
	<u>14 or less</u>	<u>0.013</u>	<u>30</u>	<u>26</u>
	<u>Over 14</u>	<u>0.016</u>	<u>28</u>	<u>24</u>
<u>Exposed rectangular ducts</u>				
	<u>14 or less</u>	<u>0.016</u>	<u>28</u>	<u>24</u>
	<u>Over 14</u>	<u>0.019</u>	<u>26</u>	<u>22</u>

Reason:

New provisions listed would require pipe manufacturers to change their complete manufacturing systems and when combined with additional labor it would be an extremely expensive change with little to no health or safety benefit. Proposed table is from the 2006 IRC.

Cost Impact:

If amended, there would be an approximate decrease of \$300 to \$400 in material and labor

58.

City's Response:

The building division disagrees with this recommendation. The 2009 IRC has increased the minimum thicknesses for all round ducts. The minimum thicknesses indicated are the low end of the tolerance range according to SMACNA HVAC Duct Construction Standards.

59

Creve Coeur
Building Code Review

Code Change Proposal Form

Code: 2009 International Residential Code

Code Section: M1601.4.1

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

M1601.4.1 Joints and seams. Joints of *duct systems* shall be made substantially airtight in an unconditioned area by means of tapes, mastics, liquid sealants, gasketing or other *approved* closure systems. Closure systems used with rigid fibrous glass ducts shall comply with UL181A and shall be marked 101A-P for pressure-sensitive tape, 181 A-M for mastic or 181 A0H for heat-sensitive tape. Closure systems used with flexible air ducts and flexible air connectors shall comply with UL 181B and shall be marked 181B-FX for pressure-sensitive tape or 181B-M for mastic. Duct connections to flanges of air distribution system *equipment* or sheet metal fittings shall be mechanically fastened. Mechanical fasteners for use with flexible nonmetallic air ducts shall comply with UL181B and shall be marked 181B-C. Crimp joints for round metal ducts shall have a contact lap of at least 1½ means of at least three sheet-metal screws or rivets equally spaced around the joint. Closure systems used to seal metal ductwork shall be installed in accordance with the manufacturer's installation instructions.

Reason:

Efficiency mandated in language without new additional language is not a health or safety issue for the dwelling's occupants. These type of mandates should be a choice and lifestyle chosen by the consumer so that they have the desire and energy to fully understand how system changes, such as these, will effect their life in their home.

Cost Impact:

If amended, there would be an approximate decrease of \$500 to \$2,000 depending on the size of the home.

City's response:

The building division disagrees with this recommendation. The intent of the building code is to seal all joints and seams in all duct systems. The EPA estimates that 20 percent of the energy efficiency of heating and cooling systems can be lost due to duct air leaks located in basements, stud cavities, crawl spaces, attics, etc.

60.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: 2009 *International Residential Code*

Code Section: G2408.4

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

G2408.4 (350.7) Clearances from grade. Equipment and appliances installed at grade level shall be supported on a level concrete slab or other approved material extending not less than ~~3~~ 2 inches (~~76~~ 50.8 mm) above adjoining grade or shall be suspended not less than 6 inches (152 mm) above adjoining grade. Such supports shall be installed in accordance with the manufacturer's installation instructions.

Reason:

The extra inch of ground clearance offers no life or safety benefit to the homeowner. But, it does raise the cost of air conditioning systems as current concrete lifts do not meet this requirement.

Cost Impact:

Cost savings range from \$225 to \$525:

Extra slab of concrete \$75 per inch/per unit

Custom concrete slab \$150 to 450 per unit

 **City's Response:**

See city's response to M1305.1.4.1

61.

Creve Coeur
Building Code Review

Code Change Proposal Form

Code: 2009 International Residential Code

Code Section: P 2503.6

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

P2503.6 Shower liner test. ~~Where shower floors and receptors are made water tight by the application of materials required by Section 2709.2, the completed liner installation shall be tested. The pipe from the shower drain shall be plugged water tight for the test. The floor and receptor area shall be filled with potable water to a depth of not less than 2 inches (51 mm) measured at the threshold. Where a threshold of at least 2 inches high does not exist, a temporary threshold shall be constructed to retain the test water in the lined floor or receptor area to a level not less than 2 inches deep measured at the threshold. The water shall be retained for a test period of not less than 15 minutes and there shall be no evidence of leakage.~~

Reason:

Leaks are not known at the time of the liner test as these are typically not evident until the tile and insulation are installed.

Cost Impact:

Approximately \$50 cost savings



City's Response: The city has adopted the same plumbing code as St. Louis County. The city contracts with the county to issue the city's plumbing permits and make the city's plumbing inspections.

62.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: *2009 International Residential Code*

Code Section: P 2706.3

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

P2706.3 Prohibited waste receptors. Plumbing fixtures that are used for washing or bathing shall not be used to receive the discharge of indirect waste piping.

Exceptions:

1. A kitchen sink trap is acceptable for use as a receptor for a dishwasher.
2. A laundry tray is acceptable for use as a receptor for a clothes washing machine.
3. A condensate drain for use as a receptor from mechanical equipment.

Reason:

Condensate lines running from mechanical equipment to receptors can be the most efficient and effective method for discharge.

Cost Impact:

City's Response: The city has adopted the same plumbing code as St. Louis County. The city contracts with the county to issue the city's plumbing permits and make the city's plumbing inspections.

63.

**Creve Coeur
Building Code Review**

Code Change Proposal Form

Code: *2009 International Residential Code*

Code Section: P 2903.5

Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

P 2903.5 Water hammer. The flow velocity of the water distribution system shall be controlled to reduce the possibility of water hammer. A water-hammer arrestor shall be installed where quick-closing valves are used. Water-hammer arrestors shall be installed in accordance with the manufacturer's installation instructions. Water hammer arrestors shall conform to ASSE 1010.

Reason:

This amendment is offered because the quick shut off arrestor is preferred as air pockets form on quick close fixtures, not arrestors, and this practice is better for the health and safety of the occupant.

Cost Impact:

Estimates show a minimal cost decrease



City's Response: The city has adopted the same plumbing code as St. Louis County. The city contracts with the county to issue the city's plumbing permits and make the city's plumbing inspections.

Richard M. Kutta, PE

24 Colonial Hills Parkway

Creve Coeur MO 63141

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richardkutta@earthlink.net

EXHIBIT D

March 8, 2013

Mr Steve Unser, Chief Building Official
City of Creve Coeur
300 N. New Ballas Rd.
Creve Coeur MO 63141

Re: Comments on Proposed IRC 2009 Residential Building Code

Dear Mr. Unser,

The following comments are offered for consideration.

R102.8 Matters Not Provided For

This item, carried over from the existing ordinance, differs from customary building code enforcement practice, which authorizes enforcement of code provisions that are explicitly stated. The proposed section expands enforcement to additional provisions that are deemed "essential" in the opinion of the building official. In effect, this section authorizes creation of ex post facto regulation, makes the City building official a code-writer and subjects design professionals and contractors to unanticipated Code requirements that may delay completion and increase project costs. All of which is inappropriate for code enforcement.

Recommendation: Delete section.

Building Division's Response:

This section has been in the city's building code since 1976. The city attorney has reviewed this section and found it not to be contrary with any state laws. Evolving technology inevitably results in a situation or circumstance in which the code is silent on hazards since identified. The reasonable application of the code to such hazardous, unforeseen conditions is provided for in this section. The purpose of this section is not to impair requirements that may be preferred when the code provides for alternative methods or is not silent on the circumstances. Also, per Section R112.1, any decision of the building official may be appealed to the Building Code Board of Appeals.

R104.12 Rule-making Authority

This section derives its authority from Missouri statutes regarding rule-making, which limit rules to procedures for implementing existing regulations and which requires

adherence to a statutory rule-making procedure that involves publication, notice, and hearings. Application has not followed the statutory limitations.

Recommendation: Delete section or revise the first sentence as follows, “The building official shall have authority *in accordance with Missouri statutes regarding rule-making*, as necessary ...”

Building Division's Response:

This section has been in the city's building code since 1976. The city attorney has reviewed this section and found it not to be contrary with any state laws. The intent of this section is to give the building official the administrative authority to promulgate rules and regulations that serve to interpret or supplement the provisions of the code, as long as such rules conform to the intent of the code. These rules are not intended to set aside or waive any code provisions, but are intended to implement code compliance. These rules are not to conflict with accepted engineering practice or reduce the level of life safety prescribed by the code. The most frequent use of this authority is the promulgation of the administrative rules and procedures for the division's efficient and effective operation. An example of the content of administrative rules is the type of work that is required to be inspected per Sections R109.1 through R109.3.14.

R302.14 Fire protection of floors

This item from IRC 2012 accelerates the customary code adoption cycle by three years. It is therefore not coordinated with the 2009 code and pushes the limits of building materials technology. It requires installation of drywall basement ceilings unless dimensional (typical 2x12) lumber is used. It effectively prohibits use of composite trusses commonly referred to as “I-joists, “TJ’s” or truss-joists, which have been common practice for 35 years. No instances of issues in Creve Coeur were offered as justification.

The justification is based on physical fire tests and a Finite Element Method computer simulation conducted by Underwriters Laboratory, a private testing service. The UL fire test case used 14' long, 11-7/8" deep joists spaced 24" on center, exposed to a gas-fired furnace capable of producing temperatures of 1200-1400F. Two 300 pound weights were placed mid-span. The test ran for 6 minutes at which point the floor collapsed.

The test is not representative of typical Creve Coeur residential construction because it uses wide 24" joist spacing, immediately applies high furnace temperatures and disregards the benefit of smoke/fire detectors, which will initiate occupant evacuation and hasten fire department response. Under actual fire conditions the detectors would alarm a fire condition well before the test temperatures are reached, initiating FD response and evacuation.

TJ's have become common because they produce an economical main floor deck that is stiff, solid and flat. The web (vertical element of the joist) is made of oriented strand board, a pressed and temperature cured composite of wood and resin. The proposed amendment produces a choice that no homeowner will want: dimensional lumber or inaccessible plumbing, wiring and HVAC ductwork. Dimensional lumber is costly to

purchase and install, prone to warping, twisting and checking, and functionally undesirable due to resultant bouncy, squeaking floors when the lumber dries out and deforms. Because TJ's are manufactured from flaked wood rather than solid lumber, they earn LEED credits for resource reutilization. Installing a drywall basement ceiling greatly extends the construction schedule by requiring all utilities to be finally connected and tested before the ceiling can be closed. It also makes future remodeling much more difficult and costly because portions of the drywall will have to be removed and replaced.

In response to the forthcoming 2012 code cycle, Weyerhaeuser has developed and tested a new TJ that has a 1-hour fire resistance rating. It is not yet widely available but is planned for national release late in 2013. It uses an intumescent paint that expands in the presence of heat, insulating the underlying wood substrate from the fire heat.

Alternative measures will produce improved fire safety integrity:

1. limit maximum joist spacing to 18" and the maximum unsupported span to 14' between steel support beams.
2. require wired fire/smoke detection
3. except areas protected by fire-rated lay-in suspended ceilings, which easily produces a 30-minute rating while allowing finished family rooms to have fewer columns without compromising accessibility or fire-safety

Recommendation: Defer consideration until the 2012 code cycle, which gives joist manufacturers time to distribute fire-rated joists and time for code-writers to develop alternative equivalent designs, if still necessary.

Building Division's Response:

For reasons previously stated on the building division's page of the city's website, the building division believes that this proposed amendment is necessary. This proposed amendment is already required in the 2012 IRC which was published over a year ago. There is no doubt that engineered wood products such as I-joists, when installed per the manufacturer's recommendations, meet all structural code requirements. A deficiency they have is how they perform during a fire event. When unprotected, they burn faster than dimensional lumber, which raises the concern regarding firefighter safety during fire rescue operations. There are documented cases of firefighters being injured and even killed because of the rapid failure of these type of joists during fire events. The building division believes the additional 15-20 minutes of fire protection afforded by this ½" membrane outweighs the cost and possible inconvenience of installing it.

M1503.1 General (Kitchen range hoods)

This section has internal conflicts between hoods which exhaust to the outside and those recirculation hoods which have no connecting ductwork. For example, "either type of system shall be a listed exhaust system" requires exhaust ductwork on a recirculation system that has no ductwork. Customarily this section defines the requirements for systems that exhaust to outside and then excepts recirculation systems.

Recommendation: Limit section to vented hoods followed by an exception for recirculation systems

Building Division's Response:

The building division agrees with this comment. The original code language is less confusing and has an exception for ductless range hoods/recirculation systems.

M1503.4 Makeup air required

This section requires tempered makeup air for kitchen range hoods that exceed 400 cfm. The justification for the 400 cfm cutoff is that larger systems are “greatly oversized” and may cause back drafting products of combustion from gas-fired appliances such as furnaces and water heaters. The “oversized” statement is not supported by the International Mechanical Code (IMC 1346.6010 Appx C) which recommends a minimum of 450 CFM for a 9 sq ft kitchen exhaust hood against a wall and 675 CFM for an island installation. Larger hoods over larger ranges have minimum capacities up to 800 cfm. The 400 cfm cutoff disregards range manufacturer recommendations and effectively eliminates most of the available range hoods supplied by Broan, GE and other hood suppliers, where 500-1200 cfm hoods are common. The 400 cfm cutoff also ignores the ASHRAE standard 62.2 recommended maximum of 15 cfm/100 sq ft finished living area. Under the ASHRAE standard, a 3500 sq ft house would be allowed a maximum 525 cfm without makeup air.

Building Division's Response:

Section 1346.6010 Appendix C is not part of the 2003 or 2009 IMC. It is also not part of St. Louis County's Mechanical Code. Section 505.2 of the 2009 IMC has the same 400 cfm threshold as M1503.4 of the 2009 IRC.

The ASHRAE 62.2 standard is not referenced by the 2009 IMC, the 2009 IRC or St. Louis County's Mechanical Code. Neither the city or St. Louis County has a copy of this standard and cannot comment on the prescribed criteria.

The HVI (Home Ventilating Institute) recommends a minimum exhaust rate of 40 cfm per linear foot of range and a maximum of 100 cfm per linear foot of range for wall-mounted hoods and a minimum of 50 cfm/ft and a maximum of 150 cfm/ft for island installations. These are the exhaust rates they say will satisfactorily capture and remove moisture, airborne contaminants and odors created during cooking. Using these prescribed minimums, a cooktop 4 feet in length could be adequately served by a 160 cfm wall-mounted exhaust hood and an island cooktop 4 feet in length could be adequately served by a 200 cfm range hood hung over the island.

The fundamental intent of this requirement is avoidance of carbon monoxide poisoning, which could result from back drafting the flue vent from a gas-fired appliance equipped with an old-style “gravity” draft hood such as a furnace or water heater. New gas-fired appliances do not have draft hoods; they are provided with sealed combustion chambers which are unaffected by “depressurization” and should therefore be exempt. Houses with air or ground source heat pumps do not have gas-fired furnaces and should be exempt. Modern instantaneous water heaters are electric or have sealed power-burners. Gas-fired fireplaces are direct-vent or non-vented. Wood fueled fireplaces are provided with outside combustion air and gasketed doors. The whole issue is greatly mitigated by requiring installation of a carbon monoxide alarm in the living area.

The fundamental intent of this requirement is to prevent carbon monoxide poisoning resulting from depressurization and backdrafting of CO fumes from gas-fired appliances served by flue vents/chimneys. However, the code is also concerned about other adverse effects that can be caused by depressurization. Indoor air quality issues can arise as a result of air being drawn from garages, mechanical rooms and storage rooms.

Finally, the requirement for electric resistance heat to temper makeup air runs completely contrary to energy efficiency as it consumes 40,000 Btuh, which is about half the energy requirement of the furnace that heats the whole house. Such a tempered makeup air system will cost over \$2000 installed. Heating outside air so it can be immediately exhausted is contrary to energy conservation. Where needed, Broan offers a hood system with an interlocked makeup air duct and damper that supplies untempered air to the hood to replace air that is being exhausted.

Various design guidelines recommend that in order to maintain occupant comfort, makeup air temperature should be a minimum of 50 degrees F or within 10 degrees F of the preferred room temperature. I've seen a Broan hood system with an interlocked makeup air duct and damper that supplies untempered outside air to the kitchen but not directly to the hood itself. In speaking with HVAC contractors they recommend that makeup air should be provided outside of the hood so that the exhaust system will function properly. It would seem drawing untempered outside air into the kitchen would not be cost effective.

Recommendation: Incorporate the following modifications:

1. Amend the 400 cfm limit to allow the larger of 400 cfm or 15 cfm/100 sq ft finished floor area, per ASHRAE 62.2-2010.
2. Eliminate the requirement for tempered makeup air.
3. Except houses without gas-fired appliances and those with appliances that have sealed combustion systems.
4. Except houses equipped with an engineered thermal recovery ventilator that admits and tempers makeup air through the ventilator.
5. Except houses with a wired carbon monoxide sensor alarm on the main floor.

Please see the reasons stated above.

Thank you for this opportunity to provide commentary. Please contact me if there are questions.

Sincerely,

EXHIBIT E

**Fire Performance of
Engineered
Lightweight Lumber**

Rich Walke
UL Regulatory Services



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December 6, 2012

December 6, 2012.



Partners With the DHS Funded Research



Underwriters Laboratories (UL)



Chicago Fire Department (CFD)



International Association of Fire Chiefs (IAFC)



Michigan State University (MSU)



3

TEST SUMMARY

Test	Assembly	Type	Ceiling	Protective Membrane Breach (min : sec)	Flame Through (min : sec)	Fire Fighter Breach (min : sec)
→ 2	Wood I-Joist Floor	Modern	None	0:00	6:00	6:03
→ 1	2x10 Joist Floor	Legacy	None	0:00	18:30	18:45
→ 3	2x10 Joist Floor	Legacy	Regular Gypsum Board	23:30	44:15	44:45
8	2x10 Joist Floor	Legacy	Lath and Plaster	74:00 ¹	79:45*	79:45
→ 4	Wood I-Joist Floor	Modern	Regular Gypsum Board	17:45	26:45*	26:45
5	Metal Gusset Truss Floor	Modern	Regular Gypsum Board	16:30	28:40	29:15
6	Finger Joint Truss Floor	Modern	Regular Gypsum Board	16:00	26:00	26:45
7	2x6 Joist & Rafter Roof	Legacy	Regular Gypsum Board	15:45	38:00 ²	40:00 ²
9	Metal Gusset Truss Roof	Modern	Regular Gypsum Board	13:45	23:00*	23:15

* - Denotes approximate time

1 - Denotes total failure of ceiling - plaster & lath had deflected down to & was supported by TC's prior to event

2 - Flaming through roof vents occurred at 26:00



NFPA Journal Cover Story: Lightweight Construction

Alan R. Earls, NFPA Journal - Monday, March 18, 2013

Early in the afternoon of August 13, 2006, the fire department in Green Bay, Wisconsin, responded to a suspected residential basement fire. An engine company focused on the flames while a ladder company worked on ventilation. The department also had a report that someone was in the building and prepared to make an entry.

Firefighters Arnie Wolff and Jo Brinkley-Chaudoir arrived on the scene four minutes after the fire was reported. Approximately seven minutes later, at the request of the incident commander, they began a search of the home's first floor. They took the precaution of crawling in and sounding the floor to ensure it could support them. The floor, made of concrete for a radiant heating system, seemed solid. Satisfied it would hold, the firefighters inched their way into the structure on their hands and knees as the fire roared beneath them in the basement.

Within moments, they heard a loud cracking sound. The floor gave way, plunging them into the fiery basement. Despite a fractured hip and ribs and first-degree burns on her back and upper arms, Brinkley-Chaudoir managed to escape by crawling through a basement window. Wolff fell into another part of the basement, separated from Brinkley-Chaudoir by a partial wall and blocked by floor debris. Wolff, a 17-year veteran of the department, perished in the fire, and his body was recovered the next day. Medical examiners determined that he had died of smoke inhalation and burns.

An after-report of the incident by the National Institute for Occupational Safety and Health found that the concrete first floor had concealed the severity of the fire in the basement. The report highlighted the extreme speed with which lightweight wood I-joists, such as those used in the house that burned, can reach their failure point when exposed to fire.

The findings have become all too familiar for firefighters. In January 2007, Hamilton County, Tennessee, lost a "firefighter of the year" in another sudden structural collapse blamed on lightweight construction that failed in a fire. In April of that year, the failure of lightweight construction in a fire contributed to the death of a rookie firefighter in Prince William County, Maryland.

Such incidents have fueled a growing concern for the fire service and pose a significant challenge to the code community. In recent decades, an expanding range of construction methods and building products, particularly wooden truss roofing systems and wood I-joists that together are often termed "lightweight construction," have been widely embraced by residential builders for their ability to deliver economy and functionality. Lightweight residential structures began to appear widely about 25 years ago, according to APA-The Engineered Wood Products Association (formerly the American Plywood Association), and have become increasingly popular ever since. From an engineering perspective, lightweight materials and construction techniques often outperform traditional dimensional lumber and assembly methods. Many recently built communities across the country are composed entirely of lightweight structures.

In separate studies by Underwriters Laboratories (UL) and the National Research Council of Canada (NRC), however, findings confirmed what firefighters have long suspected about what happens to lightweight construction when it is exposed to fire. In repeated tests by both groups, under carefully controlled conditions, lightweight structures were found to burn faster and lose their structural integrity quicker—in some cases much quicker—than those built with dimensional lumber, with obvious ramifications for the fire service and for anyone who lives in a residence constructed with lightweight materials.

For the fire service, the issues around fire and lightweight residential construction are immediate and often visceral. In Green Bay, Assistant Fire Chief Robert Goplin says the increased potential for sudden and catastrophic structural failure presented by lightweight construction is forcing his department to rethink many of its fire and rescue practices. "We are trying to drive home to the troops that this stuff

Alan R. Earls is a writer based in Franklin, Massachusetts. He specializes in technical and safety topics.

SIDEBAR

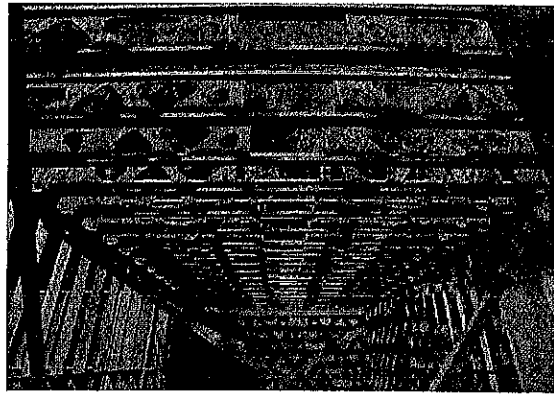
Danger for Firefighters

According to NFPA Fire Analysis and Research Department statistics, 250 firefighters died of injuries suffered at structure fires from 1997 to 2006. Of those, 44 were killed inside buildings as a result of structural collapses, and another nine were outside and struck when walls collapsed. Of the 44 killed inside, 24 were killed in roof collapses in 14 fires, 17 in floor collapses in 13 fires, two in a wall collapse in a fire, and one in a ceiling collapse.

Full details on construction are not available for many of the collapse incidents, but trusses were involved in the collapse in seven incidents. These seven incidents claimed 12 lives. Five firefighters died in two roof collapses where wood trusses, described as pre-engineered wood and lightweight wood, were involved. Three firefighters were killed in two collapses involving lightweight wood floor trusses. And another was killed in a floor collapse involving open manufactured wood I-beams.

The National Institute of Occupational Safety and Health (NIOSH) points out that carpet, ceramic tile, lightweight concrete, and similar floor coverings may increase the danger to firefighters because they add weight to the floor system and because the insulation these materials provide may cause the floor to not feel warm, despite the fire beneath it.

NIOSH also stresses that engineered wood I-joists represent a rising technology in the building sector, since it offers certain advantages over traditional construction methods. Changes in the building construction industry, driven by technological advancements and societal needs, suggest that the use of engineered wood products will continue to grow, according to NIOSH.



Even lightweight materials – Georgia Pacific XJ-85

Cost Impact: The code change proposal will increase the cost of construction.

ICCFILENAME: DECRANE-RB-1-R501.3

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: Based on the proponent's request and the committee's previous action on RB85-09/10.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Sean DeCrane, Cleveland, OH, Fire Department, representing the International Association of Fire Fighters; Azarang (Ozzie) Mirkhah, Las Vegas, NV, Fire & Rescue, representing Fire & Life Safety Section of the International Association of Fire Chiefs); Steven Orłowski, National Association of Home Builders, Dennis Pitts American Wood Council, American Forest & Paper Association, requests Approval as Modified by this Public Comment.

Replace proposal as follows:

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, 5/8 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.
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.

Commenter's Reason: This public comment was developed in response to the IRC Code Development Committee's comments regarding RB31, RB85, RB86, RB87 and RB88.

subjected to the same fire-test conditions, unprotected wood I-joist floors typically fail in four to eight minutes, depending on flange size and web thickness. The few minutes of difference in endurance times among the different types of joists is of no practical use to the firefighter for predicting the safety of the floor. It makes sense, therefore, that when there is a serious fire beneath a floor, there is no "safe" amount of time that anyone can remain on that floor. Any floor system protected or not, can fail unpredictably when exposed to a substantial fire beneath.

4. Gypsum Wallboard Provides Additional Floor Protection

Millions of homes have been built and are still being built with exposed wood floor joists - typically over some type of habitable basement area. The lack of a code-mandated fire-resistance requirement, such as a requirement for a one-hour fire-rated floor, means that the floor framing may not be protected on the underside.

A simple, inexpensive yet significant increase in fire resistance can be achieved in any type of joist or truss system by simply adding a single layer of gypsum wallboard to the underside of the floor joists. The use of 1/2-inch thick ordinary, unrated gypsum wallboard will very likely more than double the fire-endurance time for all commonly used wood floor joist systems, including sawn-lumber, open web wood trusses and I-joists.

Based on this, APA recommends the use of a single layer of 1/2-inch thick gypsum on the underside of all I-joists used in floor/ceiling assemblies over habitable spaces.

5. Summary

It is important for everyone, (home owner, building official, firefighter and others) to remain aware that no amount of additional protection will make any floor "safe" for any predictable minimum length of time when the underside of that floor is exposed to an intense fire. All floor/ceiling assemblies, however, will endure a severe fire longer if protected by gypsum wallboard, regardless of the type of floor framing.

Thus, firefighter and occupant safety can be addressed by early evacuation of occupants through the use of smoke detectors, by adding passive or active fire suppression such as by the use of gypsum wall board and equally important by firefighter education and pre-planning. The wood industry has been actively involved with the USFA in providing educational materials for the fire service and this effort is continuing.

Technical Services Division

DISCLAIMER

The information contained herein is based on APA - The Engineered Wood Association's continuing programs of laboratory testing, product research, and comprehensive field experience. Neither APA nor its members make any warranty, expressed or implied, or assume any legal liability or responsibility for the use, application of, and/or reference to opinions, findings, conclusions, or recommendations included in this publication. Consult your local jurisdiction or design professional to assure compliance with code, construction, and performance requirements. Because APA has no control over quality of workmanship or the conditions under which engineered wood products are used, it cannot accept responsibility of product performance or designs as actually constructed.



Creve Coeur FIRE PROTECTION DISTRICT

Administrative Center • 11221 Olive Boulevard • St. Louis, Missouri 63141-7652
Office (314) 432-5570 • Fax (314) 432-2367

April 16, 2013

Mr. Steve Unser
Building Division Manager
City of Creve Coeur

EXHIBIT I

RECEIVED
APR 16 2013
BUILDING DEPT.

Re: R501.3 Fire Protection of Floors

Dear Steve:

The Creve Coeur Fire Protection District is in full support of your amendment to the 2009 International Residential Code as follows:

R501.3 Fire protection of floors. Floor assemblies, not required elsewhere in this code to be fire-resistance rated, shall be provided with ½-inch gypsum wallboard membrane, 5/8-inch wood structural panel membrane, or equivalent on the underside of the floor framing member.

Exceptions:

1 through 4 - No changes made.

The following statistics were taken from an article written by Alan R. Earls, published in March 18, 2013 in the National Fire Protection Agency (NFPA) Journal:

According to NFPA Fire Analysis and Research Department statistics, 250 firefighters died of injuries suffered at structure fires from 1997 to 2006. Of those, 44 were killed inside buildings as a result of structural collapses, and another nine were outside and struck when walls collapsed. Of the 44 killed inside, 24 were killed in roof collapses in 14 fires, 17 in floor collapses in 13 fires, two in a wall collapse in a fire, and one in a ceiling collapse.

Full details on construction are not available for many of the collapse incidents, but trusses were involved in the collapse in seven incidents. These seven incidents claimed 12 lives. Five firefighters died in two roof collapses where wood trusses, described as pre-engineered wood and lightweight wood were involved. Three firefighters were killed in two collapses involving lightweight wood floor trusses. And another was killed in a floor collapse involving open manufactured wood I-beams.

I have attached a copy of the March 18, 2013 article with some highlighted segments.

Also, an important thing to know is that the change that is proposed has been written into the 2012 version of the IRC and the City would just be adopting this change in the 2009 version.

The ultimate goal of the Creve Coeur Fire Protection District is to provide safety for both the homeowners and the firefighters. It is our belief of that the adoption of the 2009 IRC, with this modification, will give the occupants more time to exit the structure and give firefighters the additional time to make entry to suppress a fire.

I have attached a copy of the March 18, 2013 article with some highlighted segments and a NIOSH report from the CDC describing the dangers to firefighters due to truss failures.

The Creve Coeur Fire Protection District truly appreciates your adding this amendment to your IRC adoption and appreciates the City Council's consideration in this matter.

Yours in Fire Safety:

A handwritten signature in cursive script, appearing to read "Arthur K. Oestereich".

Arthur K. Oestereich
Fire Marshal
Creve Coeur Fire Protection District



MONARCH FIRE PROTECTION DISTRICT

13725 Olive Blvd., Chesterfield, MO 63017-2640

Phone: 314.514.0900 Fax: 314.514.0696

www.monarchfpd.org

May 3, 2013

Steve Unser
Building Code Official
City of Creve Coeur
300 N. New Ballas Rd.
Creve Coeur, MO 63141

RECEIVED
MAY 03 2013
BUILDING DEPT.

EXHIBIT J

Dear Mr. Unser:

This letter is to confirm my support of the proposed language requiring protection of engineered lightweight floors in the City of Creve Coeur adoption of the 2009 Codes.

The intent of the Code clearly states, in part, that it is "...to provide safety to fire fighters and emergency responders during emergency operations." (Section 101.3).

This requirement is vital to occupant and emergency responder safety, as the time for escape and rescue in fire conditions is drastically shortened with the use of engineered lightweight lumber and modern furnishings.

Unlike those built with traditional sawn lumber, floors built with unprotected engineered lightweight lumber collapse suddenly and without warning when exposed to fire from the underside. This has been proven through tests by Underwriters Laboratories. In the tests, the engineered lightweight floors showed no significant heat signature when viewed with a thermal imaging camera until collapse was imminent. And the time from fire ignition to collapse was a mere 6 minutes after fire ignition – less than the time it takes for fire department arrival.

However, the application of ½-inch gypsum board on the bottom of the engineered lightweight floor system in the tests increased the time to collapse by 20 minutes. This would give emergency responders considerably more time for search and rescue.

The sponsors of the Code change that inserted this requirement into the 2012 International Residential Code included the National Association of Home Builders, as well as the American Wood Council which represents the industry that manufactures engineered wood products. The vote by membership of the International Code Council overwhelmingly approved this change because those sponsoring the Code change, and the voting membership, all agreed that the facts supporting the change undeniably outweighed the opposing arguments. Unprotected engineered lightweight construction involved with fire collapses much faster, and without much warning (if any at all); however the added protection gives time for occupant escape and search and rescue by emergency responders.

For the reasons stated above, I believe it is imperative that this proposed amendment be included in the City of Creve Coeur adoption of the 2009 Codes.

If you have any questions, please call me at 314-514-0900 ext. 313, or email me at herin.r@monarchfpd.org.

Yours in Firesafety,

A handwritten signature in black ink that reads "Roger N. Herin".

Roger N. Herin, MCP
Fire Marshal

City of Creve Coeur / Building Division **EXHIBIT K**
 COMPARISON TABLE
 BETWEEN
 PRESENT ENERGY CONSERVATION CODE REQUIREMENTS
 AND
 2009 INTERNATIONAL ENERGY CONSERVATION CODE REQUIREMENTS.

NOTE: The Building Division will recommend that the 2009 International Energy Conservation Code and Chapter 11- Energy Efficiency- of the 2009 International Residential Code be adopted as written.

Building Element	Current Requirement	2009 IRC, Chapter 11 Or 2009 IECC, Chapter 4	What St. Louis County Did
Roof R Value	30	38	30
Wall R Value	13	13	13
Floor R Value	19	19	19
Crawl Space R Value	5	10	5
Exposed Duct R Value	5	8	4
Fenestration U- Factor	0.40	0.35	0.40
Programmable Thermostats	Not Required	Required	Required
High Efficiency Light Bulbs	Not Required	Required for 50% of permanent light fixtures	Required for 50% of permanent light fixtures
Thermal Envelope Sealing/Testing	Not Required	Required	Amended 'sealing' Deleted 'testing'
Permanent Energy Conservation Certificate Posted	Not Required	Required	Deleted
Duct Sealing / Testing	Sealing Required Testing Not Required	Sealing and Testing Required	Sealing Required Testing Deleted
Wood-Burning Fireplaces	Can be open to a room.	Must have gasketed doors and outside air	Deleted
Thermal Cover for Heated Swimming Pools	Not Required	Required	Required
Insulating & Weatherstripping Attic Access Panels	Not Required	Required	Insulating Required Weatherstripping Deleted



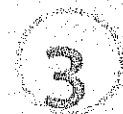
FOR NEW HOMES IN
MISSOURI
CLIMATE ZONE 4

TRUE COST OF THE 2009 INTERNATIONAL ENERGY CONSERVATION CODE

Homes are the biggest investment we make—and everyone deserves a home that meets national minimum energy efficiency standards. While it's true that homeowners can always improve the efficiency of their homes, it is far more cost-effective to upgrade building components during construction, putting in better windows or swapping out one grade of insulation for a better one. Here's what buyers get with the 2009 IECC:



Payback Period
14 months



3-year Profit
\$476.75

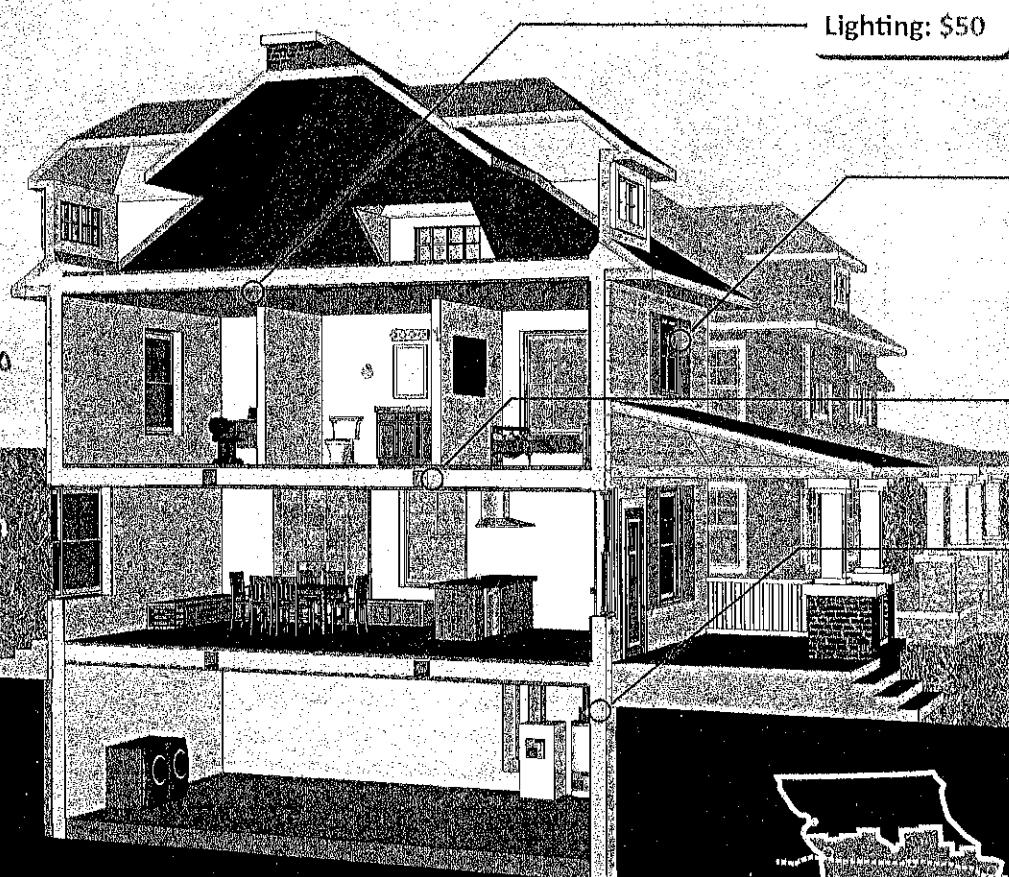


Annual Energy Reduction
18%



5-year Profit
\$992.69

18%



Lighting: \$50

Window Upgrades
CLIMATE ZONE 4: \$735

Duct Sealing and
Testing: \$350

Insulation Upgrades
CLIMATE ZONE 4: \$383



Climate Zone 4

u-factor: .5 $\Rightarrow$.35

r-value: 30 $\Rightarrow$ 38

□□□□□□
WINDOW
INSULATION
CEILING



MISSOURI
DEPARTMENT OF
NATURAL RESOURCES



For the full Incremental Cost Analysis study, please visit bcap-ocean.org

TRUE COST OF THE



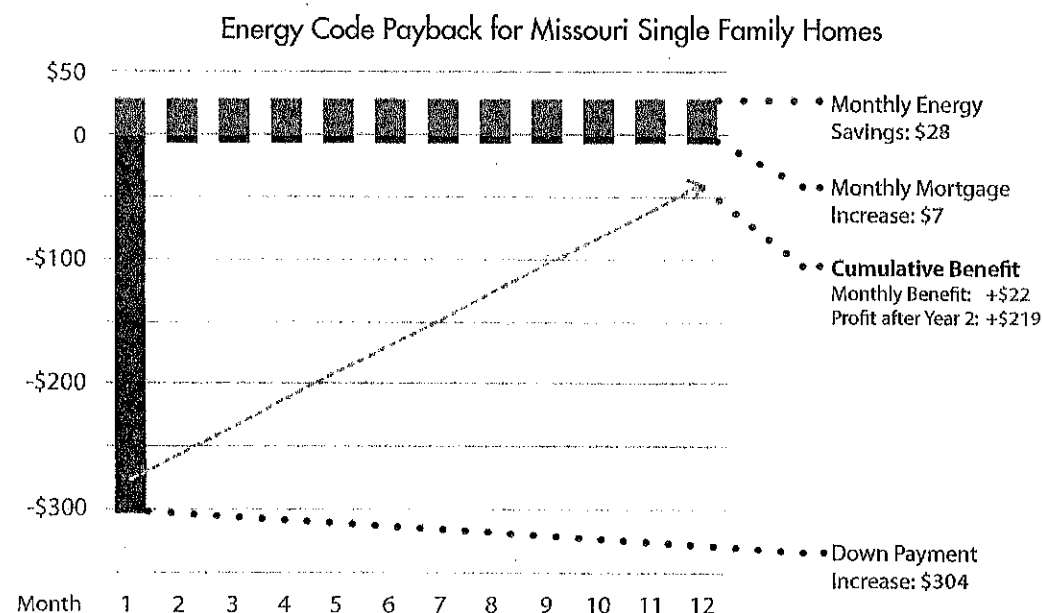
FOR NEW HOMES IN
MISSOURI
CLIMATE ZONE 4

2009 INTERNATIONAL ENERGY CONSERVATION CODE

One of the major barriers to energy code adoption across the country is the concern that new codes will add to the purchase price and potential buyers will not be able to afford the homes they want. In Missouri, upgrading homes to the 2009 International Energy Conservation Code will actually reduce out-of-pocket expenses for homeowners – paying off their initial investment in a matter of months.

For the average new home built in IECC climate zone 4*, BCAP estimates the costs of the new code will add no more than a total of \$1,519 in construction costs—an increase of only 0.6%. When this amount is rolled into the average mortgage, real costs to homebuyers will mean a down payment increase of \$303.72 and \$6.56 extra on monthly mortgage bills.

These added mortgage costs will be offset, however, by monthly energy savings of \$28.06, helping homebuyers pay off their initial investment in only fourteen months. After breaking even in month fourteen, the home will return buyers a profit of \$22 per month—for a total return of \$258 every year. This return on investment is graphed below and presented as a balance sheet at right.



Month	Mortgage Increase	Monthly Energy Savings	Cumulative Cost/Benefit
1	\$303.72	\$28.06	-\$275.66
2	\$6.56	\$28.06	-\$254.17
3	\$6.56	\$28.06	-\$232.67
4	\$6.56	\$28.06	-\$211.17
5	\$6.56	\$28.06	-\$189.67
6	\$6.56	\$28.06	-\$168.18
7	\$6.56	\$28.06	-\$146.68
8	\$6.56	\$28.06	-\$125.18
9	\$6.56	\$28.06	-\$103.68
10	\$6.56	\$28.06	-\$82.19
11	\$6.56	\$28.06	-\$60.69
12	\$6.56	\$28.06	-\$39.19
13	\$6.56	\$28.06	-\$17.69
14	\$6.56	\$28.06	\$3.81 Break Even
15	\$6.56	\$28.06	\$25.30 \$22 profit every month
16	\$6.56	\$28.06	\$46.80
17	\$6.56	\$28.06	\$68.30
18	\$6.56	\$28.06	\$89.80

This model assumes an average sale price of \$267,451 for a 2,400 square foot home. The mortgage is conservatively set at 30 years, with 20% down and the current average nationwide interest rate of 5.05%. With a lower down payment—such as 10% down—consumers will break even on their investment even sooner.

* Missouri's climate zone 4 covers the lower three-fourths of the state, and represents 93% of the state's population

RECEIVED

APR 19 2013

BUILDING DEPT.

EXHIBIT M

April 17, 2013

The Honorable Barry Glantz and
Honorable Members of the Creve Coeur City Council
300 N. New Ballas Road
Creve Coeur, MO 63141

Dear Mayor Glantz and Creve Coeur City Council Members:

The Homes Builders Association of St. Louis and Eastern Missouri (HBA) and its 600 business members are greatly concerned with the integrity of home construction. Therefore, every code cycle the HBA writes and proposes code amendments with the intent to achieve the delicate but necessary balance of maintaining superb health and safety standards while still allowing home owners to have the flexibility needed to make their residence a home that meets their families' needs and lifestyle choices.

To this end, the HBA conducts a thorough review every code cycle of the International Code Council's code products that are relevant for home construction. The review of the *2009 International Residential Code* included a varied group of industry experts including, but not limited to, builders, engineers, architects, fire service representatives, utility representatives, and various associate sub-contractor groups (electricians, plumbers, HVAC specialists, truss and window supply companies, and other various disciplines within the industry). These amendments were submitted to the City and discussed with City Staff during the public comment period of the code adoption process.

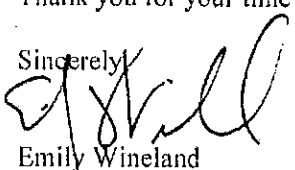
To date, none of the HBA comments were approved by City Staff for incorporation into the adopting ordinance of the City of Creve Coeur. While the HBA appreciates the consideration of staff, the dismissal of HBA's industry expertise and knowledge of the needs of consumers is disappointing. If the current version of the City's code ordinance is adopted, the City of Creve Coeur will face a significant market disadvantage when compared to its surrounding communities – Ladue, Frontenac, Olivette, Chesterfield, etc. – as those municipal codes allow greater flexibility for families to work with builders to customize a home that better fit their families' needs and choices for their own homes.

It is common for municipalities and counties to work with the home building industry to customize a code – from these international models – that is appropriate for their jurisdiction and the needs of its current and future constituents. And, the HBA would appreciate the opportunity to work with you to explain these technical issues and the recommended HBA amendments.

I am happy to facilitate such discussions at any time, please do not hesitate to contact me if you are interested.

Thank you for your time and consideration on this important issue.

Sincerely,


Emily Wineland
Staff Vice President for Public Policy
314-817-5625

CC: Mark Perkins, City Administrator, Creve Coeur
Steve Unser, Chief Building Official, Creve Coeur
HBA Codes Advisory Committee
HBA St. Louis County Board of Trustees
Patrick S. Sullivan, Executive Vice President

HOME
BUILDERS
ASSOCIATION
OF ST. LOUIS
& EASTERN
MISSOURI

10104
OLD OLIVE
STREET ROAD

ST. LOUIS,
MISSOURI
63141-5908

314 994 7700

FAX
314 432 7185

WEBSITE
WWW.STLHBA.COM





city
of

CREVE COEUR

300 North New Ballas Road • Creve Coeur, Missouri 63141
(314) 432-6000 • Fax (314) 872-2539 • Relay MO 1-800-735-2966
www.creve-coeur.org

July 1, 2013

EXHIBIT AA

Mayor and Council Members
Creve Coeur Government Center
300 N. New Ballas Road.
Creve Coeur, MO 63141

RE: Building Code Board of Appeals Review of the Recommendations Made by the Home Builder's Association and Mr. Richard Kutta to the Rough Draft of the City Ordinance (Bill No. 5424) Being Proposed to Adopt the City's New Residential Building Code.

Dear Mayor and Council Members;

The Building Code Board of Appeals was asked by City Council on May 28, 2013, to review the aforementioned recommendations made to the ordinance being proposed that will amend and adopt the 2009 edition of the International Residential Code as our city's new building code for One- And Two-Family Dwellings.

Upon careful review of the aforementioned proposed recommendations and during our public meeting held on June 25, 2013, to further discuss these recommendations with each other, members of the HBA, Mr. Kutta, other interested parties and the Chief Building Official, the Building Code Board of Appeals voted to disapprove the sixteen (16) recommendations made by the HBA and one (1) of the five (5) recommendations made by Mr. Kutta.

Mr. Kutta withdrew two (2) of his recommendations. Mr. Kutta and the Chief Building Official are working together to revise Mr. Kutta's two (2) remaining recommendations.

Thank you for your consideration of these decisions made by the Building Code Board of Appeals .

Sincerely,

Building Code Board of Appeals
Bernard Colton, Chairperson

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF CREVE COEUR, MISSOURI AUTHORIZING THE EXECUTION OF A MAINTENANCE AGREEMENT WITH THE MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION FOR THE MAINTENANCE OF ILLUMINATED STREET NAME SIGNS ON TRAFFIC SIGNALS LOCATED IN THE MODOT RIGHT-OF-WAY AT CONWAY ROAD AND SOUTH NEW BALLAS ROAD

WHEREAS, the City of Creve Coeur strives to promote a beautiful and safe place for the residents to live, work and drive; and

WHEREAS, the City supports the use of illuminated street name signs on all newly installed traffic signal mast arms; and

WHEREAS, the attached "Exhibit A" is an agreement with the Missouri Department of Transportation (MoDOT) regarding the responsibilities of maintaining city approved improvements at Conway Road and South New Ballas Road;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CREVE COEUR, AS FOLLOWS:

Section 1: The maintenance agreement between the Missouri Highways and Transportation Commission and the City regarding the upkeep and maintenance of illuminated street name signs on the traffic signals mast arms located at the Conway Road/ South New Ballas Road intersection and attached hereto as Exhibit A is hereby approved and the City Administrator is authorized to execute same on behalf of the City and the City Clerk is authorized and directed to attest thereto. The Agreement as executed shall be in substantially the form of Exhibit A, with such changes therein as shall be approved by the officers of the City executing same, consistent with the provisions and intent of this Ordinance and necessary, desirable, convenient or proper in order to carry out the matters herein authorized. The City Administrator and his designated representatives are hereby authorized and directed to take any and all actions necessary, desirable, convenient or proper in order to carry out the intent of this Ordinance, the matters herein authorized, and the rights and duties of the City under the Agreement.

Adopted this ____ day of _____ 2013.

Scott Saunders
President of City Council

Adopted this ____ day of _____ 2013.

Barry Glantz
Mayor

ATTEST:

Deborah Ryan, MPCC
City Clerk

CCO Form: TR52
Approved: 04/13 (ASB)
Revised:
Modified:

Date of Installation: _____
Type of Installation: ☐ New ☐ Revised
MoDOT District Number: _____
MoDOT Contract Administrator: _____

“EXHIBIT A”

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION ILLUMINATED STREET SIGN MAINTENANCE AND POWER SUPPLY AGREEMENT

THIS AGREEMENT is entered into by the Missouri Highways and Transportation Commission (hereinafter, "Commission") and the _____, Missouri (hereinafter, "City").

WITNESSETH:

WHEREAS, as, the City has requested and the Commission approved the placement of illuminated street signs on Commission right of way; and

WHEREAS, the parties desire to enter into this Agreement to designate maintenance and power supply responsibilities in relation to the illuminated street signs.

NOW, THEREFORE, in consideration of the mutual promises, covenants, and representations contained in this Agreement, the parties agree as follows:

(1) PURPOSE AND SCOPE: It is the purpose of this Agreement to outline the responsibilities of the Commission and the City regarding maintenance and power supply responsibilities in relation to the illuminated street signs. The general locations of the illuminated street signs to be installed pursuant to this Agreement are at _____ and _____ along _____ in _____, Missouri.

(2) INSTALLATION OF ILLUMINATED STREET SIGNS:

(A) The City shall provide documentation of a structural analysis, signed and seal by a registered professional engineer in the State of Missouri that shows the illuminated street name sign will not affect the structural stability of the signal structure on which it is to be installed.

(B) Pursuant to the terms of this Agreement, the City shall install illuminated street signs at the approved location(s). The City will incur the installation expense of the illuminated street signs pursuant to this Agreement and the City shall comply with any terms placed in the issuance of a permit authorizing the construction of the illuminated street signs. The Commission shall be responsible for all maintenance and traffic control devices at

_____ and _____ along _____ in _____, Missouri, with the exception of illuminated street signs.

(C) The City shall maintain, at the City's cost, the illuminated street signs. The illuminated street signs shall be maintained in accordance with the Commission's policies.

(D) The City shall be responsible for the cost of electrical current used for the operation of the illuminated street signs. The Commission will allow the illuminated street signs to be connected to the electrical current from the Commission's traffic signal power supply but the signs shall be wired to a separate breaker box and labeled "Street Name Signing". The cost of the electrical current for the ten years is due before installation of the sign, in full and is \$ _____. The payment is nonrefundable. The payment amount constitutes the cost of electrical current used for the operation of the illuminated street signs for the life of this contract. If the signs or its support structures need to be replaced as a result of age, damage, or vandalism the City will be solely responsible for the cost to return the signs to their original condition. In such an event another agreement between the parties must be executed before any work to replace the signs or support structures begins. If a new agreement is not executed the signs in question will be permanently removed by the City at no cost to the Commission.

(3) ILLUMINATED STREET NAME REQUIREMENTS: The illuminated street signs shall be in accordance with the latest edition of the Manual of Uniform Traffic Control Devices (MUTCD) regarding letter height, letter type, use of pictographs and color.

(4) TRAFFIC CONTROL: All work zone signs and traffic control devices to be used shall be in accordance with the latest revision of the Manual on Uniform Traffic Control Devices for Streets and Highways or as directed by the District Engineer or his authorized representative.

(5) MAINTENANCE BY CITY WITHIN COMMISSION RIGHT OF WAY: In order to coordinate maintenance activities on the improvement, the City shall notify the Commission either by telephone, telefax, or in writing, prior to performing maintenance work within Commission right of way. Such notification shall be made to the district's Operational Support Engineer or a designated assistant, and shall include the location and nature of the work to be performed.

(A) The City may have the maintenance work required pursuant to this Agreement performed by either its own maintenance personnel or by contract with qualified individuals or companies approved by the Commission to provide a fully functional illuminated street sign system.

(B) The City shall respond to any emergency situation in which repair or maintenance of damage to the illuminated street signs is required immediately to correct a dangerous condition or restore the safe, unobstructed flow of traffic on the improvement.

(6) PERMITS: Before beginning work, the City shall secure from the Commission's District Engineer a permit for the proposed improvement. The City may provide written authority to the Commission's District Engineer enabling its contractor to obtain the permit as an agent for the City. Future maintenance shall be covered by separate permit. The City shall comply with any additional condition placed upon the issuance of the permit.

(7) BOND: The City shall secure sufficient bond, as determined by the Commission's District Engineer or his authorized representative, for the work to be done pursuant to this Agreement within Commission right-of-way.

(8) HIGHWAY SPECIFICATIONS: All work done pursuant to this Agreement shall be in accordance with applicable portions of the latest editions of the Missouri Highways and Transportation Commission's Standard Specifications for Highway Construction and the Standard Plans for Highway Construction. The City shall provide a copy of its contractor's certification of material used.

(9) AMENDMENTS: Any change in this Agreement, whether by modification or supplementation, must be accomplished by a formal contract amendment signed and approved by the duly authorized representative of the City and the Commission.

(10) COMMISSION REPRESENTATIVE: The Commission's District Engineer is designated as the Commission's Representative for the purpose of administering the provisions of this Agreement. The Commission's Representative may designate by written notice to each of the City Representatives, additional persons having the authority to act on behalf of the Commission in the performance of this Agreement.

(11) CITY REPRESENTATIVE: The City Administrator for the City is designated as the City's representative for the purpose of administering the provisions of this Agreement. The City Representatives may designate by written notice to the Commission's Representative additional persons having the authority to act on behalf of the City or a City Department in the performance of this Agreement.

(12) NOTICES: Any notice or other communication required or permitted to be given hereunder shall be in writing and shall be deemed given upon delivery by First Class, Priority or Express United States mail, postage

prepaid, or upon actual receipt by courier, personal or facsimile delivery, addressed as follows:

(A) To the Commission:

(B) To the City

or to such other place as the parties may designate in accordance with this Agreement. To be valid, facsimile delivery shall be followed by delivery of the original document, or a clear and legible copy thereof, within three (3) business days of the date of facsimile transmission of that document.

(13) NONDISCRIMINATION COVENANT: The City for themselves, their representatives, successors in interest, and assigns, as part of the consideration hereof, do hereby covenant and agree as a covenant running with the property that no person on the grounds of race, color, religion, creed, national origin, sex, or age shall be denied by them the benefits or otherwise be subjected to them, to discrimination in the use of the property.

(14) VENUE: It is agreed by the parties that any action at law, suit in equity, or other judicial proceeding to enforce or construe this Agreement, or regarding its alleged breach, shall be instituted only in the Circuit Court of Cole County, Missouri.

(15) LAW OF MISSOURI TO GOVERN: This Agreement shall be construed according to the laws of the state of Missouri. The City shall comply with all local, state and federal laws and regulations relating to the performance of this Agreement.

(16) INDEMNIFICATION:

(A) To the extent allowed or imposed by law, the City shall defend, indemnify and hold harmless the Commission, including its members and department employees, from any claim or liability whether based on a claim for damages to real or personal property or to a person for any matter relating to or arising out of the City's wrongful or negligent performance of its obligations under this Agreement.

(B) The City will require any contractor procured by the City to work under this Agreement:

(1) To obtain a no cost permit from the Commission's district engineer prior to working on the Commission's right-of-way, which shall

be signed by an authorized contractor representative (a permit from the Commission's district engineer will not be required for work outside of the Commission's right-of-way); and

(2) To carry commercial general liability insurance and commercial automobile liability insurance from a company authorized to issue insurance in Missouri, and to name the Commission, and the Missouri Department of Transportation and its employees, as additional named insureds in amounts sufficient to cover the sovereign immunity limits for Missouri public entities (\$500,000 per claimant and \$3,000,000 per occurrence) as calculated by the Missouri Department of Insurance, Financial Institutions and Professional Registration, and published annually in the Missouri Register pursuant to Section 537.610, RSMo.

(C) In no event shall the language of this Agreement constitute or be construed as a waiver or limitation for either party's rights or defenses with regard to each party's applicable sovereign, governmental, or official immunities and protections as provided by federal and state constitution or law.

(17) ASSIGNMENT: The City shall not assign, transfer or delegate any interest in this Agreement without the prior written consent of the Commission.

(18) CANCELLATION: The Commission may cancel this Agreement at any time for a material breach of contractual obligations by providing the City with written notice of cancellation. Should the Commission exercise its right to cancel the contract for such reasons, cancellation will become effective upon the date specified in the notice of cancellation sent to the City. In the event the Commission terminates this Agreement, the Commission reserves the right to remove the illuminated street signs or replace it with any type of signing it chooses.

(19) AUDIT OF RECORDS: The City must maintain all records relating to this Agreement, including but not limited to invoices, payrolls, etc. These records must be available at all reasonable times at no charge to the Commission and/or its designees or representatives during the period of this Agreement and any extension thereof, and for three (3) years from the date of final payment made under this Agreement.

(20) SECTION HEADINGS: All section headings contained in this Agreement are for the convenience of reference only and are not intended to define or limit the scope of any provision of this Agreement.

(21) SOLE BENEFICIARY: This Agreement is made for the sole benefit of the parties hereto and nothing in this Agreement shall be construed to give any rights or benefits to anyone other than the Commission and the City.

(22) SEVERABILITY: If any clause or provision of this Agreement is found to be void or unenforceable by a court or agency of proper jurisdiction, then the remaining provisions not void or unenforceable shall remain in full force and effect.

(23) AUTHORITY TO EXECUTE: The signers of this Agreement warrant that they are acting officially and properly on behalf of their respective institutions and have been duly authorized, directed and empowered to execute this Agreement.

(24) NO INTEREST: By constructing the illuminated street signs within the Commission right of way, the City gains no property interest in the Commission's right of way whatsoever. The Commission shall not be obligated to keep the illuminated street signs in place or on the Commission's right of way, if the Commission in its sole discretion, determines removal or modification of the illuminated street signs is in the best interests of the state highway system or the Commission.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the parties have entered into this Agreement on the date last written below:

Executed by the City this _____ day of _____, 20__.

Executed by the Commission this _____ day of _____, 20__.

MISSOURI HIGHWAYS AND
TRANSPORTATION COMMISSION

CITY OF _____

By _____

By _____

Title _____

Title _____

ATTEST:

ATTEST:

Secretary to the Commission

By _____

Title _____

Approved as to Form:

Approved as to Form:

Commission Counsel

Title _____

Ordinance Number _____



DEPARTMENT OF PUBLIC WORKS OFFICE MEMO

DATE: June 18, 2013

TO: Mark C. Perkins, City Administrator,

FROM: Jim Heines, Director of Public Works

SUBJECT: Recommendation to Execute an Agreement with the Missouri Highways and Transportation Commission for the Maintenance of Illuminated Street Name Signs to be mounted on the Traffic Signals at Conway Rd./New Ballas.

The City of Creve Coeur and adjacent developers have funded many traffic signal improvements in the city such as black powder coat and illuminated street name signs on traffic signals. As part of the improvement project on Ballas Rd. at Conway Rd., MoDOT is required Mercy Hospital to replace the traffic signal posts and mast arms to accommodate the additional lanes. The city not only required black powder coating on the posts and mast arms as a visual enhancement staff also requested the installation of illuminated street name signs on the mast arms..

MoDOT will not allow the illuminated street name signs to be installed on the new traffic signal equipment unless there is an agreement with the city in place to maintain the equipment. The attached agreement, "Exhibit A" is MoDOT's standard TR52 maintenance agreement for illuminated street signs and power supplies

Public Works staff is recommending the execution of six copies of the attached agreement on behalf of City to confirm the city's maintenance responsibilities in regards to these improvements.

**AN ORDINANCE AUTHORIZING THE ISSUANCE OF A NEW CONDITIONAL USE PERMIT
FOR A 2,837 SQUARE-FOOT, LIMITED-SERVICE ULTIMATE ZOUP RESTAURANT,
LOCATED AT 810 NORTH NEW BALLAS ROAD, AND CONTAINING AN EMERGENCY
CLAUSE**

WHEREAS, under Section 405.210 Table A, all limited-service restaurants in the “CB”, Core Business zoning district require the issuance of a conditional use permit as provided in Section 405.1070, Conditional Use Permits; and

WHEREAS, an application was submitted by Thaer Abdulkarim, of Ultimate Zoup, for a conditional use permit for a 72 seat, 2,837 square foot restaurant located in the tenant space of 810 N. New Ballas Road, at the northeast corner of Olive Boulevard and N. New Ballas Road.

WHEREAS, a public hearing was held by the Creve Coeur Planning and Zoning Commission on Monday, July 1, 2013, beginning at 7:00 p.m. or immediately following the close of the previous public hearing, on said application for the conditional use permit as provided by Section 405.1070(D)(2); and

WHEREAS, notice of publication for said public hearing had been previously published at least 15 days prior to the hearing, in the St. Louis Countian, a newspaper of general circulation in the City of Creve Coeur; and

WHEREAS, the Planning and Zoning Commission reviewed and, by a 6-0 vote, recommended approval of the conditional use permit, subject to the conditions contained herein, at its meeting on July 1, 2013; and

WHEREAS, all parties desiring to be heard, either for or against said application, were given an opportunity to be heard, and a copy of the proposed ordinance has been made available for public inspection prior to its consideration by the Council; and this Bill having been read by title in open meeting two times before final passage by the City Council, and

WHEREAS, the Council approved consideration and passage of this ordinance as an emergency measure on the day of its introduction due to the unexpected lack of quorum of the June 17th Planning and Zoning Commission, and

WHEREAS, the City Council finds that the application and evidence presented clearly indicate that the proposed conditional use, when subject to certain conditions set forth herein:

1. Will contribute to and promote the community welfare and convenience at the specific location.
2. Will not cause substantial injury to the value of neighboring property.
3. Meets the applicable provisions of the City's Comprehensive Plan and any applicable neighborhood or sector plans and complies with other applicable zoning district regulations and provisions of this Chapter, unless good cause exists for deviation therefrom.
4. Will be compatible with the surrounding area and thus will not impose an excessive burden or have a substantial negative impact on surrounding or adjacent users or on community facilities or services.

NOW, THEREFORE, be it ordained by the City Council of the City of Creve Coeur, St. Louis County, Missouri, as follows:

Section 1: A Conditional Use Permit is authorized to be issued pursuant to Section 4 hereof for the operation of a restaurant located within the tenant space at 810 N. New Ballas, within the building at 11733 Olive Boulevard in the "CB" Core Business District zoning district, whose legal description is as follows:

Parcel 1

A tract of land being part of section 3, Township 45 North. Range 5 East. City of Creve Coeur, St Louis County Missouri and being more particularly described as follows:

Beginning at the intersection of the East line of Ballas Road Extension (40 feet wide) with the North line of Olive Street Toad, as widened; thence Northwardly along said East line of Ballas Road Extension North 00 degrees 22 minutes 27 seconds East 300.39 feet to a point; thence South 87 degrees 05 minutes 59 seconds East 263.67 feet to a point on the West line of Parcel A of "Marriott Courtyard Plaza Plat 1" a subdivision according to the plat therefor recorded in Plat Book 245 page 12 of the St. Louis County records; thence Southwardly along said West line South 02 degrees 51 minutes 03 seconds West 337.99 feet to a point on the aforesaid North line of Olive Street Road as widened; thence Westwardly along said North line along a curve to the right having a radius of 2116.75 feet and the Arc distance of 34.94 feet to a point (whose chord bears North 79 degrees 34 minutes 14 seconds West 34.94 feet); thence North 79 degrees 05 minutes 51 seconds West 90.51 feet to a point; thence along a curve to the right having a radius of 2819.93 feet and an Arc distance of 128.15 feet (whose chord bears North 77 degrees 47 minutes 44 seconds West 128.15 feet) to the point of beginning and containing 82206 square feet or 1.887 acres according to a survey by Heideman + Associates, Inc. dated January 25, 1996 and last revised February 15, 1996.

Parcel 2

Lot A of Marriott Courtyard Plaza, a subdivision in St. Louis County, Missouri, according to the plat thereof recorded in Plat Book 245, Page 12 of the St. Louis County Records. Together with easements described in easement agreement dated as of February 15, 1996, among Essex House Condominium Corporation, Mid-County Real Estate, LLC and Borders, Inc., recorded at Deed Book 10743, Page 804.

Section 2: The Conditional Use Permit granted shall be subject to all applicable statutes, ordinances, rules and regulations, and the following conditions:

1. The conditional use permit shall be for the operation of 2,837 square-foot limited-service restaurant at tenant space addressed as 810 N. New Ballas Road, within the building at 11733 Olive Boulevard.
2. Seating is limited to a maximum of 72 indoor seats.
3. Hours of operation shall not exceed 10:00 am to 9:00 pm seven days a week. Additional business hours may be permitted with the Zoning Administrator's approval, including, but not limited to, the catering of special events.
4. There shall be no outdoor storage or placement of any materials or equipment.
5. Employee parking, delivery and company vehicles shall be parked in the rear garage parking area or as far from the public right-of-way as possible.
6. All signs and banners shall be in conformance with Article VIII, Sign Regulations, of the Zoning Code.
7. The restaurant shall use a tempered makeup air system. Such system shall be regularly cleaned and maintained in order to reduce cooking smells.

8. Any mechanical equipment installed for the restaurant shall be properly screened with materials approved by the Zoning Administrator.
9. Any future enlargement, extension, expansion or alteration in the use of the structures or site must be approved by the City Council upon receipt of the recommendation of the Planning and Zoning Commission as an amendment to the Conditional Use Permit before a Building Permit for the enlargement, expansion or alteration may be issued.
10. Failure to comply with any one or all of the conditions of this permit shall be adequate cause for the revocation of said permit by the City Council, provided, however, no permit shall be revoked without prior notice to the owner of the intention of the City Council to revoke this permit and reasonable time granted to the owner to correct or remedy any such breach of conditions, except for repeated breaches or violations.
11. No conditional use permit granted by the City Council shall be valid for a period longer than one year from the date it grants the conditional use permit, unless within such period: (1) a building permit is obtained and construction is begun; or (2) if a building permit is not required, an occupancy permit is obtained and the use of the building commenced. The City Council may grant extensions to the one (1) year period of not more than one hundred and eighty (180) days each, without notice or hearing, provided that a written request for such extension is filed by the original applicant and approved by the City Council prior to the date the conditional use permit is scheduled to expire.
12. Any transfer of ownership or lease of the property shall include in the transfer or lease agreement a provision that the purchaser or lessee agrees to be bound by the approved Site Development Plan for the property and the conditions herein set forth, and written confirmation thereof signed by the new owner or lessee shall be filed with the City at the time of such transfer or lease. Failure to comply with this provision shall not excuse anyone from these conditions.

Section 3: The City Administrator of the City of Creve Coeur is hereby authorized and directed to issue a Conditional Use Permit in accordance with the provisions of this ordinance, said permit to expressly provide for the conditions and stipulations hereinabove set out in Section 3 of this ordinance. Exercise of the rights granted pursuant to the issued permit shall constitute acceptance of all conditions and stipulations set forth herein.

Section 4: This ordinance shall become effective as emergency measure in accordance with Section 3.11 of the City Charter in light of Applicant's lease deadline and delays caused by lack of quorum at Planning and Zoning Commission meeting.

ADOPTED THIS ____ DAY OF _____, 2013.

DR. SCOTT SAUNDERS
PRESIDENT OF CITY COUNCIL

APPROVED THIS ____ DAY OF _____, 2013.

BARRY GLANTZ
MAYOR

ATTEST:

DEBORAH RYAN, CITY CLERK



city of CREVE COEUR

300 North New Ballas Road • Creve Coeur, Missouri 63141
(314) 432-6000 • Fax (314) 872-2539 • Relay MO 1-800-735-2966
www.creve-coeur.org

APPLICATION TO PLANNING AND ZONING COMMISSION #13-015 FOR A CONDITIONAL USE PERMIT FOR ULTIMATE ZOUP, A LIMITED-SERVICE RESTAURANT

FOR THE MEETING OF: June 17, 2013, 7:00 PM

LOCATION: 810 N. New Ballas Road

REQUEST: An application has been submitted for a conditional use permit for a 2,837 square-foot, 72 seat, limited-service restaurant in the newly created tenant space at the northwest corner of the building at 11733 Olive Boulevard. The property is zoned "CB" Core Business District.

ADDITIONAL INFORMATION: The Planning and Zoning Commission reviewed the exterior modifications to the building and the creation of the generic tenant space on January 7, 2013, and Council approved the resolution on January 14, 2013. Limited-Service Restaurants (NAICS 722513) are permitted by conditional use permit in the "CB" Core Business District per Section 405.210, Table A: Permitted and Conditional Uses.

Key Issues:

- Does the request integrate with the existing surrounding uses?
- Does the request further or implement the goals of the Comprehensive Plan?

Comp. Plan References

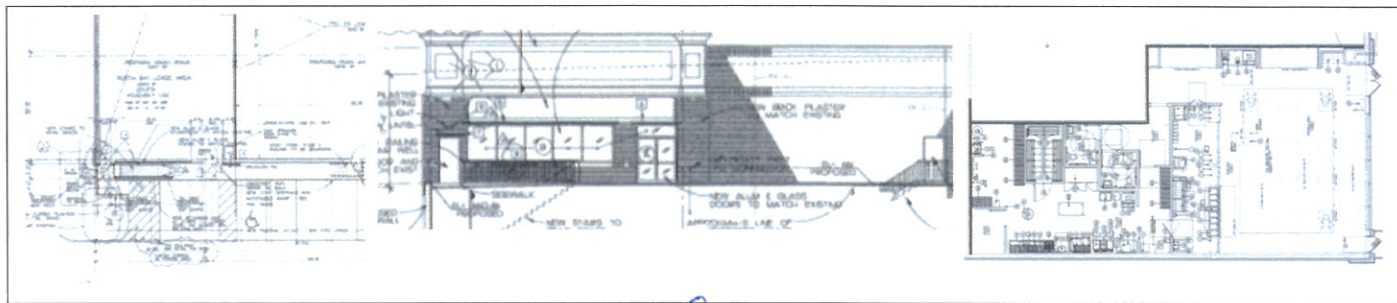
- NA

Zoning Code References

- Section 405.210: Regulation of Uses
- Section 405.370: "CB" Core Business District
- Section 405.470 Conditional Uses
- Section 405.820 Required Off-Street Parking Spaces

APPLICANT: Thaer Abdulkarim
Ultimate Zoup
104 Marble Crossing Dr.
Wentzville, MO 63385

PROPERTY OWNER: Nick Sepac
Mid-County Real Estate, LLC
2128 Woodlet Park Dr.
Chesterfield, MO 63017



REPORT PREPARED BY:

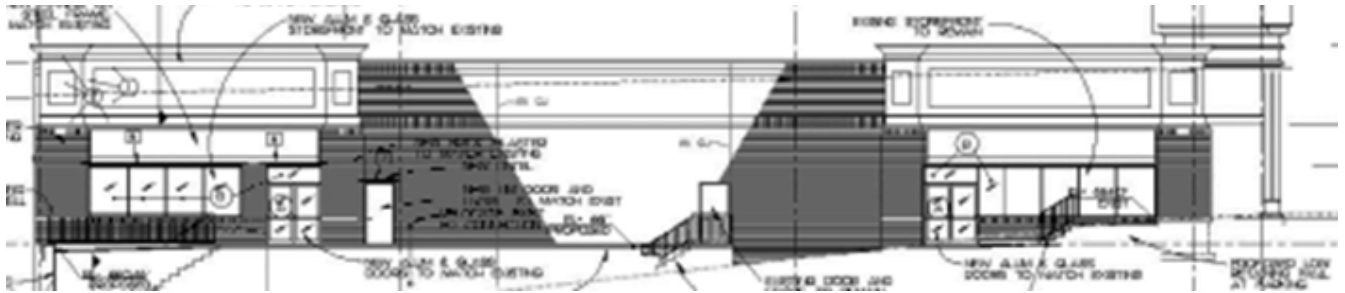
Whitney Kelly, AICP

Date

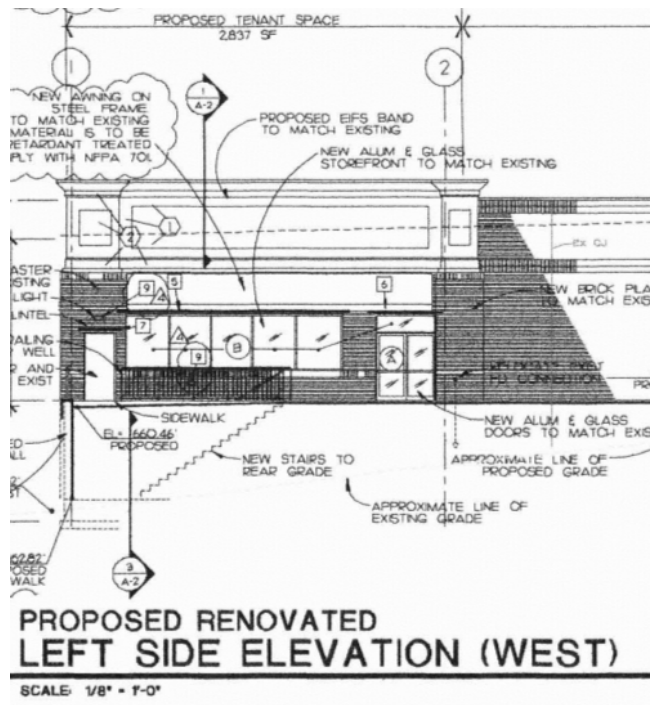
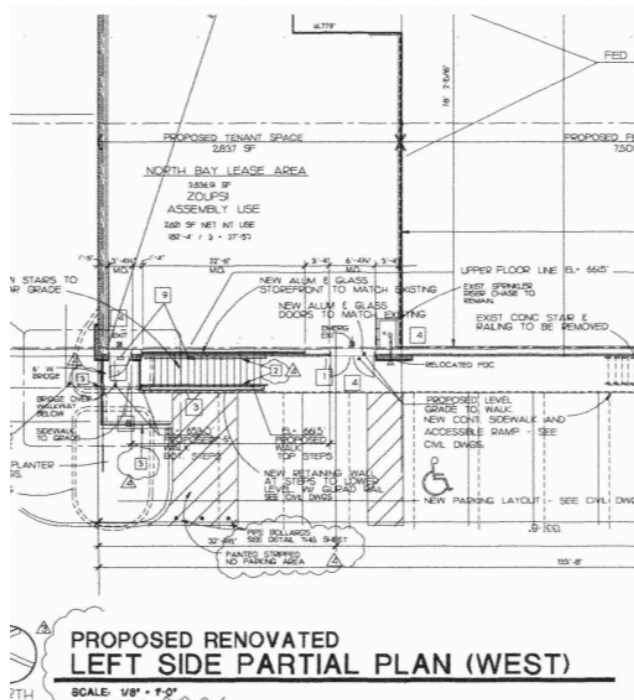
ATTACHMENTS: Applicant's Materials submitted May 17, 2013
Draft Ordinance

PROPERTY HISTORY

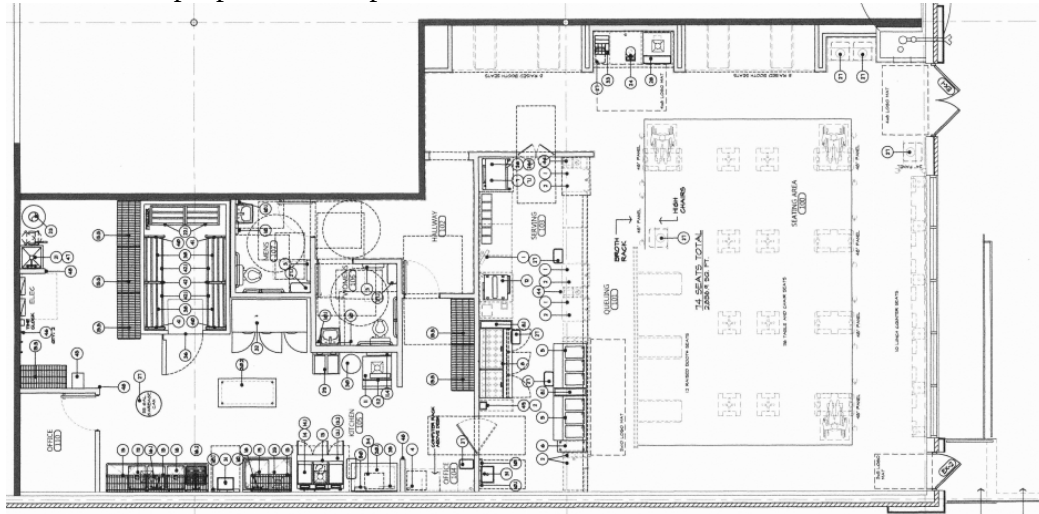
The property was originally developed in 1996 as a Borders Bookstore and has legally pre-existing non-conformities in regard to site coverage. Aldi Foods has leased the majority of the previous Border's space. The Applicant is seeking to fill the tenant space that was created from the remaining square footage at the northwest corner of the building. Below is a close-up of the west exterior modifications to the building that were reviewed at the January 7th Planning and Zoning Commission meeting:



The City's Building Code requires that a new door be created to the left corner for secondary access. The second access will create a bridge over the stairs to the rear garage, and eliminating the use of one parking space. This will modify the prior approved site plan to a minor degree, without creating a significant alteration to the site plan. Below is a close-up of the proposed tenant space:



Below is the proposed floor plan for the restaurant:



LAND USE AND ZONING OF SURROUNDING PROPERTIES

The adjacent zoning and land uses are as follows:

DIRECTION	USE	ZONED	SEPARATED BY
North	Hotel	"CB" Core Business District	NA
South	Retail Shopping Center	"CB" Core Business District	Olive Boulevard
East	City Place, Office, Retail	"CB" Core Business District	NA
West	Restaurant, Condo	"CB" Core Business District	N. New Ballas Road

COMPREHENSIVE PLAN REVIEW

The subject property is located in the Central Business District Action Area that encourages a mix of land uses and, in the area north of Olive Boulevard, encourages a continuation of the master-planned CityPlace development. Adjacent developments should incorporate design elements, cross-access easements, pedestrian connections, and mixed uses. The addition of new tenants to the building and adding design elements and creating interest to what was a blank wall is consistent with this recommendation.

ZONING REVIEW

Restaurants are permitted with conditions in all commercial zoning districts within the city, and the applicant is leasing an existing tenant space in a development that has a mix of retail uses. Section 405.470(14) states that food services and drinking places shall be located on sites of not less than two acres except that this requirement does not apply to restaurants in the "CB", "PO", "PC" and "LI" Districts that are located within a retail or office building, provided that such restaurants do not collectively occupy more than 40% of the building square footage. The site comprises of a total of 4.09 acres. Ultimate Zoup will be the only restaurant in the entire building, and represents 8% of the building square footage.

Parking

Parking regulations for restaurants are discussed under Section 405.820(F)(5) Required Off-Street Parking Spaces, where parking for limited-service restaurants is one space per 250 square feet of floor area, plus one space for every three seats. The proposed conditional use permit is for a 2,837 square foot restaurant with 72 seats, thus requiring 36 parking spaces.

The following table shows the parking calculations for the entire center:

Tenant	Use	Size (sq.ft.)	Parking Regulations	# of spaces
Vincents Jewelers	Retail	3,440	4/1000	14
St. Luke's MRI	Other Health Services	4,060	4/1000	17
Aldi	Grocery/Retail	16,666	4/1000	67
FedEx Office	Business Services	7,500	4/1000	30
Zoups	Restaurant	2,837 (+72 seats)	1/3 seats in C.U.P., + 1/250 sf	36
Total Building:		34,503	Total:	164
		15% Reduction	Total Required:	140
		Parking Available On -Site		187

The site plan for the entire property, including the modifications viewed on January 7th by the Planning and Zoning Commission, indicate that 187 spaces are available on site, well within the total number of spaces required.

RECOMMENDATION

Based on the above analysis, the request for a conditional use permit meets all of the applicable requirements of the Comprehensive Plan and the Zoning Ordinance. Conditions listed below are the usual and customary conditions for restaurants which are included in the draft ordinance:

1. The conditional use permit shall be for the operation of 2,837 square-foot limited-service restaurant at tenant space addressed as 810 N. New Ballas Road, within the building at 11733 Olive Boulevard.
2. Seating is limited to a maximum of 72 indoor seats.
3. Hours of operation shall not exceed 10:00 am to 9:00 pm seven days a week. Additional business hours may be permitted with the Zoning Administrator's approval, including, but not limited to, the catering of special events.
4. There shall be no outdoor storage or placement of any materials or equipment.
5. Employee parking, delivery and company vehicles shall be parked in the rear garage parking area or as far from the public right-of-way as possible.
6. All signs and banners shall be in conformance with Article VIII, Sign Regulations, of the Zoning Code.

ACTION

If the Planning and Zoning Commission finds the attached draft conditional use permit ordinance to be in conformance with the purposes and regulations of the Comprehensive Plan and Zoning Code, it should vote on a recommendation to the City Council. Any changes to the draft ordinance should be discussed and made by separate actions.

MOTION

The following is an example of an appropriate motion for this application:

“I move to recommend approval of Application #13-015 for a Conditional Use Permit for a limited-service restaurant located at 810 N. New Ballas subject to the conditions contained in the draft ordinance attached to the staff report prepared for the meeting of June 17, 2013” (conditions may be added, eliminated, or modified by preceding motion).

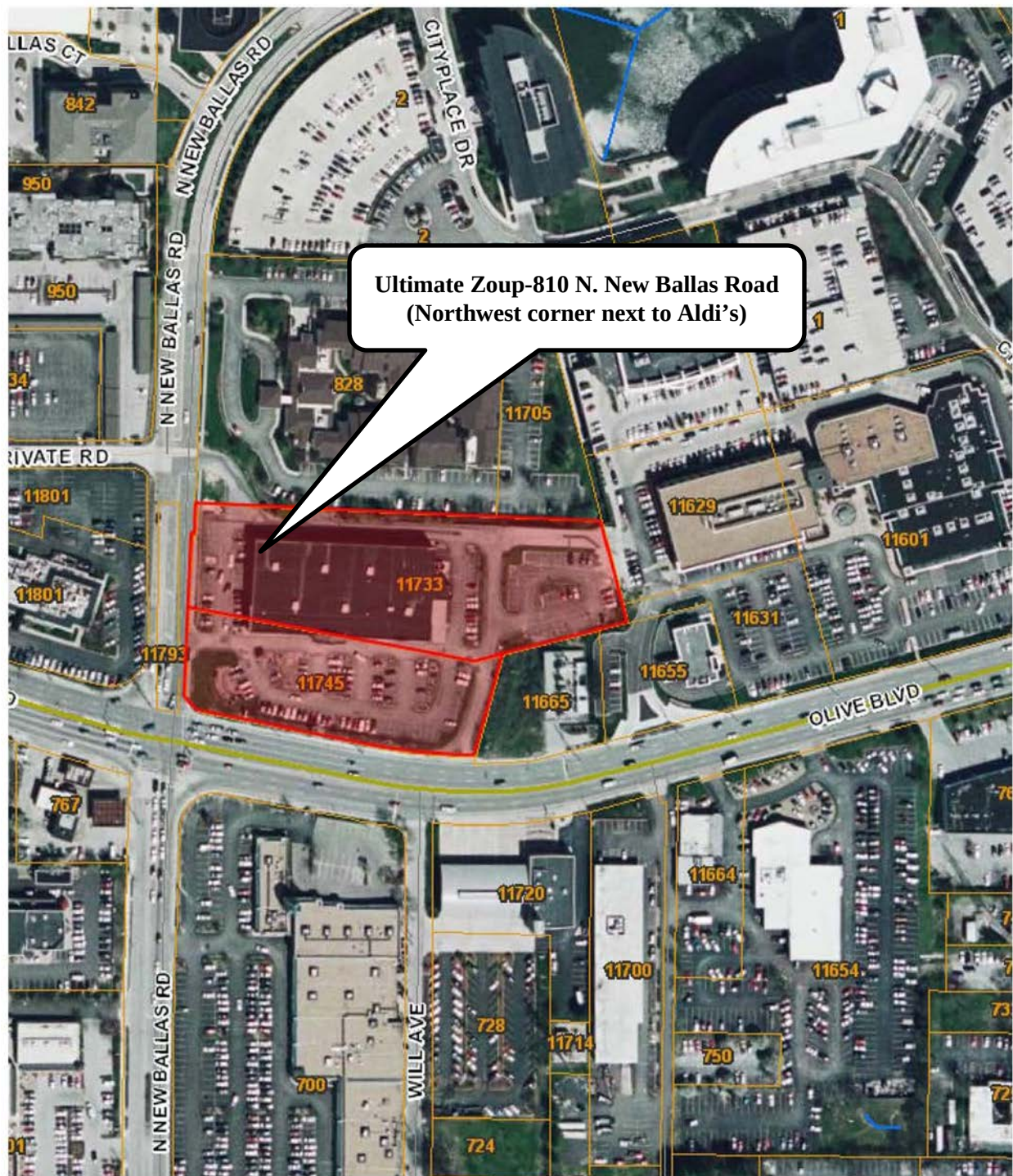
APPENDIX 1: COMPREHENSIVE PLAN

Included and attached by reference. See body of report for specific excerpts.

APPENDIX 2: ZONING CODE

Included and attached by reference. See body of report for specific excerpts.

APPENDIX 3: AERIAL PHOTO



APPENDIX 4: SITE PHOTOGRAPHS	Photo Date: 01/04/2013
 A photograph showing a red brick building with a 'BORDERS' sign. In the foreground, there is a grassy area with patches of snow. To the left, a speed limit sign for 30 is visible. In the background, a tall glass skyscraper is visible against a clear blue sky.	Description: View looking northeast from the corner of Olive Boulevard and N. New Ballas Rd.
 A photograph of a red brick building with a 'BORDERS' sign, viewed from across a road. A yellow fire hydrant is visible on the sidewalk. In the background, several tall glass buildings are visible under a clear blue sky.	Description: View of the building looking east from across N. New Ballas Rd.
 A photograph of a red brick building, viewed from a low angle along a road. The building has a 'BORDERS' sign. The foreground shows a paved area with some snow patches and small bushes.	Description: View of the building looking south from the northern drive entrance along N. New Ballas Rd.



city
of

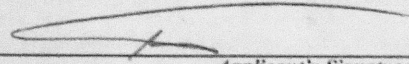
CREVE COEUR

PLANNING DIVISION

300 North New Ballas Road Creve Coeur, Missouri 63141
Tel. (314) 872-2501 • Fax (314) 872-2505

PLANNING AND ZONING COMMISSION AGENDA APPLICATION CONDITIONAL USE PERMIT

PLEASE COMPLETE FRONT AND BACK PAGES

Applicant:	Applicant's Representative (if applicable):
Name <u>THAER ABDULKARIM</u>	Name _____
Company (If Applicable) <u>Ultimate Zoup</u>	Company (If Applicable) _____
Address <u>104 Marble Crossing Dr</u>	Address _____
Address <u>Wentzville MO 63385</u>	Address _____
Telephone # <u>414-736-5217</u>	Telephone # _____
Fax # <u>N/A</u>	Fax # _____
Email: <u>Tabdul82@gmail.com</u>	Email: _____
 Applicant's Signature	 Applicant's Representative's Signature

Property Information:	Owner's Acknowledgement (if different from applicant):
Address <u>810 N. New Ballas</u>	Name <u>Nick Sepac</u>
Address <u>Creve Coeur MO</u>	Company (If Applicable) <u>Mid-County Real Estate LLC</u>
Development Name (if any) <u>Creve Coeur Centre</u>	Address <u>2128 Wadley Park Dr.</u>
Current Zoning <u>CB</u>	Address <u>Chesterfield MO 63017</u>
Prior CUP Approvals (if known) _____ _____ _____	Telephone # <u>314-744-4400</u>
	Fax # <u>314-744-4401</u>
	Email: <u>NickSepac@</u> <u>SaintLouisProperties.com</u>
	 Owner's Signature

Description of Requested Use (attach additional sheets as needed)

General Description of Business: restaurant

Gross Floor Area – Existing and Proposed: 2836.91

Number of Seats (for restaurant only): 72

Number of Employees at the busiest shift: 5

Hours of Operation: 11-8

Current or Most Recent Use of the Property: nick's use

Will the applicant apply for a liquor license: Yes _____ No X

Rationale

Please describe in detail, on an attached sheet, the reasons why you believe the request for a conditional use permit should be approved and what steps are being taken to lessen any impacts on surrounding residences and businesses. An explanation of the building and landscape designs (if changes are proposed) should also be included.

Submittal Checklist

- | | |
|---|---|
| ☒ Rationale | ☐ Building elevations for new construction |
| ☐ Site plan | ☐ Photographs of existing structures |
| ☐ Access and parking plan; (may be shown on site plan) | ☐ Materials samples |
| ☐ Landscape plan | ☐ Fees: \$250 (non-refundable) |
| ☐ Floor plan | ☐ \$2000 (refundable deposit) |
| ☐ Electronic copies of all materials | ☐ Other items as requested by staff |

Preferred Public Hearing Date: Monday, _____, 20____.

****See attached schedule and confirm available meeting dates with Planning Division staff****

Office Use Only

____ All Sections Complete
____ All Documents, incl. e-Copies
____ Fees Paid

Received By: _____

Date: _____

Paul Langdon, AICP, Planning Director
Whitney Kelly, AICP, City Planner
Julie Lowery, Administrative Assistant (872-2501)

Revised: 11/11

General description of business:

Zoup! features hundreds of award-winning soup recipes with 12 rotating daily varieties, including low-fat, vegetarian, dairy-free, low-points and spicy options. Zoup!'s Founder and Managing Partner, Eric Ersher created Zoup! after discovering that really good soup is hard to find. Also, in talking to people, it became clear that there's something special about soup and the way it elicits thoughts of family, well-being and comfort for many people. Zoup! strives to offer authentic, hand-crafted soups that are as good – and as "feel-good" – as the homemade soups our mothers and grandmothers used to cook up.

Zoup!'s "Something for Everyone" nutritional offerings include low-fat soups such as Veggie Waves of Grain, Old Fashion Chicken Noodle and Frontier 7 Bean, dairy-free soups like the Mulligatawny and Sesame Noodle Bowl, vegetarian soups, including Tomato Bisque and Rustic Vegetable Bean and low-points options such as Spicy Black Bean Chili and Wild Mushroom Barley. Customer favorites also include Chicken Pot Pie, Lobster Bisque and Vegetarian Split Pea.

To help customers select from the soups offered each day, Zoup! encourages sampling. Prices range from \$4.65 to \$6.95 for a bowl of soup. The menu also includes fresh, made-to-order salads, grilled sandwiches and an array of baked goods and beverages.

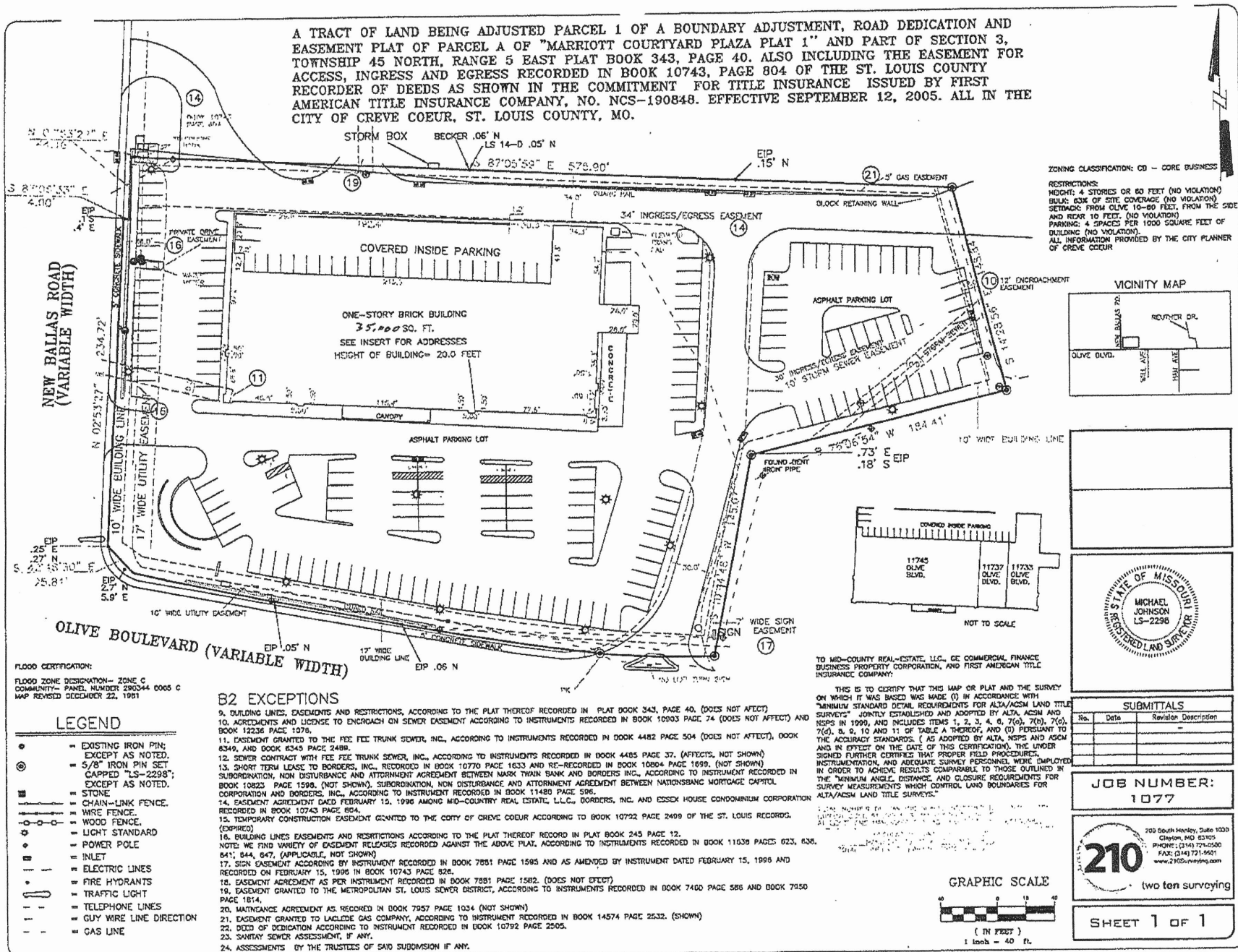
For time-starved customers looking for a quick, nutritious meal, Zoup! offers streamlined online ordering. The online system includes a location finder, a complete menu with the day's soups, and online catering ordering and rewards program tracking. The catering rewards program offers customers the opportunity to earn a point for every dollar they spend on catering. Once customers reach 500 points, they will receive a \$20 gift certificate.

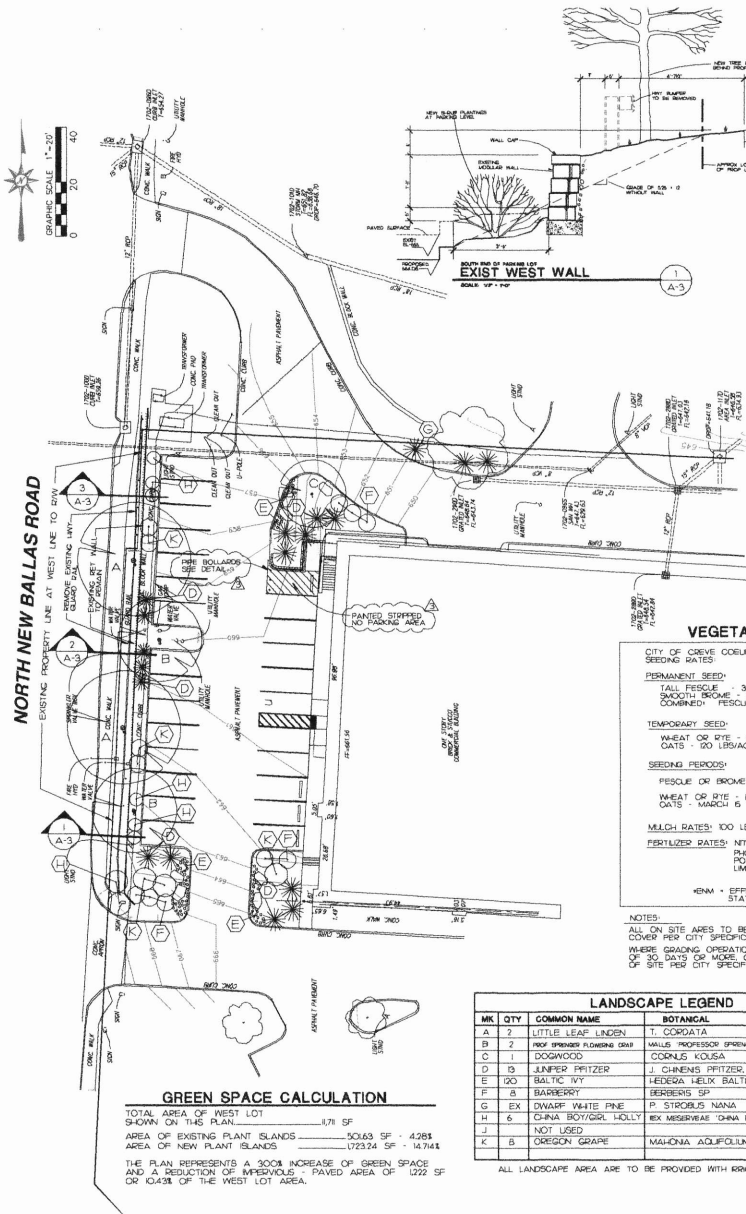
ZOUP Rationale

The approval of a Zoup restaurant in the development at Olive & N New Ballas should have little to no negative impact on the surrounding residences and businesses. The site in which the café would operate is already a commercial development with approved parking and landscaping. The café will be a complimentary use to Aldi and FedEx as well as the other tenants in the building and will offer a unique option in the market for the health conscious consumer. Zoup has over 100 unique soup recipes that will be rotated for variety as well as a selection of salads and sandwiches.

Rent Roll

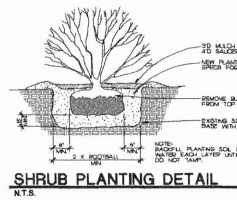
Tenant	Use	Square Footage
Vincent's Jewelers	Jewelry Store	3,440
St. Luke's	MRI	4,060
Aldi	Grocery	16,666
FedEx Office	Business Services	7,500
Zoup	Restaurant	<u>2,836</u>
Total		34,502





PROPOSED LANDSCAPE PLAN

SCALE: 1" = 20'



VEGETATION ESTABLISHMENT

CITY OF CREVE COEUR
SEEDING NOTES:

PERMANENT SEED:
TALL FESCUE - 30 LBS/AC
SMOOTH BROME - 20 LBS/AC
COMBINED FESCUE AT 5 LBS/AC AND BROME AT 10 LBS/AC

TEMPORARY SEED:
WHEAT OR RYE - 20 LBS/AC (35 LBS PER SF)
OATS - 20 LBS/AC (35 LBS PER SF)

SEEDING PERIODS:
FESCUE OR BROME - MARCH 1 TO LINE 1
AUGUST 1 TO OCTOBER 1
WHEAT OR RYE - MARCH 5 TO NOVEMBER 1
OATS - MARCH 5 TO SEPTEMBER 5

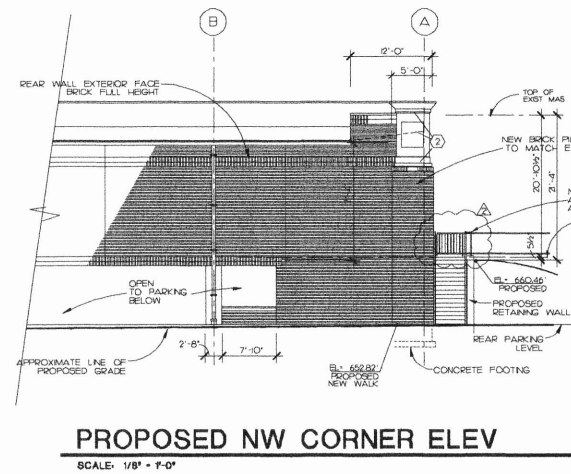
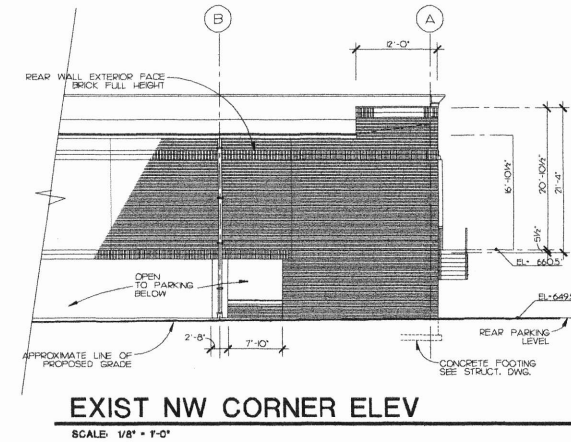
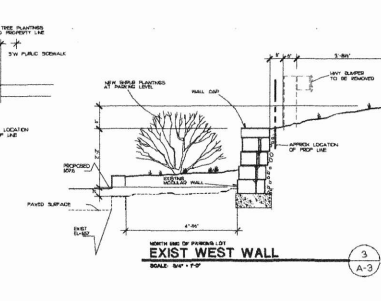
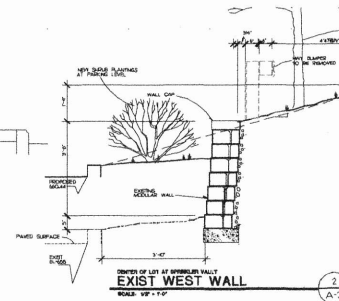
MULCH RATES: 100 LBS PER 1000 SF (14.26 LBS PER AC)
FERTILIZER RATES: NITROGEN 30 LBS/AC
PHOSPHATE 30 LBS/AC
POTASSIUM 30 LBS/AC
LIME 800 LBS/AC ENH

ENH - EFFECTIVE NEUTRALIZING MATERIAL AS PER STATE EVALUATION OF CHALKED ROCK.

NOTES:
ALL ON SITE AREAS TO BE PROVIDED WITH PERMANENT SEED WITH STRAW COVER PER CITY SPECIFICATIONS.
WHERE GRADING OPERATIONS OR DELAY SUSPEND SITE WORK FOR A PERIOD OF 30 DAYS OR MORE, CONTRACTOR IS TO PROVIDE TEMPORARY SEEDING OF SITE PER CITY SPECIFICATIONS.

NO.	QTY	COMMON NAME	BOTANICAL	SIZE COMMENT
A	2	LITTLE LEAF LINDEN	T. CORORATA	12" BALL & BURLAP
B	2	PROF. SPINDLER PLUMBING TREE	MAULE 'PROFESSOR SPINDLER'	10" BALL & BURLAP
C	1	DOGWOOD	CORNUS KOLSA	SPECIMEN 3" ORNAMENT
D	1	JUNIFER PRITZER	J. CHINENS PRITZER	BALL & BURLAP - 6'H
E	20	BALTIC WY	HEDEIRA HELIX BALTICA	12" O.C. STAGGARD
F	1	BARRIBERRY	BERBERIS SP.	BALL & BURLAP - 12"
G	EX	DWARF WHITE PINE	P. STROBUS NANA	BALL & BURLAP (EXIST)
H	6	CHINA BOY/GIRL HOLLY	EX MISERABLE 'CHINA BOY' TM	10" BALL & BURLAP
J	1	NOT USED		
K	1	OREGON GRAPE	MAHONIA AQUIFOLIUM	12" BALL & BURLAP

ALL LANDSCAPE AREA ARE TO BE PROVIDED WITH IRRIGATION SYSTEM COVERAGE



REVISIONS
1. V013 LANDSCAPE
2. APR 14, 2013 REVISED
3. MAY 10, 2013 REVISED

John Mark and Associates
architects and planners
1745 OLIVE STREET ROAD
CREVE COEUR, MISSOURI 63008
PHONE: 314-665-0888

MID COUNTY REAL ESTATE, LLC
RENOVATIONS TO WEST FACADE AND PARKING
1745 OLIVE STREET ROAD
CITY OF CREVE COEUR, MISSOURI

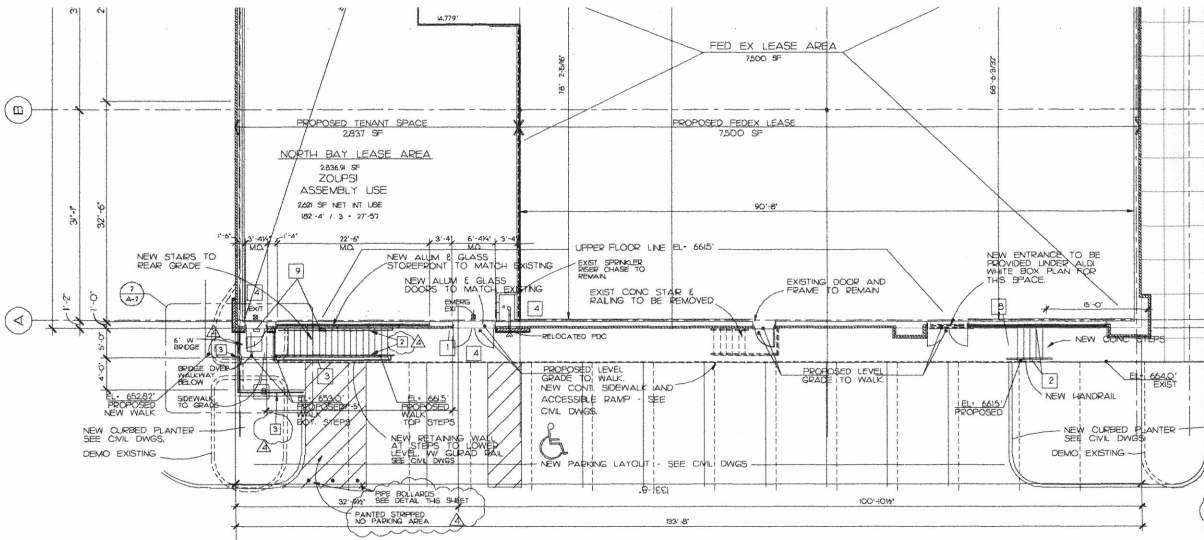
DRAWING INFORMATION
ISSUE DATES:
NOV. 29, 2012
JAN. 3, 2013
APPROVED
CHECKED
DRAWN

ALL REVISIONS SHALL BE MADE TO THE ORIGINAL SET OF DRAWINGS. THE REVISIONS SHALL BE MADE TO THE ORIGINAL SET OF DRAWINGS. THE REVISIONS SHALL BE MADE TO THE ORIGINAL SET OF DRAWINGS.

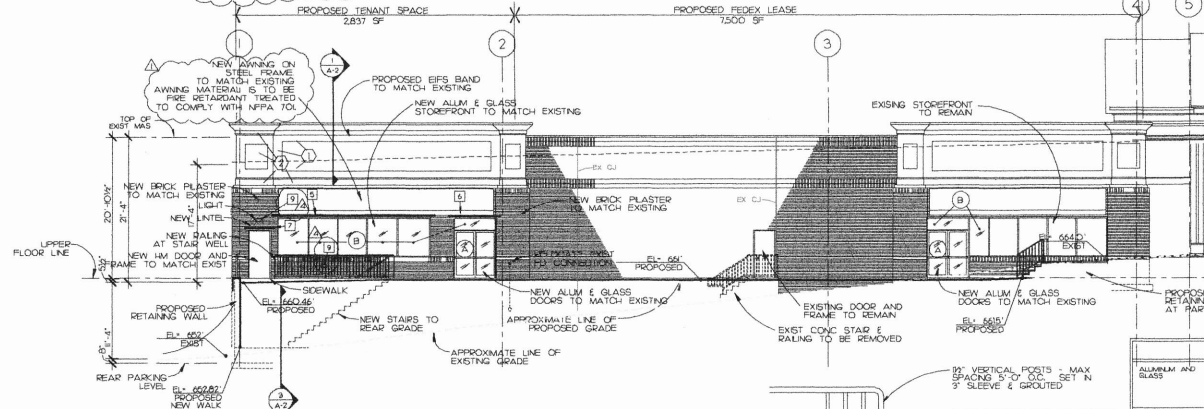
SHEET NO.
A-3
SHEET 3 OF 3

DATE: 11/15/2023
 DRAWING NO: 23-0001
 PROJECT: 11745 OLIVE STREET ROAD

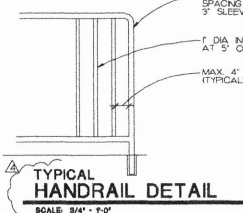
DATE: 11/15/2023
 DRAWING NO: 23-0001
 PROJECT: 11745 OLIVE STREET ROAD



PROPOSED RENOVATED LEFT SIDE PARTIAL PLAN (WEST)
 SCALE: 1/8" = 1'-0"



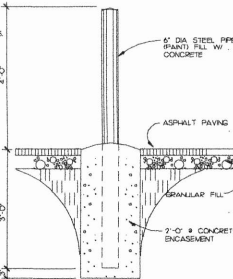
PROPOSED RENOVATED LEFT SIDE ELEVATION (WEST)
 SCALE: 1/8" = 1'-0"



TYPICAL HANDRAIL DETAIL
 SCALE: 3/4" = 1'-0"

PLAN NOTES

1. NEW MASONRY PLASTER MATCH EXISTING AND ALIGN JOINTS PLASTER IN THE LOCATION ARE TO MATCH THOSE ON SOUTH SIDE OF THIS FACADE.
2. PROVIDE NEW CONTINUOUS HANDRAILS AT BOTH SIDES OF STEPS REFER TO CIVIL DWGS. GRASPABLE RAILS TO BE 1 1/2" DIA.
3. NEW CONTINUOUS GUARD RAIL AT TOP OF THE RETAINING WALL AT 4' O.C. HANDRAIL WITH BALUSTERS AT 4' O.C.
4. NEW MASONRY OPENING IN THE EXISTING WALL FOR DOOR OF NEW STOREFRONT.
5. NEW WALKER STEEL LINTEL WITH 1/4" DIA. STEEL PLATE SET IN 1/4" DIA. BLOCK SOLID 1/4" DIA. GRAVEL 2' DEEP.
6. NEW WALKER STEEL LINTEL WITH 1/4" DIA. STEEL PLATE SET IN 1/4" DIA. BLOCK SOLID 1/4" DIA. GRAVEL 2' DEEP.
7. NEW 1/4" DIA. STEEL ANGLES LINTELS AT EXIST DOOR.
8. PROVIDE A NEW 4'X4' LEVEL LANDING AT BOTTOM OF STAIR IN WALL.
9. PROVIDE AN EXTERIOR WALL SCOOP FOR LIGHT AT STEPS, USE 1/4" DIA. PAVEMENT SPACE CIRCULAR CHALLENGER WALL SCOOP. SCOOP 1/4" DIA. LOW IN AS MANUF BY LSI ARCH FINISHES.



BOLLARD DETAIL
 SCALE: 3/4" = 1'-0"

BUILDING CODE INFORMATION BLOCK	
JURISDICTION	CITY OF CREVE COEUR, MISSOURI
BUILDING CODE	2009 IBC
OCCUPANCY CLASSIFICATION	BLDG-NO CHANGE
CONSTRUCTION TYPE	20 NON-COMBUSTIBLE FULLY SPRINKLERED
BASED AREA	EXISTING - NO CHANGE
BASED AREA	EXISTING - NO CHANGE
EXTERIOR ELEVATION	CHANGE ONLY

EXTERIOR FINISH SCHEDULE	
ALUMINUM AND GLASS	ALL ALUMINUM AND GLASS STOREFRONTS AND ALUMINUM DOORS SHALL MATCH EXISTING. GLASS TYPES: (A) 1" CLEAR TEMPERED INSULATED GLASS, (B) 1" CLEAR INSULATED GLASS.
FACE BRICK	EXTERIOR FACE BRICK AND MORTAR SHALL BE BASED ON MATERIAL TO MATCH EXISTING.
EIFS EXTERIOR INSULATION SYSTEM AND FINISH	EXTERIOR INSULATION SYSTEMS SHALL BE "STC" OR "CPVT". ALL COLORS SHALL BE BASED ON STC COLOR NUMBERS AND SELECTED BY THE ARCHITECT. SUBMIT SAMPLES FROM STOUT OR QUATZITE. ALL EIFS COLORS TO MATCH EXISTING. COLOR (1) PASCIA FIELD COLOR - STO MATCH EXIST. COLOR (2) PASCIA ACCENT COLOR BAND - STO MATCH EXIST. COLOR (3) CORNICE COLOR BAND AND PENDANT AT CANOPY - STO MATCH EXIST.
ARCHITECTURAL SHEET METAL	ALL EXTERIOR ARCHITECTURAL METALS SHALL BE 24 GA GALV IRON WITH PREPARED KNAUF 500 OR FLUOROPOLYMER FINISH OR EQUAL ALUMINUM.
EXTERIOR AWNINGS	SOLID COLOR FABRIC AWNINGS ON STEEL FRAMES SUPPLIED AND INSTALLED BY AWWING MANUFACT. PROVIDE SUBMITTALS FOR AWNING FABRIC AWNING COLOR TO MATCH EXISTING SUBMIT SAMPLES FOR APPROVAL.

REVISIONS	
1	JAN 20, 2013 RESMT
2	APR 3, 2013 REVISED
3	APR 16, 2013 REVISED
4	MAY 10, 2013 REVISED

John Lark and Associates
 Architects and Planners
 11745 Olive Street Road
 St. Louis, Missouri 63141
 Phone: (314) 433-1111
 Fax: (314) 433-1112
 www.jla-architects.com

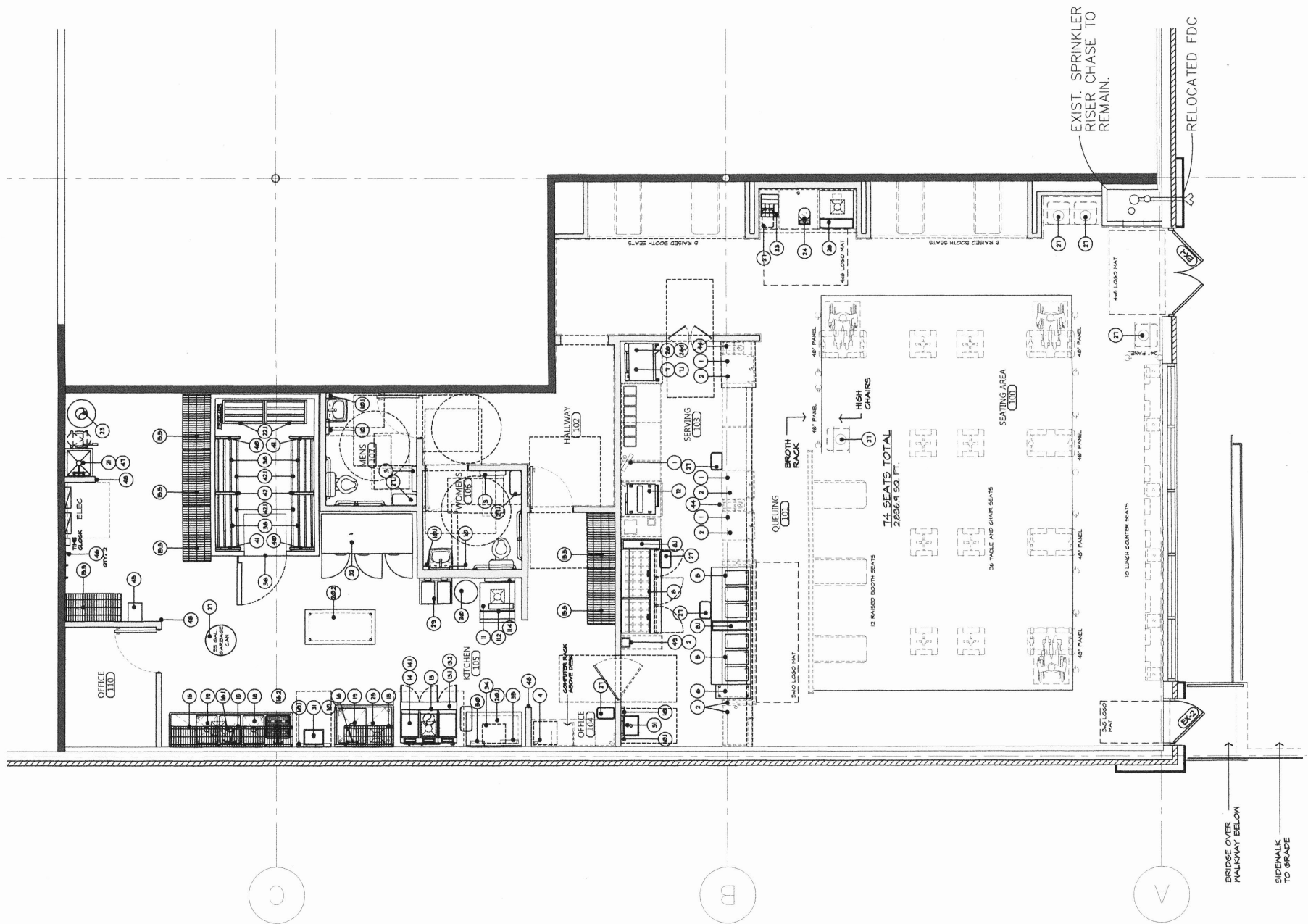
MID COUNTY REAL ESTATE, LLC
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 11745 OLIVE STREET ROAD
 CITY OF CREVE COEUR, MISSOURI

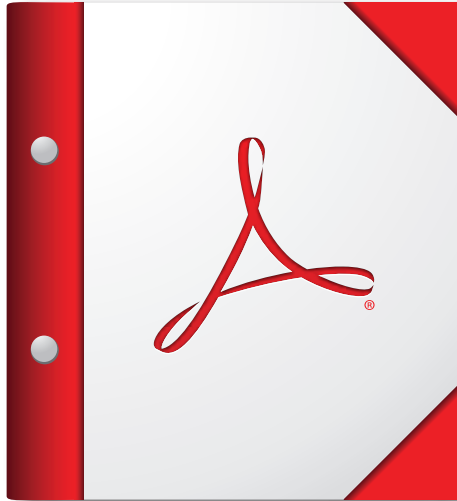
DRAWING INFORMATION
 ISSUE DATES:
 NOV. 29, 2012

APPROVED
 CHECKED
 DRAWN

10. PERSONS ARE NOT TO BE HELD RESPONSIBLE FOR THE RESULTS OF THE USE OF THIS DRAWING WITHOUT THE SIGNATURE OF THE ARCHITECT OR ENGINEER.

SHEET NO.
A-1
 SHEET 1 OF 3





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1 PZ 070113.txt
2 PLANNING AND ZONING COMMISSION PUBLIC HEARING
3 CITY OF CREVE COEUR, MISSOURI
4 300 NORTH NEW BALLAS ROAD
5 MONDAY, JULY 1, 2013
6 7:00 P.M.
7 THOSE IN ATTENDANCE:
8 Mr. Tim Madden, Chair
9 Dr. Michael Barton
10 Mr. James Faron
11 Mr. Ken Howard
12 Mr. Charles Pullium
13 Mr. Gene Rovak
14 Mr. Carl Lumley, City Attorney
15 Mr. Paul Langdon, AICP, Director of Community Development
16 Ms. Whitney Kelly, AICP, City Planner
17 Ms. Julie Lowery, Recording Secretary
18
19
20
21
22

23 McLaughlin Court Reporting Services, Inc.
24 Deborah K. McLaughlin, RPR, MO-CCR #314, IL-CSR, KS-CCR
25 4772 Gatesbury Drive
St. Louis, MO 63128
(314)487-2259

1 CHAIRMAN MADDEN: I'd like to call to order the¹
2 Planning Zoning Commission Meeting for the City of Creve
3 Coeur, Missouri for Monday, July 1st, 2013.
4 We'll start with roll call.
5 I don't see Dr. Barton.
6 Mr. Eberhardt sent an email he wouldn't make it.
Page 1

7 Mr. James Faron?
8 MR. FARON: Present.
9 CHAIRMAN MADDEN: Mr. Ken Howard?
10 MR. HOWARD: Present.
11 CHAIRMAN MADDEN: Mr. Charles Pullium?
12 MR. PULLIUM: Present.
13 CHAIRMAN MADDEN: Mr. Gene Rovak?
14 MR. ROVAK: Present.
15 CHAIRMAN MADDEN: Mr. Carl Lumley, our City
16 Attorney?
17 MR. LUMLEY: Present.
18 CHAIRMAN MADDEN: Mr. Paul Langdon, our Director
19 of Community Development?
20 MR. LANGDON: Present.
21 CHAIRMAN MADDEN: Ms. Whitney Kelly, our City
22 Planner?
23 MS. KELLY: Present.
24 CHAIRMAN MADDEN: And, Judy Lowery, our Planning
25 -- our Recording Secretary?

2

1 MS. LOWERY: Present.
2 CHAIRMAN MADDEN: That'll move us to B,
3 Application No. 13-015. It's a public hearing; request
4 for approval of a conditional use permit for Ultimate
5 Zoup, a limited-service restaurant, located at 810 North
6 New Ballas Road.
7 Anybody that may be coming before us, please
8 come up and get sworn in. If you think you might be
9 commenting on it or anything from the audience, please
10 come up.
11 (The speakers were sworn by the court reporter.)

12 MR. YAWITZ: Mr. Chairman, my name is Greg
13 Yawitz, I'm with Keat Properties, 9200 Olive Boulevard,
14 Olivette, Missouri 63132.

15 I'm here on behalf of my client, the Ultimate
16 Zoup Co., a franchisee of Zoup Restaurants, a new concept
17 to St. Louis. There's currently one in existence.
18 Seeking approval for a conditional use permit at the
19 corner of Ballas and Olive.

20 Zoup, which -- I'll describe the concept. Zoup
21 is a limited-service concept whose primary menu item is,
22 as you might imagine, soup. They have twelve fresh soups
23 made daily out of a list of over 100 on their overall
24 menu. They also have salads, sandwiches, all made fresh.

25 And they are looking to open a restaurant here

1 in Creve Coeur and are very excited to do so, look forward³
2 to be a valuable member of the community.

3 And I've got the franchisee and the landlord
4 here with me, and we'd be happy to answer any questions.

5 CHAIRMAN MADDEN: Any questions? Okay.

6 Is there anybody in the audience? Okay.

7 How about staff?

8 MS. KELLY: Whitney Kelly, City Planner, on
9 behalf of the City of Creve Coeur.

10 As the applicant has indicated, the proposed
11 conditional use permit for Ultimate Zoups is for a 2,837
12 square foot limited-service restaurant with 72 seats,
13 located at the northwest corner of the building at 11733
14 Olive Boulevard.

15 This is, if you remember a prior application for
16 the site development plan, this is that vacant space that
17 is left by the portion of Borders that is not taken up by

18 the current Aldi's.

19 They are seeking a conditional use permit for
20 it. As they are not making any substantial changes to the
21 exterior of the building, zoning review is limited to
22 parking.

23 And based on a count of this site -- of the
24 parking available on site, they have 187 parking spaces
25 available with only 140 required.

1 The draft ordinance is a typical zoning
2 ordinance that you find for most of our restaurants.

3 The staff report indicated hours from ten to
4 eight, however, after the report had been written, the
5 applicant had indicated they would like additional hours,
6 from eleven to nine -- I mean, I'm sorry -- ten to nine.
7 They originally requested eleven to eight.

8 So the draft ordinance before you does indicate
9 those changes in the hours so.

10 There was a last minute public comment that was
11 received at the start of the meeting that has been passed
12 out on your desk, and she did -- the public comment was
13 expressing a concern of the number of parking spaces,
14 however, they are showing a surplus almost 47 spaces on
15 site.

16 CHAIRMAN MADDEN: Okay. Any questions for
17 Ms. Kelly?

18 MR. HOWARD: What's the parking situation at
19 Aldi's; is -- do they show a similar excessive parking
20 spots?

21 MS. KELLY: We do a -- a review of all the
22 parking on site for all the tenants.

23 Grocery store, if you look at page 4 of the
24 staff report, restaurants -- I mean grocery store and
25 other retail services are four spaces per thousand, so

1 they're currently showing a number of required at 67 5
2 spaces.

3 CHAIRMAN MADDEN: Okay. Any other questions?

4 Mr. Faron.

5 MR. FARON: Did the staff see any issues with
6 the comments from the email that we just received in terms
7 of is the woman stating that she'd have to cross that lane
8 of traffic to go to the east parking lot, is that her
9 concern, I would guess?

10 MS. KELLY: I think what she's referring to is
11 this back here.

12 MR. FARON: Right. And that traffic going
13 through there coming off Olive.

14 MS. KELLY: Coming off Olive to enter into the
15 retail space.

16 We do foresee that that would mostly be used as
17 overflow parking at -- and for staff, therefore, we don't
18 foresee it as a problem, as we've discussed before, under
19 the review of our parking requirement, when we did the
20 15 percent reduction, we don't see that all of the spaces
21 are being used at the exact same time.

22 And we've also been discussing the fact that
23 current planning review of other cities have also shown
24 that even decreasing it further does not hinder the flow
25 or the impact of traffic -- of parking in the area.

1 We don't foresee that the peak hours for a 6
2 restaurant would be the same as the peak hours for a

3 grocery store.

4 MR. FARON: All right.

5 MS. KELLY: So.

6 CHAIRMAN MADDEN: Do most these businesses tell
7 their employees, like, to park in that overflow lot,
8 cause, you know, it's helping their business when the
9 people don't have to walk as far, do they encourage their
10 employees?

11 I see them shaking their heads, but I don't -- I
12 mean I would think so.

13 MS. KELLY: Yeah, it is a condition of this
14 ordinance for the restaurant that any employee parking be
15 as far away from Olive Boulevard as possible or as far
16 away from the public right-of-way as possible.

17 CHAIRMAN MADDEN: Did we do the same thing with
18 Aldi or not, do you know?

19 MS. KELLY: Aldi's is a permitted use, so it
20 didn't take any further review by the City.

21 CHAIRMAN MADDEN: Okay.

22 MS. KELLY: But it is typical that most --

23 CHAIRMAN MADDEN: Businesses would --

24 MS. KELLY: -- would tell their --

25 CHAIRMAN MADDEN: Okay.

1 MS. KELLY: Yeah.

2 MR. FARON: Were we asking them to park
3 underground or covered, wasn't that part of -- I mean we
4 were requesting that maybe they park in back, and if they
5 were, is that going to fill the whole area there?

6 I would assume frequent, you know, frequent
7 customers to this restaurant would probably park in back

8 anyhow, when they see the --

9 MS. KELLY: The --

10 MR. FARON: -- the, you know, the covered

11 parking behind the building --

12 MS. KELLY: Correct.

13 MR. FARON: -- and the walk up quickly from the

14 steps.

15 MS. KELLY: The -- the actual -- the draft

16 ordinance before you includes a condition that employee

17 parking, delivering company vehicles, shall be parked in

18 the rear garage parking area or as far as from the public

19 right-of-way as possible.

20 MR. FARON: Okay. Can I ask the applicant how

21 many employees -- I mean how many do they expect to be

22 working at a peak time or --

23 MR. YAWITZ: We believe the maximum number of

24 employees on a shift will be six.

25 MR. FARON: Very few cars then probably.

1 MR. YAWITZ: And that assumes that all of them⁸

2 will have cars. Some --

3 MR. FARON: Right.

4 MR. YAWITZ: -- will come by public

5 transportation as well.

6 MR. FARON: Great. Thank you.

7 CHAIRMAN MADDEN: Any other questions for

8 Whitney?

9 Okay.

10 MR. FARON: Move to recommend approval --

11 CHAIRMAN MADDEN: Oh, yeah, wait a minute.

12 MR. FARON: I'm sorry.

13 CHAIRMAN MADDEN: That'll be the end of our

14 public hearing.

15 MR. LUMLEY: Offer the following exhibits into
16 the record of this public hearing: Documentation in
17 possession of the City Clerk reflecting the public notice
18 that was provided; the staff report and communications
19 regarding the application; the City's Code of Ordinances
20 and Charter; the City's Comprehensive Plan and the public
21 file regarding the application.

22 (The public hearing ended at 7:33 p.m.)
23
24
25

9

1 STATE OF MISSOURI }
2 COUNTY OF ST. LOUIS } SS
3

4 I, Deborah K. McLaughlin, Registered Professional
5 Reporter, Missouri Certified Court Reporter, Illinois
6 Certified Shorthand Reporter and Kansas Certified Court
7 Reporter, do hereby certify that I reported the Planning
8 and Zoning public hearing stenographically and later
9 reduced to typewriting; and that this is a true and
10 accurate transcript of the public hearing.
11
12

13 _____, RPR, MO-CCR, IL-CSR, KS-CCR

14 Deborah K. McLaughlin, RPR, MO-CCR, IL-CSR, KS-CCR
15
16
17
18

PZ 070113.txt

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RESOLUTION NO. 1066

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CREVE COEUR, MISSOURI
AUTHORIZING THE EXECUTION OF AN AGREEMENT WITH ST. LOUIS COUNTY REGARDING A
COMMUNITY DEVELOPMENT BLOCK GRANT FOR ADA COMPLIANT IMPROVEMENTS TO THE
CREVE COEUR GOVERNMENT CENTER.**

WHEREAS, a Community Development Block Grant (CDBG) is offered to Municipalities to improve ADA facilities,

WHEREAS, the City Council of the City of Creve Coeur recognizes a need for ADA compliant improvements to the existing facilities at the Tappmeyer Homestead.

WHEREAS, the original resolution #968 was adopted on June 27, 2011, and this resolution shall serve as an amendment.

WHEREAS, all persons will benefit from said improvements

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF CREVE COEUR, AS FOLLOWS:

1. Changes to our application have been requested under the CDBG Grant for a grant-in-aid to assist with some of the cost to provide ADA compliant improvements at the Tappmeyer Homestead, located at 2 Barnes West Drive.
2. Improvements to the Tappmeyer Homestead will consist of removing existing deck, steps, and defective wheelchair lift, and replacing them with a new ADA complaint deck, ramp, and steps.
3. The project proposal described herein be prepared and submitted to the CDBG Grant Commission for reimbursement.
4. The governing body hereby authorizes the execution of the necessary documents for submitting the project proposal application for a grant-in-aid under the CDBG Grant Commission.
5. If a grant is awarded, the City of Creve Coeur will enter into an agreement or contract with the Commission regarding said grant.
6. The Agreement between **CDBG**, and the City, attached hereto as "Exhibit A," is hereby approved and the execution is hereby authorized. The Contract as executed shall be substantially in the form of "Exhibit A," with such changes therein as shall be approved by the officers of the City executing same, consistent with the provisions and intent of this Resolution. The City Administrator and his designated representatives are hereby authorized and directed to take any and all actions necessary, desirable, convenient, or proper in order to carry out the intent of this Resolution, the matters herein authorized, and the rights and duties of the City under the Contract.

Adopted this 8th day of July 2013.

Barry Glantz
Mayor

Attest:

Deborah Ryan, City Clerk

Charlie A. Dooley
County Executive

Saint Louis
COUNTY
PLANNING

Glenn A. Powers
Director of Planning

June 19, 2013

Mr. George Seifried
Project Manager
City of Creve Coeur
300 N. New Ballas Road
St. Louis, MO 63141

Re: Supplemental Agreement 2011
Amendment No. 1

Dear Mr. Seifried:

Please find attached, copies of the above referenced agreement. Please review, date, seal and secure original signatures and return both copies to this office for execution as soon as possible. A fully executed copy will then be returned to you for your files.

If you have any questions regarding this agreement or require any additional assistance, please do not hesitate to contact me at 314-615-8236.

Sincerely,

Kathryn Mayrose

Kathryn Mayrose, CD Specialist
Office of Community Development

Enclosures (2)

KM/pl

cc: RFile

OFFICE OF COMMUNITY DEVELOPMENT

41 South Central Avenue • 5th floor • Clayton, MO 63105-1725 • PH 314/615-4405 • FAX 314/615-8674 • TTY 314/615-5TTY (5889)
South County Location • PH 314/615-4025 • Fax 314/615-4125
web <http://www.stlouisco.com>

ST. LOUIS COUNTY DEPARTMENT OF PLANNING
OFFICE OF COMMUNITY DEVELOPMENT

MUNICIPAL HOUSING AND COMMUNITY DEVELOPMENT
SUPPLEMENTAL COOPERATION AGREEMENT

NO. 2011 AMENDMENT NO. 1

THIS SUPPLEMENTAL COOPERATION AGREEMENT AMENDMENT, made
and entered into this _____ day of _____, 2012, by and between ST. LOUIS
COUNTY, MISSOURI (herein-after referred to as "County"), and the CITY _____ of
CREVE COEUR _____, Missouri (hereinafter referred to as "Municipality").

WITNESSETH:

WHEREAS, Paragraph No. 2 of the Supplemental Cooperation Agreement No. 2011
to the Municipal Housing and Community Development Cooperation Agreement provides for
changes in Exhibit A: Scope of Program of said Agreement; and

WHEREAS, County and Municipality desire to modify Exhibit A: Budget and Scope of
Program of the Supplemental Cooperation Agreement No. 2011 _____ and/or reallocate funds.
Funds will be reprogrammed as follows:

CHANGE OF DESCRIPTION ONLY

Fund	Dept	Division	Section	Object	Grant	Program	Activity	Location	Amount
From	4 5 9 0	2 5 0 0	2 5 8 0	4 0 4 9	6 5 6 4 1 0	N B 1 0 1	N P 4 3	0 0 0 0	\$ - 0 -
To									
From									
To									

NOW, THEREFORE, County and Municipality mutually agree as follows:

1. Exhibit A: Scope of Program of the Supplemental Cooperation Agreement No 2011 _____ is hereby deleted in its entirety and the following Exhibit A is inserted in lieu thereof.
(See Attached Pages)

MUNICIPAL HOUSING AND COMMUNITY DEVELOPMENT
SUPPLEMENTAL COOPERATION AGREEMENT

NO. 2011 AMENDMENT NO. 1

BUDGET AND SCOPE OF PROGRAM

EXHIBIT A

Municipality: CITY OF CREVE COEUR Total Allocation \$ 20,000.00

Fund: 4590 Department: 2500 Division: 2580 Section: 4049 Object: 656410

Grant: NB101 Program: NP43 Activity: NPF43 Location: 0000 Project: NB101

Description: Counters, walkways, doors, signage and accessibility ramps for 300 N. Ballas Road
(Creve Coeur Government Center building.) Remove existing deck, steps, and defective wheelchair
lift at the Tappmeyer Homestead, 2 Barnes West Drive, and replace with new deck, steps, and ramp.

Amount: \$ 20,000.00

HUD Activity Title: _____ HUD Matrix Code: _____

Fund: _____ Department: _____ Division: _____ Section: _____ Object: _____

Grant: _____ Program: _____ Activity: _____ Location: _____ Project: _____

Description: _____

Amount: \$ _____

HUD Activity Title: _____ HUD Matrix Code: _____

Fund: _____ Department: _____ Division: _____ Section: _____ Object: _____

Grant: _____ Program: _____ Activity: _____ Location: _____ Project: _____

Description: _____

Amount: \$ _____

MUNICIPAL HOUSING AND COMMUNITY DEVELOPMENT
SUPPLEMENTAL COOPERATION AGREEMENT

NO. 2011 AMENDMENT NO. 1

IN WITNESS WHEREOF, the parties have signed this Agreement on the day and year first above written.

MUNICIPALITY

CITY OF CREVE COEUR

By: _____

Title: _____

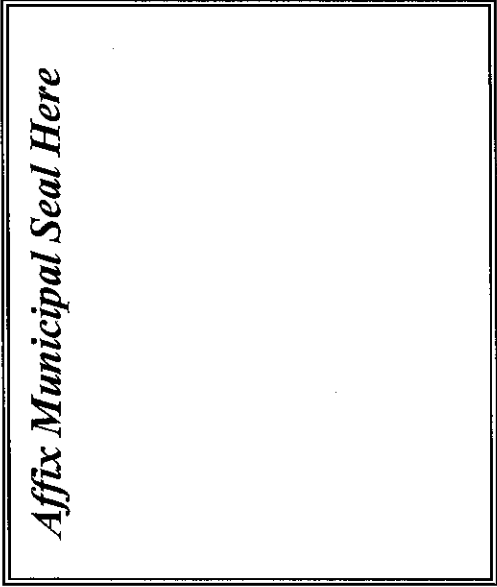
Attest:

By: _____

Title: _____

Approved as to Legal Form:

Municipal Attorney



ST. LOUIS COUNTY, MISSOURI

By: _____

Title: Director, Department of Planning

Approved:

By: _____

Title: Director, Community Development

I hereby certify that balances sufficient to pay the contract sum remain in the appropriation accounts against which this obligation is to be charged, to the extent County continues to receive federal funds sufficient to pay contract sum, in accordance with the applicable Municipal Housing and Community Development Cooperation Agreement, between Municipality and St. Louis County.

By: _____

Title: Community Development Accounting Supervisor

Approved: _____

Title: Community Development Manager

MUNICIPAL HOUSING AND COMMUNITY DEVELOPMENT
SUPPLEMENTAL COOPERATION AGREEMENT

NO. 2011 AMENDMENT NO. 1

BUDGET AND SCOPE OF PROGRAM

EXHIBIT A

Municipality: CITY OF CREVE COEUR Total Allocation \$ 20,000.00

Fund: 4590 Department: 2500 Division: 2580 Section: 4049 Object: 656410

Grant: NB101 Program: NP43 Activity: NPF43 Location: 0000 Project: NB101

Description: Counters, walkways, doors, signage and accessibility ramps for 300 N. Ballas Road

(Creve Coeur Government Center building.) Remove existing deck, steps, and defective wheelchair lift at
the Tappanmeyer Homestead, 2 Barnes West Dr, and replace with new deck, steps, and ramp.

Amount: \$ 20,000.00

HUD Activity Title: _____ HUD Matrix Code: _____

Fund: _____ Department: _____ Division: _____ Section: _____ Object: _____

Grant: _____ Program: _____ Activity: _____ Location: _____ Project: _____

Description: _____

Amount: \$ _____

HUD Activity Title: _____ HUD Matrix Code: _____

Fund: _____ Department: _____ Division: _____ Section: _____ Object: _____

Grant: _____ Program: _____ Activity: _____ Location: _____ Project: _____

Description: _____

Amount: \$ _____



DEPARTMENT OF PUBLIC WORKS OFFICE MEMO

DATE: July 1, 2013
TO: Mark Perkins, City Administrator
FROM: Jim Heines, Director of Public Works
SUBJECT: Amend resolution #968

Resolution #968 was adopted on June 27, 2011. The resolution was for a grant awarded by CDBG in the amount of 20,000.00 to make ADA accessible improvements to the government center. Staff has applied for the grant annually since 2004 and we have been awarded the grant each year.

About 10 years ago an ADA lift was installed at the Tappmeyer Homestead; which has served the city well over the years. Exposure to weather has caused the lift to deteriorate, and routine service calls are becoming constant, which is costing a minimal of \$1,500.00 annually. Staff feels removing the ADA lift, replacing it with a ramp system will be more effective, and cost feasible long term.

Staff is requesting an approval of the new resolution, which will transfer the money awarded from CDBG in 2011 to be used at the Tappmeyer Homestead. Staff will then use the funds to make the improvements mentioned above.

RESOLUTION NO. 1067

A RESOLUTION APPROVING AN AMENDMENT TO THE AGREEMENT FOR LEGAL SERVICES OF CURTIS, HEINZ, GARRETT, & O'KEEFE, CARL J. LUMLEY, CITY ATTORNEY AND LELAND B. CURTIS, ASSISTANT CITY ATTORNEY.

WHEREAS, the City Council approved the hiring of the City Attorney, Carl J. Lumley, and the Assistant City Attorney, Leland B. Curtis, by Agreement on October 13, 2003; and

WHEREAS, the City amended that Agreement in 2006 and 2009 and has determined that it is in the best interest of the City that the Agreement be further amended;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF CREVE COEUR:

Section 1: The City Administrator of the City of Creve Coeur is hereby authorized to execute on behalf of the City an amended Agreement for Legal Services with Curtis, Heinz, Garrett & O'Keefe ("Firm") and Carl J. Lumley and Leland B. Curtis ("Attorneys") as follows:.

I. REPRESENTATION

A. Attorneys and Firm agree to provide legal services as City Attorney (Carl J. Lumley) and Assistant City Attorney (Leland B. Curtis) to the City on the terms and conditions set forth herein beginning July 1, 2013 and ending June 30, 2015, subject to automatic annual renewal thereafter unless a party provides advance notice of intent to renegotiate. The parties reserve the right to terminate the relationship at any time upon reasonable notice and consistent with applicable law and ethical standards.

B. Attorneys shall be primarily responsible for the provision of legal services to the City, but Attorneys are authorized to delegate responsibilities to other Firm attorneys in the event Attorneys are not available or circumstances so require, in the Attorneys' discretion. In such circumstances the City shall retain the final authority to determine which of the Firm's attorneys provides service to the City.

C. Attorneys and Firm shall keep a detailed record of all time expended for legal services rendered to City, in one-tenth of an hour increments, and shall provide said information to the City through monthly billing statements. Time devoted to City matters shall include all efforts, including but not limited to court appearances, document preparation, planning, coordination, supervision, meetings, telephone calls, correspondence, email, and travel. City shall pay Firm invoices on a timely basis. Neither Firm nor City shall be entitled to any interest earned on funds held in the Firm's trust account, but rather both consent to the payment of any such interest to the Missouri Lawyer Trust Account Foundation.

II. RETAINER SERVICES:

The following legal services will be rendered to the City for the fee of \$4,000.00 per month:

A. Attendance and representation at:

1. Regular meetings of the City Council (two per month); and

RESOLUTION NO. 1067

2. Regular meetings of the City's Planning and Zoning Commission (two per month).

B. Availability for consultation by telephone or in person with the Mayor and members of City Council, City Administrator and Department Heads and render such advice as may be requested by same (not to exceed 15 hours per month).

III. GENERAL MISCELLANEOUS SERVICES:

The following services will be rendered to the City at the rate of \$180.00 per hour for partners, \$155.00 per hour for associates, and \$65.00 per hour for paralegals:

A. Attendance at any meetings and time expended not included in the retainer services.

B. Upon request from the Mayor and City Council or upon the authorization from the City Administrator:

1. Research and preparation of written memoranda or written opinions;

2. Draft ordinances, resolutions, opinions or memoranda;

3. Negotiations with other parties with respect to contracts, purchase or sale of property and drafting of contracts and similar matters; and

4. Any other legal representation requested from the Mayor and City Council or authorized by the City Administrator.

IV. GENERAL LITIGATION:

Services required for litigation matters pending in state or federal courts, shall be rendered at the rate of \$180.00 per hour for partners, \$155.00 per hour for associates, and \$65.00 per hour for paralegals. In the event of fee recovery from third parties, the rate for legal services shall be at the Firm's prevailing market rates (for recovery purposes only).

V. OUT-OF-POCKET EXPENSES:

In addition to the fees set forth above, Attorneys and Firm shall be reimbursed for all direct out-of-pocket expenditures incurred in the rendering of such services as follows:

A. Travel expenses including transportation, food and lodging while on City business away from the St. Louis metropolitan area and upon approval of such travel in advance by the appropriate City official.

B. Special courier or messenger service when required by the City.

C. External photocopy or document reproduction costs when required by the City for use in legal proceedings and out-of-pocket litigation costs such as depositions.

RESOLUTION NO. 1067

D. Other direct out-of-pocket expenditures as may be approved by the City Administrator or City Council.

VI. OTHER SERVICES:

It is anticipated that this Agreement will cover all required legal services associated with the positions of City Attorney and Assistant City Attorney. In the event there is a need for services not described, or specifically excluded, the fees for such services shall be reviewed with the City prior to such undertaking.

VII. OVERHEAD AND RELATED COSTS:

No general overhead costs incurred by Attorneys or Firm in rendering such services shall be billed to the City.

Section 2: This Resolution shall take effect from and after its adoption.

Adopted this ____ day of _____, 2013.

Barry Glantz
Mayor

Attest:

Deborah Ryan, MPCC
City Clerk

Contract for Legal Services established and accepted pursuant to the foregoing terms and conditions.

CITY OF CREVE COEUR, MISSOURI

Date:_____

By:_____

CURTIS, OETTING, HEINZ, GARRETT
& O'KEEFE, PC
By Carl J. Lumley, President

Date:_____

Carl J. Lumley

Date:_____

Leland B. Curtis

Date:_____



CITY OF CREVE COEUR

July 1, 2013

To: Mayor and City Council

Re: Olive TDD Project Management – Reduced Scope Phase 1 / Minimum Phase 2

Carl Lumley has served as City Attorney since 2003. The City has not adjusted Carl Lumley's retainer or rate since 2009, and I believe it is appropriate to review it at this time as we begin a new fiscal year.

The proposed agreement includes an increase in monthly retainer fee from \$3,500 to \$4,000 per month. This includes attendance at 4 meetings (two City Council and two P&Z) and an additional 15 hours of work. Based on our average bill for the last 18 months of \$10,600 per month, the proposed rate would amount to slightly less than a 5% overall increase, which I believe is reasonable particularly considering the length of time since an adjustment to his rate. His hourly rate for additional work beyond the retainer will remain at \$180 per hour.

Carl has served the City exceptionally well, and his abilities are well-recognized by many outside of Creve Coeur. Carl adds value in a number of ways beyond his legal work. In addition, his firm represents a wealth of resources for the city based on their numerous local government clients.

Sincerely,

Mark Perkins
City Administrator

BILL NO. _____

ORDINANCE NO. _____

AN ORDINANCE AMENDING TITLE VI, CHAPTER 635, SECTION 635.060 OF THE CODE OF ORDINANCES OF THE CITY OF CREVE COEUR, MISSOURI, TO REDUCE THE BUSINESS LICENSE AND OCCUPATION TAX RATE FOR ELECTRIC SERVICE TO RESIDENTIAL PROPERTIES.

WHEREAS, the City receives tax revenues to fund its operations from a variety of sources; and

WHEREAS, the City Council has determined that it is appropriate to reduce the business license and occupation tax rate for electric service to residential properties;

NOW, THEREFORE, be it ordained by the City Council of the City of Creve Coeur, Missouri as follows:

SECTION 1: Section 635.060, Tax Levied, of the City of Creve Coeur's Code of Ordinances shall be amended to read as follows:

TITLE VI: BUSINESS AND OCCUPATION

CHAPTER 635: PUBLIC UTILITIES

SECTION 635.060: TAX LEVIED

Every person now or hereafter engaged in the business of supplying electricity or electric service for compensation for any purpose in the City shall pay to the City, as a license or occupation tax, seven percent (7%) of the gross receipts from such business in the City, except that the tax rate applicable to gross receipts received for service to "single family dwellings" and "multi-family dwellings" as those terms are defined by Section 405.120 of the City's Code of Ordinances shall be ____ percent (__%).

SECTION 2: This ordinance shall become effective in accordance with Section 3.11 (g) of the City Charter.

ADOPTED THIS ____ DAY OF _____, 2013.

DR. SCOTT SAUNDERS
PRESIDENT OF CITY COUNCIL

BILL NO. _____

ORDINANCE NO. _____

APPROVED THIS ____ DAY OF _____, 2013.

BARRY GLANTZ
MAYOR

ATTEST:

DEBORAH RYAN, MPCC
CITY CLERK

BILL NO. _____

ORDINANCE NO. _____

**AN ORDINANCE AMENDING TITLE VI, CHAPTER 635, SECTION 635.060 OF THE
CODE OF ORDINANCES OF THE CITY OF CREVE COEUR, MISSOURI, TO
TEMPORARILY REDUCE THE BUSINESS LICENSE AND OCCUPATION TAX RATE
FOR ELECTRIC SERVICE TO RESIDENTIAL PROPERTIES.**

WHEREAS, the City receives tax revenues to fund its operations from a variety of sources; and

WHEREAS, the City Council has determined that it is appropriate to temporarily reduce the business license and occupation tax rate for electric service to residential properties;

NOW, THEREFORE, be it ordained by the City Council of the City of Creve Coeur, Missouri as follows:

SECTION 1: Section 635.060, Tax Levied, of the City of Creve Coeur's Code of Ordinances shall be amended to read as follows:

TITLE VI: BUSINESS AND OCCUPATION

CHAPTER 635: PUBLIC UTILITIES

SECTION 635.060: TAX LEVIED

Every person now or hereafter engaged in the business of supplying electricity or electric service for compensation for any purpose in the City shall pay to the City, as a license or occupation tax, seven percent (7%) of the gross receipts from such business in the City, except that during the period from _____ to _____ the tax rate applicable to gross receipts received for service to "single family dwellings" and "multi-family dwellings" as those terms are defined by Section 405.120 of the City's Code of Ordinances shall be reduced to ____ percent (___%).

SECTION 2: This ordinance shall become effective in accordance with Section 3.11 (g) of the City Charter.

ADOPTED THIS ____ DAY OF _____, 2013.

DR. SCOTT SAUNDERS
PRESIDENT OF CITY COUNCIL

BILL NO. _____

ORDINANCE NO. _____

APPROVED THIS ____ DAY OF _____, 2013.

BARRY GLANTZ
MAYOR

ATTEST:

DEBORAH RYAN, MPCC
CITY CLERK



MEMORANDUM

DATE: July 3, 2013

TO: Mark Perkins, City Administrator

FROM: Daniel Smith, Director of Finance

SUBJECT: Electric Utility Rate Decrease

Finance staff has been requested to determine the amount of lost revenue should the electric utility gross receipts tax rate be reduced. For FY 13 the electric gross receipts tax generated \$3,096,347. It is projected that this figure would have increased 4% during budget year FY 14 primarily due to a January 2013 rate increase. This would make the projected number approximately \$3,220,200 for FY 14.

Past history has shown that the gross receipts revenue generated averages 27% from residential and 73% from non-residential. Based on these numbers the following would be revenue lost should a reduction in the gross receipts tax rate for electric occurs.

Reduction	Residential	Non-Residential
.50%	62,104	167,910
1.0%	124,208	335,820
2.0%	248,416	671,640

In addition the following information should be noted. According to Ameren some apartments or condominiums may be classified as non-residential and therefore not receive any reduction if it applies only to residential service. These appear to be the exception rather than the rule. Secondly, since electric utility gross receipt taxes increase over time the lost revenues due to the reduction will increase over time.

For your information I have still not heard from the water company or Laclede Gas concerning the billing distribution between residential and non-residential. I will continue to pursue this matter.

I would recommend that the city avoid adjusting the telecom tax rate if possible. We currently have over 70 telecom companies paying gross receipts tax to the City. Therefore ensuring compliance with the rate changes would be a difficult task.

I would be happy to respond to any questions.

MUNICIPAL UTILITY TAX RATES

<u>City</u>	Sep-11							
	Res <u>Elec</u>	Comm <u>Elec</u>	Res <u>Gas</u>	Comm <u>Gas</u>	Res <u>Water</u>	Comm <u>Water</u>	Res <u>Phone</u>	Comm <u>Phone</u>
Ballwin	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
Brentwood	0.00	7.50	0.00	8.00	0.00	8.00	0.00	8.00
Chesterfield	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Clayton	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
Crestwood	5.70	7.00	6.00	7.00	6.00	7.00	6.00	6.00
Creve Coeur	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
Des Peres	3.37	3.37	4.00	4.00	5.00	5.00	5.00	5.00
Ellisville	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
Frontenac	0.50	8.00	0.50	8.00	0.50	8.00	0.50	8.00
Glendale	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
Kirkwood	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
Ladue	6.90	6.90	7.00	7.00	7.00	7.00	7.00	7.00
Manchester	4.00	4.00	5.00	5.00	5.00	5.00	5.00	5.00

<u>City</u>	Res <u>Elec</u>	Comm <u>Elec</u>	Res <u>Gas</u>	Comm <u>Gas</u>	Res <u>Water</u>	Comm <u>Water</u>	Res <u>Phone</u>	Comm <u>Phone</u>
Maplewood	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
Maryland Heights	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
Olivette	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Overland	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Richmond Heights	5.63	5.63	6.00	6.00	6.00	6.00	6.00	6.00
St. Louis	4.00	10.00	4.00	10.00	10.00	10.00	10.00	10.00
Shrewsbury	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25
Town & Country	0.00	6.75	0.00	7.00	0.00	7.00	0.00	7.00
University City	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
Webster Groves	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
Wildwood	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
St. Louis County	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00

NOTES

St. Louis County is limited by law to a maximum of 5% on all services, earmarked for police service.

Bold Cities have different rates for commercial and residential



DEPARTMENT OF PUBLIC WORKS STAFF MEMORANDUM

DATE: July 2, 2013

TO: Mr. Mark Perkins, City Administrator

CC: Mr. James Heines, Director of Public Works

FROM: Matt Wohlberg, P.E., City Engineer

SUBJECT: North New Ballas Lighting
Olive Boulevard Transportation Development District

City staff, acting as the project manager for the Olive Boulevard Transportation Development District (Olive TDD), recently sought and received the opinion and recommendation of the Planning and Zoning Commission regarding the style of lights to be installed on North New Ballas Road. Staff has decided to revisit this issue with the Planning and Zoning Commission and the City Council, because it has been three years since the previous discussions on the topic and additional options are now available.

Olive TDD Lighting Project

One of the remaining obligations of the Olive TDD is to install decorative sidewalk lighting along the west side of North New Ballas Road, generally in front of the Plaza Shops just north of Studt Avenue and south of Olive Boulevard. A sketch of the proposed locations for these lights is attached.

City staff discussed the design of these lights with the Planning and Zoning Commission and the City Council from December 2009 through much of 2010. Since that time, this project has been on hold while other Olive TDD plans and proposals were considered. The Olive TDD Board now seeks to move forward with the New Ballas lighting project.

City staff has recently met with Ameren and has identified a power source for the proposed lights. Bid documents will be developed for the project following approval of the lighting style. Installation of these lights is anticipated during the fall or winter of 2013.

Lighting Style

The original intent for the lights was to continue the theme of the decorative lights that line the median of Olive Boulevard. As discussions regarding the New Ballas lighting began in earnest, there was also a movement towards energy-efficient bulbs underway, as the City sought to incorporate emerging technology into its lighting along Olive Boulevard. Unfortunately, City staff found that there were few options available for energy-efficient decorative lighting, and these options did not include a model similar to the Olive Boulevard median lights.

City staff advised against an attempt to try to use a style that was close to the Olive median lights but not the same, as staff felt that the differences would be obvious. Instead, staff advised that the City pursue an innocuous style for these lights – something that would be completely different from the Olive median lights but also plain enough to limit the design impact to future development in the area.

Herwig Option. The light style that the City decided to pursue was a model manufactured by Herwig Lighting. This style involved a decorative post topped with a curved arm, at the end of which hung an acorn-shaped light fixture. Two factors that were favorable for this design included the use of an energy-efficient inductive light fixture and the possibility to include decorative scrollwork unique to Creve Coeur on the underside of the arm.

Images of the Herwig light style are attached.

The cost to install the Herwig lights is anticipated to be between \$50,000 and \$60,000. The Olive TDD would cover this cost.

Spring City Options. City staff recently coordinated with Spring City, the manufacturer of the lights in the Olive Boulevard median, to develop several sidewalk-lighting options that resemble the Olive median lights. The attached cut sheets show the available options.

In general, two designs are available: a smaller replica of the Olive Boulevard hanging-acorn fixture or a post-top fixture. A sketch of the lighting used on the Olive Boulevard median is included as "Option A" on the hanging-acorn cut sheet. Also, as a point of comparison, "Option D" from the hanging-acorn fixture options has the same post as is shown for the post-top fixture options. All of the options shown would use an LED fixture.

The cost to install the post-top option is anticipated to be between \$50,000 and \$60,000, similar to the cost for the Herwig option. The Olive TDD would cover this cost.

The cost to install the Olive median replica lights would be considerably more due to the custom order for these lights. The cost for these lights is anticipated to be between \$80,000 and \$90,000, which would be beyond the obligation of the Olive TDD to finance. If it were pursued, it would be expected that the City or some other outside source cover the difference in cost between the Herwig option and the Olive median replica option.

Energy efficiency. Both the inductive lighting and LED lighting are known to be energy-efficient technologies. City staff does not anticipate an appreciable difference in operating cost between the two lighting types.

Planning and Zoning Commission Recommendation

City staff presented the attached options to the Planning and Zoning Commission at its meeting on Monday, July 1, 2013. After some discussion, the Commission unanimously recommended that the City pursue the Herwig lights, with the caveat that the Commission would prefer the Olive median replica lights if the City Council decided to appropriate funding for them.

One aspect of the Herwig lights that the Commission favored was that the light hung over the sidewalk instead of directly on top of the pole, as would be the case with a post-top light.

The Commission asked that staff investigate several add-ons for the light poles, including banner hangers and planters. Staff was also asked to review the scrolling shown in the example to see if it could be eliminated. This research had not been completed at the time of writing this memorandum.

Attachments: Preliminary Lighting Layout sketch

Herwig Option

Spring City Options



PRELIMINARY LIGHTING LAYOUT

N. NEW BALLAS PEDESTRIAN LIGHTING

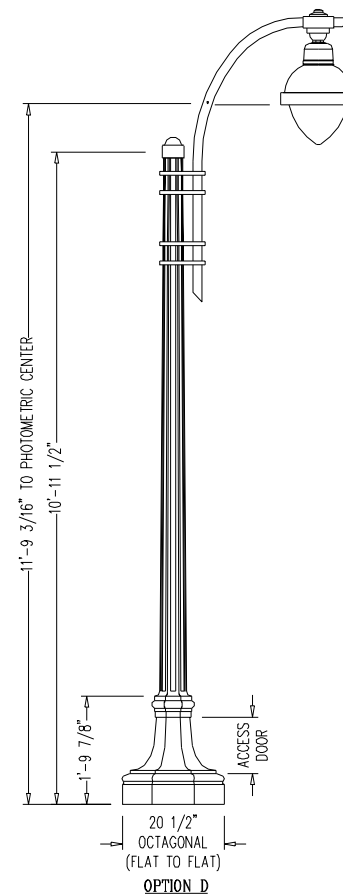
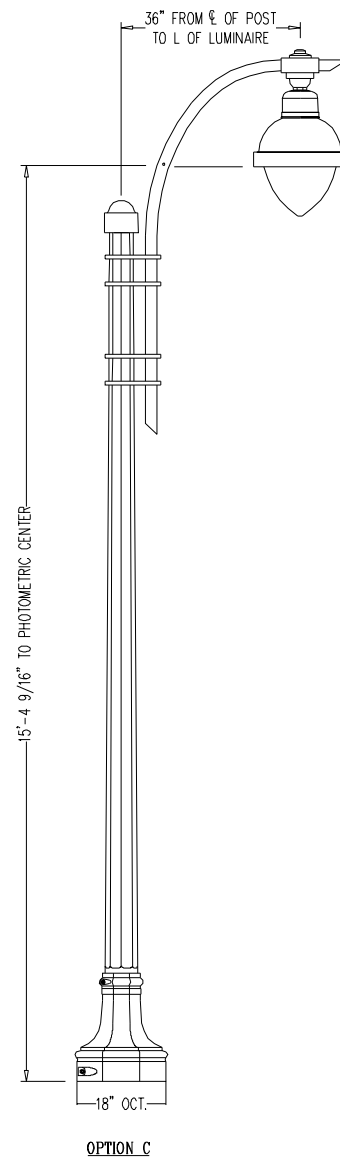
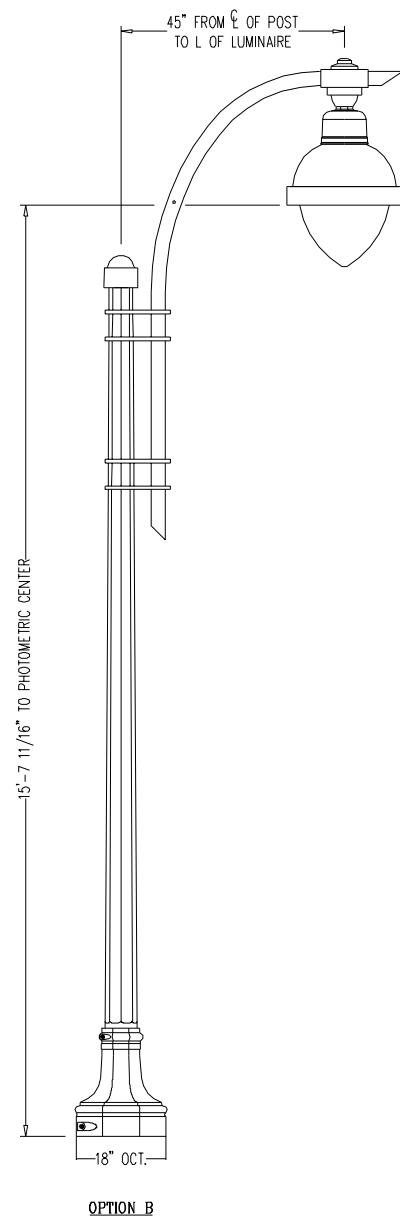
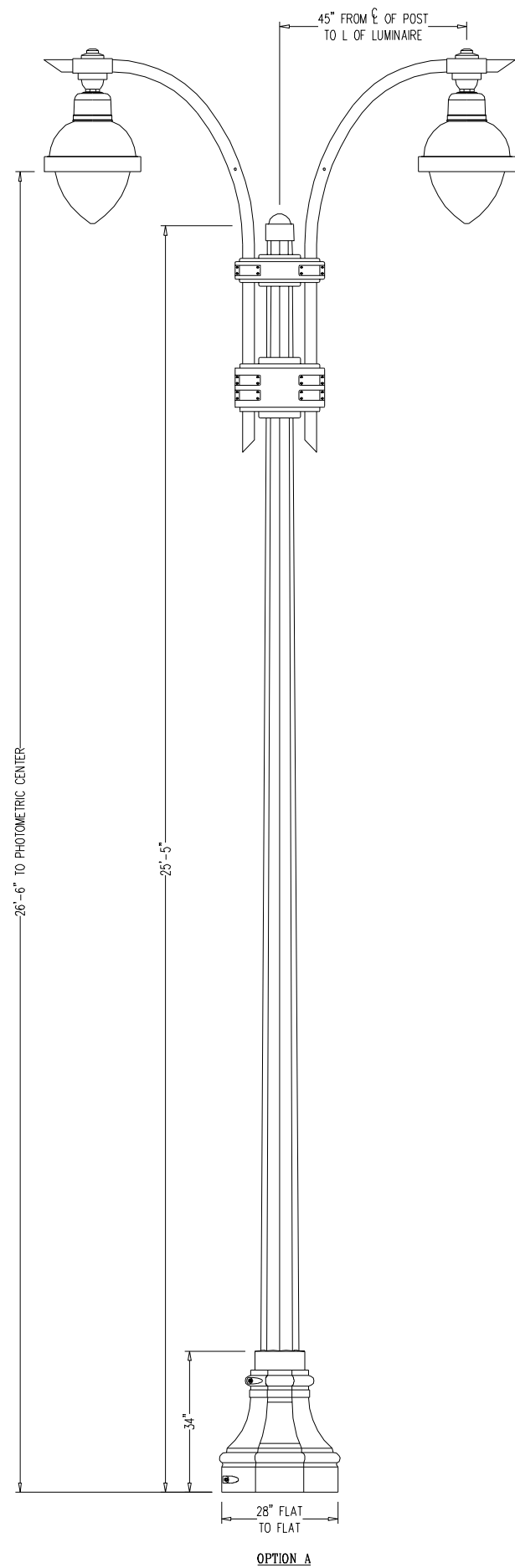
CITY OF CREVE COEUR



SCALE:
1" = 50'



Herwig Lighting style for New Ballas Road decorative lighting.



This drawing is property of Spring City Elect. Mfg. and is issued to the recipient with the understanding that it shall not be copied, duplicated, passed on to unauthorized parties, nor used for any purpose other than that for which it is specifically furnished except with Spring City's written permission.

OPTION A
ROADWAY STANDARD

OPTION B
PEDESTRIAN STANDARD - NO TOOLING

OPTION C
PEDESTRIAN STANDARD - SCALED LUMINAIRE
TOOLING REQUIRED

OPTION D
CAST POST - SCALED LUMINAIRE TOOLING
REQUIRED

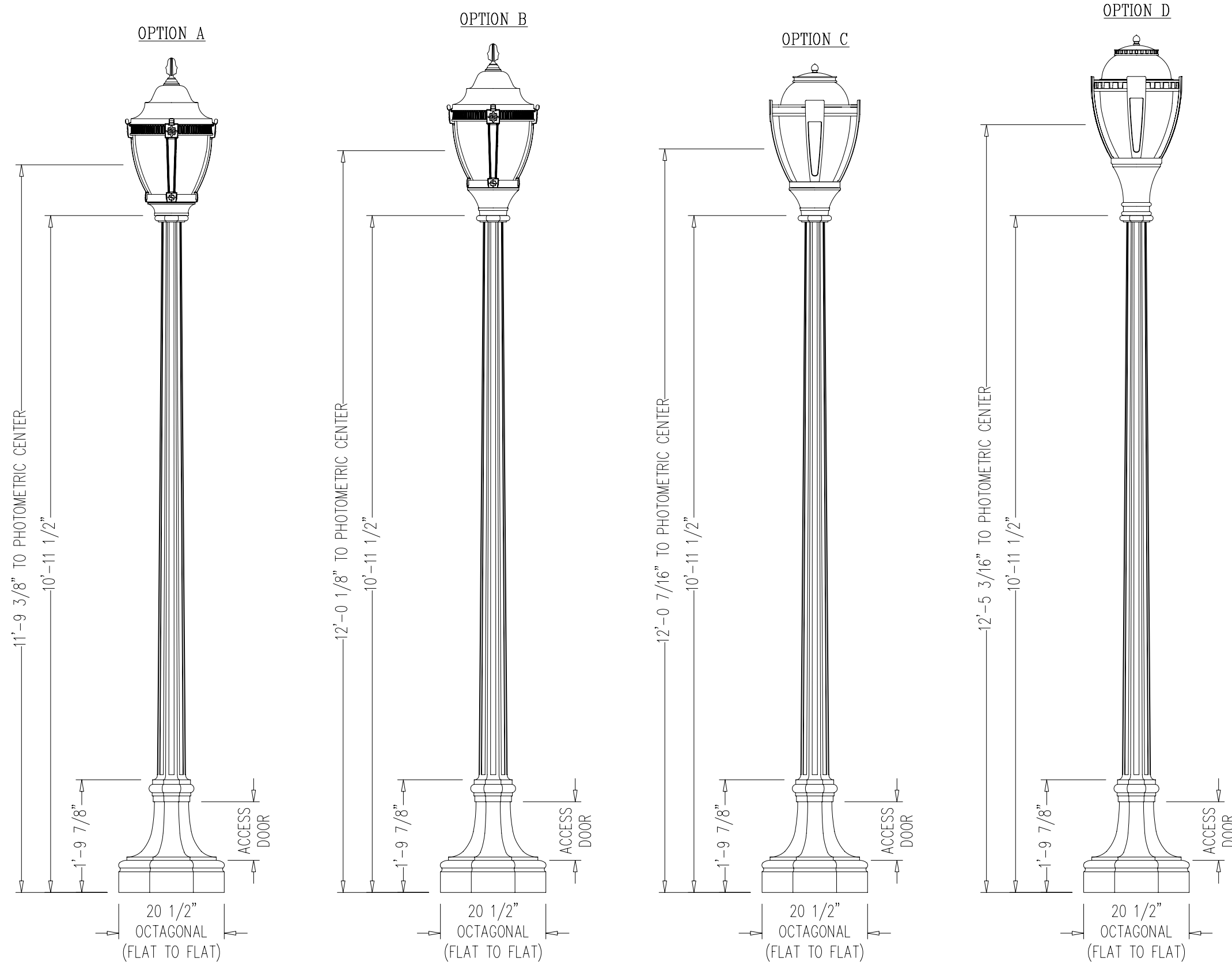


Spring City Electrical Mfg. Co.

HALL AND MAIN STREETS - P.O. BOX 19 - SPRING CITY, PA. 19475
PHONE (610) 948-4000 - FAX (610) 948-5577 - WWW.SPRINGCITY.COM

DESCRIPTION	THE HARRISBURG/BALTIMORE POST WITH GRAND CENTRAL LED FIXTURES		
CUSTOMER	CREVE COEUR STREETSCAPE, MO		
JOB			
SCALE N.T.S.	DRAWN BY: MWG	DATE 11-20-12	SPEC NO. S102271

This drawing is property of Spring City Elect. Mfg. and is issued to the recipient with the understanding that it shall not be copied, duplicated, passed on to unauthorized parties, nor used for any purpose other than that for which it is specifically furnished except with Spring City's written permission.



- OPTION A**
RIVERSIDE LED WITH FRANKLIN SQUARE FITTER
- OPTION B**
RIVERSIDE LED WITH DURPHY SCHOOL FITTER
- OPTION C**
FRANKLIN SQUARELED WITH DURPHY SCHOOL FITTER AND NO DENTAL MOLDING
- OPTION D**
CENTER CITY LED WITH DENTAL MOLDING
- LAMP POST**
THE 10'-11 1/2" ONE PIECE HARRISBURG/
BALTIMORE
- PLEASE ADVISE THE FOLLOWING**
POST AND LUMINAIRE FINISH COLOR
LAMP POST MATERIAL
LED WATTAGE
LED COLOR TEMPERATURE
LUMINAIRE DISTRIBUTION

 Spring City Electrical Mfg. Co. HALL AND MAIN STREETS - P.O. BOX 19 - SPRING CITY, PA. 19475 PHONE (610) 948-4000 - FAX (610) 948-5577 - WWW.SPRINGCITY.COM			
DESCRIPTION	THE HARRISBURG/BALTIMORE CAST POST WITH LED FIXTURES		
CUSTOMER JOB	CREVE COEUR STREETSCAPE, MO		
SCALE	DRAWN BY:	DATE	SPEC NO.
N.T.S.	MWG	11-05-12	S102265B



DEPARTMENT OF PUBLIC WORKS OFFICE MEMO

DATE: July 2, 2013
TO: Mark Perkins, City Administrator
FROM: Jim Heines, Director of Public Works
SUBJECT: Space Needs Analysis and Preliminary Design

The Fiscal Year 2014 budget includes funds for a space needs analysis and preliminary design for renovations to the Government Center. City staff has prepared a Request for Qualifications (RFQ), attached, to be issued to prospective firms shortly. Below is a summary of improvements made to the Government Center and recent discussions on the topic.

Government Center History

The city purchased the Weber Elementary School Property from Parkway School District in 1988 and embarked on an extensive renovation project to convert the old school built in 1947 to the Creve Coeur Government Center.

During the construction the interior of the building was gutted, lead and asbestos abatement completed, and construction completed to convert the building from a classroom design to a functional Government Center design.

The center opened up shortly after staff moved into the building in July of 1989. Since that time only one major addition to the building has occurred. The construction included a Sallyport and Shooting Range in the Police Department as well as a workout room and squad room. Beyond those improvements only maintenance and replacement of equipment has been addressed.

Fast forward to 2008 when the city considered remodeling the Council Chambers to improve security, accessibility, aesthetics and functionality of this space. City staff and a consultant reviewed a number of improvements which would accommodate both Council meetings and Court events and prepared a concept plan for this space. Unfortunately this was about the time we experienced a significant downturn in the economy and the project was shelved until a later date.

Energy Audit

In 2009, the city began replacing some of the vital equipment in the building which had met its life expectancy which included the cooling tower, boilers, and domestic hot water system. These improvements resulted in significant savings due to improved energy efficiency and reduced maintenance.

In addition, other improvements at the Government Center and other city owned facilities such as lighting retrofits; radiant heat, insulation, and roofing white-coat have netted significant savings for the city by reducing energy consumption, and maintenance costs.

FDH Engineering recently completed an energy audit of city facilities which includes proposed solutions, proposed costs estimates and projected payback time. If we proceed with building renovations, staff will recommend incorporating energy efficiency improvements into the scope of work.

Recent Remodeling Discussions

As previously mentioned while reviewing the FY2013 budget at a work session held on March 26, 2012, staff recommended remodeling the Council Chambers as part of the proposed budget. The discussions that followed directed staff to explore the entire Government Center Complex. As such, staff recommends hiring a consultant to perform a Space Needs Analysis of this building.

The goals of this proposed study will be to consider current and future facilities needs of the city as well as investigating the following issues:

- Security
- Archive space
- Departmental expansions
- Public spaces
- Community Center and meeting room needs
- Remodel and update aesthetics of the building
- Improved curb presentation

Following a review of prospective consultants, a recommendation will be forwarded to the City Council for their consideration in about 60 days.

Staff looks forward to City Council input on this project and process at this early stage.



Comprehensive Energy Audit City of Creve Coeur

March 6, 2013

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Contents

1. Executive Summary	1
2. Building Background and Systems Operation	3
2.1. Overview of Systems.....	4
Government Center	4
Dielmann Recreation Center.....	5
Overview of Ice Making Process Mechanical Systems	6
Public Works	6
2.2. Lighting Systems	7
Government Center	7
Recreation Center.....	7
Public Works	7
2.3. Occupancy Schedules.....	7
Government Center	7
Recreation Center.....	8
Public Works	8
3. Energy Usage	9
City's Utility Rates.....	10
Government Center	11
Electricity Use	11
Natural Gas Use	12
Dielmann Recreation Center	13
Electricity Use	13
Natural Gas Use (Ice Rink and Golf Shop)	15
Public Works Facility	16
Electricity Use	16
Natural Gas Use	17
4. Heating/Cooling Load Analysis and Equipment Assessment	19
5. Recommended Energy Conservation Measures	20
EEM-1: Lighting – Interior	21
EEM-2: Lighting – Exterior	22
EEM-3: Direct Digital Control (DDC) Upgrade	23
EEM-4: Retro-Commissioning (RCx)	24
EEM-5: HVAC System Rebalance.....	25
EEM-6: Solar Panels (PV)	26
EEM-7: Heat Recovery	27
EEM-8: Building Envelope Improvements	28
EEM-9: Addition of VFD's	29
EEM-10: New Meeting Room HVAC	30
EEM-11: Ice Rink Bleacher Heaters	31



EEM-12: ICE Rink Operational and Control Changes	32
6. Financing Options.....	33
6.1. Capital Contribution Method	34
6.2. Low interest loans through PNC and FDH relationships	34
6.3. Energy Savings Performance Contract (ESPC)	34
7. Observation Items.....	35
8. Conclusion	35
Appendix A - Equipment Assessment.....	37
Appendix B - Ice Rink Ice Making Diagram	43



1. Executive Summary

FDH Engineering (FDH) was requested by the City of Creve Coeur to conduct a comprehensive energy audit of three City owned buildings.

Building Name	Size
Government Center	49,594 sf
Dielmann Recreation Complex	46,470 sf
Public Works Garage	10,204 sf

Table 1 - Building List

The primary goal was to identify sustainable strategies for each facility which save energy and reduce greenhouse gas emissions. All efficiency measures included in this report use proven and existing technologies to cut energy usage, improve comfort, reduce greenhouse gases, and/or reduce maintenance costs.

Table 2 summarizes the Energy Efficiency Measures (EEMs) which were analyzed and recommended for further action. A more detailed EEM summary table is provided in section 5 which includes; kWh, kBTU, estimated savings, GHG reductions, probable construction costs, payback and potential incentives. The costs used in the analysis are engineering estimates and are +/- 15%-20% values. A re-estimate of the savings and costs should be done once a preliminary design (35%-50%) has been completed.

EEM #	Description	kWh	Therms	GHG (Mtons)	Savings (\$)	Cost	Payback w/ Incentive
EEM-1	Lighting - Interior	89,801	-	64.59	9,161.05	\$30,543	2.6
EEM-2	Lighting - Exterior (1)	49,336	-	35.48	4,616.77	\$51,246	10.4
EEM-3	DDC Upgrade	103,350	1,670.00	83.20	10,794.00	\$179,394	15.8
EEM-4	Reto- Commissioning (RCx)	297,136	5,105.00	240.82	25,538.00	\$57,263	1.2
EEM-5	System Rebalancing	111,260	900.00	84.80	8,945.00	\$21,200	1.4
EEM-6	Solar PV	32,274	-	23.21	2,179.88	\$105,000	7.9
EEM-7	Heat Recovery	346,499	-	249.21	30,734.43	\$18,000	0.0
EEM-8	Building Envelope	69,646	2,810.00	65.01	7,681.52	\$26,408	2.6
EEM-9	VFD - Pump(s)	148,788	1,540.00	115.19	11,633.40	\$54,780	3.7
EEM-10	New Meeting Room HVAC	36,691	-	26.39	2,623.42	\$20,500	6.8
EEM-11	Ice Rink Bleacher Heaters (2)	(97,945)	-	(70.44)	(8,687.69)	\$15,200	None
EEM-12	Ice Rink Operational Changes	54,018	458.40	41.29	4,204.80	\$8,000	1.8

(1) The cost does not include a reduction in maintenance costs over the life of the new fixture which would occur 2-3 times in the life of the LED fixtures

(2) These values are not savings but additional usage "negative savings"

Table 2 - EEM Summary

Note: A total line was not put at the end of the table above due to the effects of EEM interactions. Since any single EEM can be implemented individually, without respect to other EEMs being done, interaction between EEMs is expected and may reduce the amount of savings by the interacting EEMs. The Phase 2 process outlined in the original RFP from the City would include this additional analysis to capture the effects of EEM interactions.



During the course of performing this energy audit, FDH observed a number of positive sustainable strategies which the City has already implemented to improve energy efficiency and reduce greenhouse gas emissions. Below are a few of the items which were observed:

1. High efficiency condensing boilers have been installed at the government center
2. "Tankless" domestic water heaters are being used at the government center for domestic water usage.
3. T8 light fixtures with electronic ballast have replaced T12 at all three facilities.
4. Munters heat recovery and dehumidification AHU is used for conditioning the ice rink.
5. Direct digital control system (DDC) for over 90% of the connected equipment at the recreation center.
6. New ceiling mounted Infrared (IR) heaters were installed to heat the staff when in the garage bays
7. Increased levels of insulation were added to the doors and ceiling to reduce heat loss and heat gain in the garage bays

We recommend the following items, with financial details summarized in Table 2, be implemented soon to allow the City to benefit from the savings and reductions associated with each. These are discussed in greater detail later in this report:

1. EEM-1: Interior lighting upgrades for the Ice Rink
2. EEM-4: RCx study and related activities at Dielmann Recreation Complex
3. EEM-8: Building Envelope study and corrections.
4. EEM-9: VFD installation at the Government Center
5. EEM-11: Heat Recovery addition to the Ice Rink compressor(s)
6. EEM-11: Ice Rink heaters for spectator comfort (this can be done in phases if desired)

FDH is very excited to continue to work with the City on implementing the above items and can assist with engineering documents, construction activities, and Ameren and Laclede Gas rebate/incentive applications. With our current knowledge of the facilities and relationships with the staff we can have most of the items listed above engineered, ready for contractor pricing, and implementation this summer.

2. Building Background and Systems Operation

The audit described by this report covered three buildings owned by the City of Creve Coeur: The buildings are: Government Center, Recreation Center, and Public Works building.



Photo 1 - Government Center



Photo 2 - Dielmann Rec. Center



Photo 3 - Public Works Garage



2.1. Overview of Systems

The following table represents the assumed construction values used during our analyses. These values were determined from a combination of site survey, original construction drawing review, and City staff interviews.

Load Construction Values			
	Government Center	Dielmann Recreation Complex	Public Works Garage
Roof (R-Value)	~ R-30 & R-20	~ R-30 & R-20	~ R-30
Window (U- Value/SHGC)	0.55 / .40	0.55 / .40	0.55 / .40
Walls (R-Value)	Masonry R11	Masonry R11	Masonry R13
Plug loads	.5 watts/sf	.5 watts/sf	.5 watts/sf
Misc. Load	.25 watts/sf	.25 watts/sf	.25 watts/sf
Lighting	1.0 watts/sf	1.5 watts/sf	1.0 watts/sf
Infiltration Rate	Neutral	Neutral	Neutral
Ventilation Rates	IMC 2012	IMC 2012	IMC 2012
Usage	Office / Police HQ	Recreation	Office / Garage

Table 3 - Assumed Construction Values

Government Center

Building Construction: The building is located at 300 N. New Ballas Road and is a two-story repurposed 1940's elementary school multi-use building of approximately 49,600 SF. This building includes spaces occupied by city administrative and financial offices, the police department, and the community center. The spaces within are primarily used as offices or for storage, though the building does feature a 4,000 SF gymnasium (community center), 1,600 SF of exercise & locker rooms (police), and a 2,200 SF council chambers (city administration).

HVAC: Heating and cooling at the Government Center is provided by 39+ horizontal water source heat pumps primarily located above the drop ceilings throughout the building. Ventilation air is supplied to each heat pump by two AHU's located in a dedicated mechanical room on the lower level. These AHU's have heating and cooling coils to partially pre-condition the ventilation air prior to being sent to the heat pumps for final distribution. Heat is added or extracted from a closed loop condenser system with a 20% glycol/water mixture and the use of a heat exchanger or cooling tower respectively. During cooling season, the condenser loop utilizes a 95-ton BAC cooling tower (installed in 2010) to reject heat to the outdoors. During the heating season, four 1,300 MBH (input) Lochinvar "Sync" condensing boilers (installed in 2012) provide a heat source for the condenser loop if the water temperature falls below the set-points. This heating system also provides hot water for the various unit heaters, baseboard heaters, and make-up air pre-heat coils installed at various locations throughout the building.

Control System: Throughout the building, there are a number of thermostat types in use. Most are non-programmable thermostats (McQuay, Honeywell, White-Rodgers), though a few programmable thermostats (Honeywell) do exist. There is a building DDC system which was not accessible or viewable at the time of this audit. No access was possible due to lack of training for the staff on how to operate the systems front-end.

Domestic Water System: The building's domestic water is heated by two natural gas fired Rheem instantaneous "tankless" water heaters with supplemental storage of 6 gallons to reduce system cycling. This system appears to have been installed in 2012 or 2011 and is operating without any reported issues.



Dielmann Recreation Center

Building Construction: The building is located at 11400 Olde Cabin Road and is a one-story building of approximately 46,500 SF. The primary spaces of use within the complex are the NHL-sized ice rink (23,800 SF, including bleachers) and the golf pro shop (1,800 SF).

The Ice complex shares a warming room "building's main lobby" for skaters and visitors, four ice rink accessible locker rooms, bleachers for spectators, facilities admin offices, snack shop, and restrooms. An administrative section of the building is adjacent to the main lobby and hosts a few offices and a multi-purpose/conference room for staff and public use. The Golf pro shop is connected to the main lobby through an oversized corridor which doubles as a snack dining area. The Golf pro-shop contains a small retail space, green fee desk, large multi-purpose room, and dedicated administrative office(s). Golf cart garage is located directly below the golf pro shop and the large connecting corridor.

HVAC: The ice rink is conditioned by a Munters "DH" heat recovery AHU located in the mechanical space adjacent to the resurfacers room. This AHU has the following features: Supply fan, reactivation fan, reactivation heater, desiccant wheel, DX cooling coil and auxiliary heater. During the heating season the 400 MBTU auxiliary heating coil is the only source of heat to the ice rink area and has the design capabilities of a 33°F temperature rise at winter design conditions. During warmer (cooling) months, the desiccant wheel and regenerative process are used to dehumidify the supply air and keep ice rink humidity within acceptable tolerances. Due to the amount of ice surface being present, no comfort cooling is required in the ice rink space other than to help keep the ice skating surface frozen by the R22 compressor system. This ice rink compressor system is discussed in more detail in the following section. The team "locker" rooms, located on the North side of the ice rink, have no direct cooling provided to them. Instead, the exhaust air taken from the locker rooms is made up from the ice rink which is inherently cool. Electric resistance baseboard heaters provide heating to the locker room when the temperature drops below the set-point(s).

The warming room "main lobby", multi-purpose room, and administrative areas are conditioned by AHU-1 which is located in the basement mechanical space adjacent to the golf cart storage area. Cooling is provided by the AHU from a 25 ton DX cooling coil and associated condensing unit. Primary space heating is provided by the AHU from hot water coils. In addition to the heat from the AHU the spaces which have large exterior surfaces have supplemental hot water baseboard heat below the windows to reduce drafts. The golf pro shop and connecting corridor are conditioned by AHU-2 in a similar manner as AHU-1. This unit is located in the same mechanical room as AHU-1.

Hot water is produced for use by the AHU's, unit heaters, and baseboard heat by two natural gas fired boilers located in the main mechanical room. Each boiler is 2-stage 300 MBH input "multipulse" non-condensing boiler. These boilers operate in a lead/lag relationship with one boiler meeting the heating demands of the building. Annual efficiency is estimated at 75%.

Control System: The ice rink is monitored and controlled through a web-based "Delta" DDC system. This system has a very nice user interface and provides adequate interface and historical trends for the facility's maintenance staff's use and review. The rest of the building is controlled through a web-based "JCI Metasys" DDC system. This system does not make use of graphics for the user interface like the Delta system does. As a result, this system is not as user friendly and system trends are much harder to set up and review.

Domestic Water System: The building's domestic water is heated by two groups of natural gas fired tank style heaters. The first group is a 50 gallon water heater located in the golf shop basement mechanical room and serves the snack and restrooms sinks in the main building. The second group is located in the ice resurfacers storage bay. This grouping has three 100 gallon water heaters and serves the flood water needs, showers, and ice rink restrooms. This system does use a hot water recirculating pump to maintain elevated water temperatures in the hot water piping.

Overview of Ice Making Process Mechanical Systems

In order to keep the ice rink operational year round, the Recreation Center uses three 100-ton compressors with R-22 refrigerant to produce a cold water/glycol mixture to make ice. The following items are part of the ice rink services and/or ice making process:

1. Slab thickness is set to 1 ½"
2. Slab cooling system (20°F ice surface set-point)
3. Under slab heating system (42°F set-point using recovered heat from the ice making process)
4. Cooling tower (used to reject heat from the ice making process to the outdoors)
5. Waste ice melting system (two 9.5 kW electric heaters with 100 gallon tanks)
6. Flood water system is connected to three natural gas fired domestic water system (140°F set-point)
7. Domestic water heaters for locker room and restroom use (140°F with three natural gas 100 gallon tank heaters)

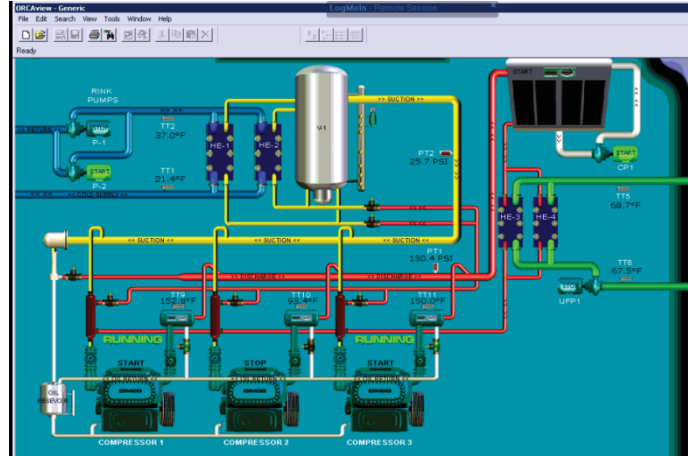


Figure 1 - DDC Screen Capture

Refer to Appendix B for a copy of the P & ID drawing for the ice making process.

Public Works

Building Construction: The building is located at 996 *Rue de la Banque East* and is a one-story hi-bay building of approximately 10,200 SF. The large parking lot adjacent to the building hosts city-owned trucks while they are not in use or down for maintenance, truck staging/storage, and a salt storage structure. The building itself consists of a smaller conditioned section (3,100 SF) attached to a heated only maintenance garage (6,100 SF).

HVAC: The fully conditioned section of the building is served by a roof top unit (RTU) and includes offices, a meeting room, and a kitchen/dining areas. The RTU is a 7 ½ -ton DX *Goodman* unit, installed within the last year. During the winter, the RTU uses a 210,000 BTU/H natural gas fired heater to heat the building. Cooling is achieved by two compressors totaling 7 ½ tons. A programmable thermostat is used for space set-point control and for night setback/ups (if used) to 73°F.

Control System: The temperature within the garage is regulated only during the winter season. This is done through the use of radiant, natural gas heaters, hung from the ceiling. Large post mounted fans help to circulate air within the garage during the summer months, since there is no actual mechanical cooling for the garage bays. The bay doors have been recently insulated with spray foam help to minimize the effects of outside weather conditions on the garage space. The feedback from the staff was extremely positive for the added insulation.



2.2. Lighting Systems

Government Center

The lighting in the Government Center was reported to have been retrofitted in 2012. Many areas that once hosted T12 fixtures were converted to utilize T8 fixtures with electronic ballasts and 32 watt lamps. These fixtures are almost exclusively 4-lamp fixtures, though a few 2-lamp fixtures do exist in the facility. Also, as a result of the upgrade, five of the building's conference rooms now use motion sensors to automatically shut off lights when not in use. The 250W metal halide fixtures in the gymnasium were not included in the retrofit and are still in use. Parabolic fluorescent and incandescent lighting also still exists sporadically throughout the building but at a very low quantity.

Recreation Center

Most of the lighting at the Recreation Center was retrofitted in 2012. In many areas, including the offices and conference room, the existing T12 fixtures were replaced with 4-lamp, T8 fixtures with 32 watt lamps. There are 54 lights over the ice rink which were not included in this retrofit and remain as 400 watt metal halide. Additionally, there are 24 12" canned light fixtures in the lobby area which are 50 watt metal halide lamps. The decorative cove lighting in the lobby is T8 fixtures with two 32 watt lamps per fixture.

Public Works

As with the other buildings, the lighting at the Public Works building was also retrofitted in 2012. The existing T12 fluorescent lights in the garage bays were replaced with 2-lamp, T5 high bay fixtures. These fixtures utilize rapid-start, 54 watt high output lamps. Inside the office section of the building, the existing T12 lights were replaced with 4-lamp, T8 fixtures with 32 watt lamps.

2.3. Occupancy Schedules

It is assumed most if not all of the lighting and HVAC equipment operates around the below schedules.

Building Schedules			
	Government Center (1)	Dielmann Recreation Complex (2)	Public Works Garage
M-F	8:00am-5:00pm	6:00am-11:00pm	7:00am-3:30pm
Sat	Closed	6:00am-11:00pm	Closed
Sun	Closed	6:00am-11:00pm	Closed
Weekly Hours	45	119	42.5

(1) Police areas are 24 hours per day 7 days per week (168 hours per week)

(2) Golf pro shop hours are 9am-5pm during the winter and 6am-7pm during the summer

Government Center

Being a multipurpose building, the Government Center has a number different occupancy profiles. Most of the building, including the Administrative, Financial, and Public Works sections, operates in accordance with the hours of a typical office. While the official hours range between 8:00 a.m. and 5:00 p.m. Monday through Friday, the occupied hours likely range as early as 7:00 a.m. and as late as 6:00 p.m. on any of those days, depending on the employees duties and deadlines. For



obvious reasons, the police station operates 24 hours a day, 365 days of the year. The Community Center operates on less of a fixed schedule as it is open to the general public when requested. The gymnasium is utilized sporadically throughout these hours, and may even be used outside of them (e.g. at night and on weekends). This is also true of the Council Chambers, located in the Administrative section of the building. The unassigned offices in the NE corner of the upper floor currently serve as storage space only and have no occupancy.

Recreation Center

Despite the golf course closing/reduced hours and usage during the winter months, all parts of the Recreation Center operate and are occupied year-round. The administrative section of the building operates weekdays (M-F) during typical business hours. This includes the meeting rooms, which are rented out to groups when requested. The ice rink, team rooms, and warming room are all open (to the public) 7 days a week.

Public Works

The Public Works building operates on weekdays (M-F) during normal business hours (7:00 a.m. to 3:30 p.m.), with a typical occupancy of 3-5 people. Frequently, the occupants are in the garage working on vehicles, and the conditioned part of the building is left nearly unoccupied. Around noon, other city employees return from the field, and the conditioned section is used as a hub for lunch, with a total occupancy of close to a dozen people. Over the weekends, this building is typically unoccupied with the exception of work orders for special events



3. Energy Usage

The energy required to heat and cool a facility depends in large part on the outdoor air temperature. Because weather intensity can vary by as much as 20% from year to year, it is difficult to predict annual energy use by just looking at a previous year's bill. For example, last winter was unseasonably mild in St. Louis and the resulting energy used to heat during last year was less much than what would be required during a "normal" year. To better account for annual weather differences, FDH regresses energy usage with respect to weather to create a comprehensive energy consumption profile for the building. This yields equations and additional insight which are used to calculate annual natural gas and electric consumption, allowing FDH to:

- Identify weather independent energy usage (baseload)
- Quickly recognize any usage that is out of the norm

The following graphs represent the calculated utilization of electricity and natural gas for each building included in this Energy Audit.

City of Creve Coeur Electrical Usage

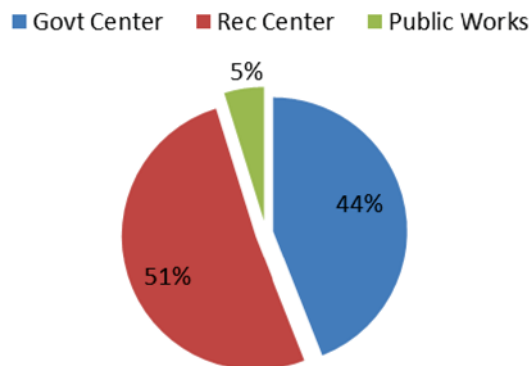


Figure 2 - Electrical Usage Graph

City of Creve Coeur Natural Gas Usage

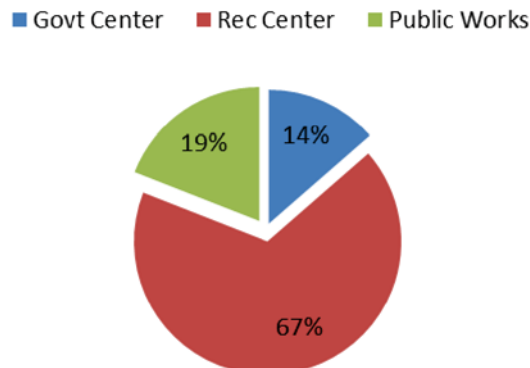


Figure 3 - Natural Gas Usage Graph



The data used to populate the graphs above are given below in Table 4. One item to note from this data is the amount of electrical usage at the Government Center and the natural gas usage at the Recreation Center. Both of these are higher than we would expect given the current usage. As a general point of guidance the Government Center should be closer to \$1.00 per sf and the Recreation Center “could” be below \$0.50 per SF with heat recovery. We have listed some causes for this and outlined a path to reduce these densities to a more traditional value later in the report.

City Electric Usage				
	kWh	% of Total	Density per SF	
Govt Center	981,200	44%	\$	1.34 per Sf
Rec Center	1,140,900	51%	\$	1.82 per Sf
Public Works	107,100	5%	\$	0.92 per Sf
	2,229,200			
City Natural Gas Usage				
	therms	% of Total	Density per SF	
Govt Center	7,700	14%	\$	0.16 per Sf
Rec Center	38,200	67%	\$	0.64 per Sf
Public Works	10,800	19%	\$	1.03 per Sf
	56,700			

Table 4 - City's Typical Year Utility Usage

City's Utility Rates

The utility rates used for the analysis are outlined below. These rates are listed as “averages” and not intended to be used to predict “actual” energy consumption or actual EEM reductions but, rather provide estimates and magnitude predictions. Additional analysis will be needed if a more precise prediction on energy consumption is desired beyond what has been provided as part of the scope of this Energy Audit. For the purposes of evaluating EEM's benefit this method is deemed acceptable.

Utility Rates (1)			
	Government Center	Dielmann Recreation Complex	Public Works Garage
Electric Schedule	3M	3M	2M
Electric	\$0.067	\$0.089	\$0.072
Nat Gas	\$1.05	\$0.78	\$0.97

(1) Utility rates are the average rates

Table 5 - Average Utility Rates



Government Center

Electricity and natural gas data for the City of Creve Coeur's Government Center was analyzed from November 2009 to December 2012.

Electricity Use

Figure 4 displays the electricity usage (kWh per day) against the average daily temperature for each month. The line containing the red/blue points reflects usage between November 2009 and December 2012. The red and blue shaded triangles represent the weather-related heating and cooling consumption (respectively) of the overall electric consumption. In figure 4 (and all subsequent figures relating to utility data), these heating and cooling triangles are placed on the most recent data trend. The gray shaded area represents the component of the electric use that is weather-independent, which is referred to as the "baseload". The baseload includes things such as lights, computers, electric hot water heaters, condenser water pumpas well as any other year-round loads not impacted significantly by the outdoor temperature.

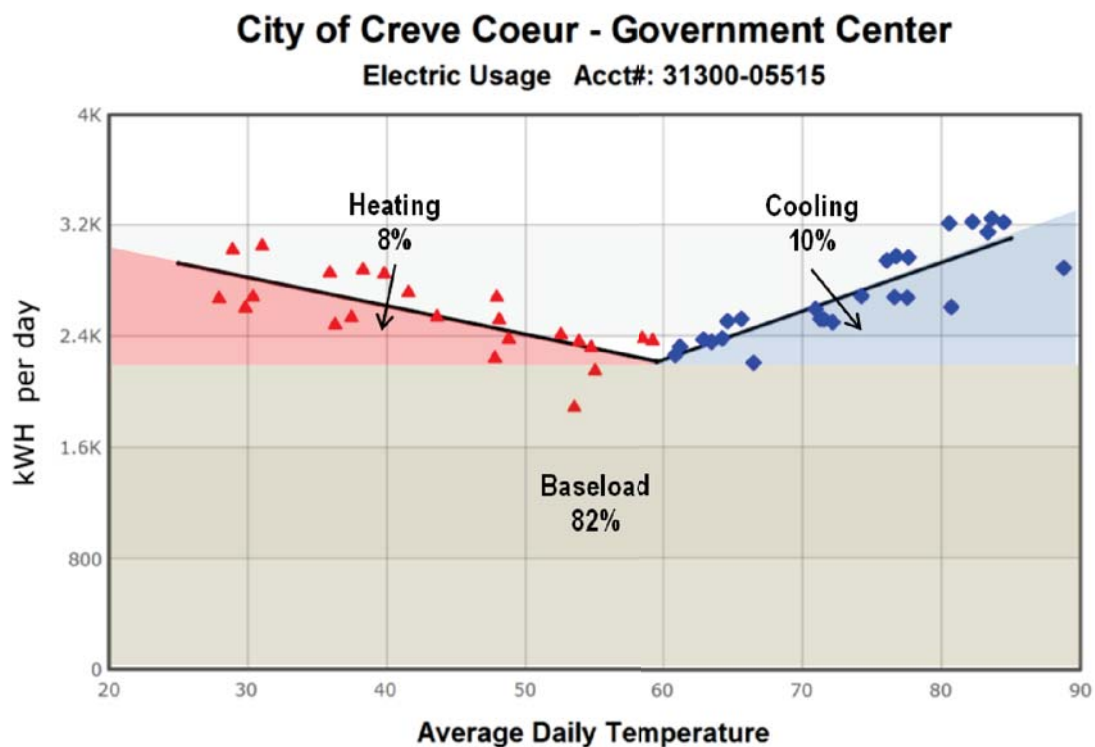


Figure 4 - Gov. Center Normalized Electrical Usage

Table 6 displays the annual electricity usage (kWh and dollars) of the Government Center for each of the components discussed above. The values included in the table represent the most recent 12months of trend in data.

Building	Account #	Electricity Use							
		Baseload		Cooling		Heating		Annual Use	
		\$	kWh	\$	kWh	\$	kWh	\$	kWh
Govt. Center	31300-05515	\$ 53,700	805,200	\$ 8,200	94,500	\$ 4,500	81,500	\$ 66,400	981,200

Table 6- Annual Electrical Usage (Normalized)



Natural Gas Use

Figure 5 displays the natural gas usage (Therms per day) against the average daily temperature for each month. The line containing the red/blue points reflects usage between November 2009 and late Spring/Summer 2011. Since then (Summer 2011 until present), a newer trend has presented itself, represented by the light and dark green points. The exact transition from one trend to the other is difficult to pinpoint during warm weather as the gas usage is almost negligible during these months. The black dots in Figure 5 each represent a month of uncharacteristically high or low gas usage and were not used in determining the buildings weather dependency. As the purpose of the utility analysis is to establish usage rates during “typical” operating conditions, these points were omitted from analysis. The red shaded triangle represents the weather-related heating part of the overall natural gas consumption. In Figure 5, this heating triangle is placed on the most recent data trend (green data points). The gray shaded rectangle (very small) represents the component of the natural gas use that is weather-independent, which, as in the electricity section, is referred to as the “baseload”. The baseload for natural gas includes anything that would be a year-round load, such as a gas-fired hot water heater for domestic water use. Natural gas is not used for cooling at the Government Center, and thus the utility data on days above 65/70°F (i.e. blue and light green points) does not form a strong trend, either upwards or downwards.

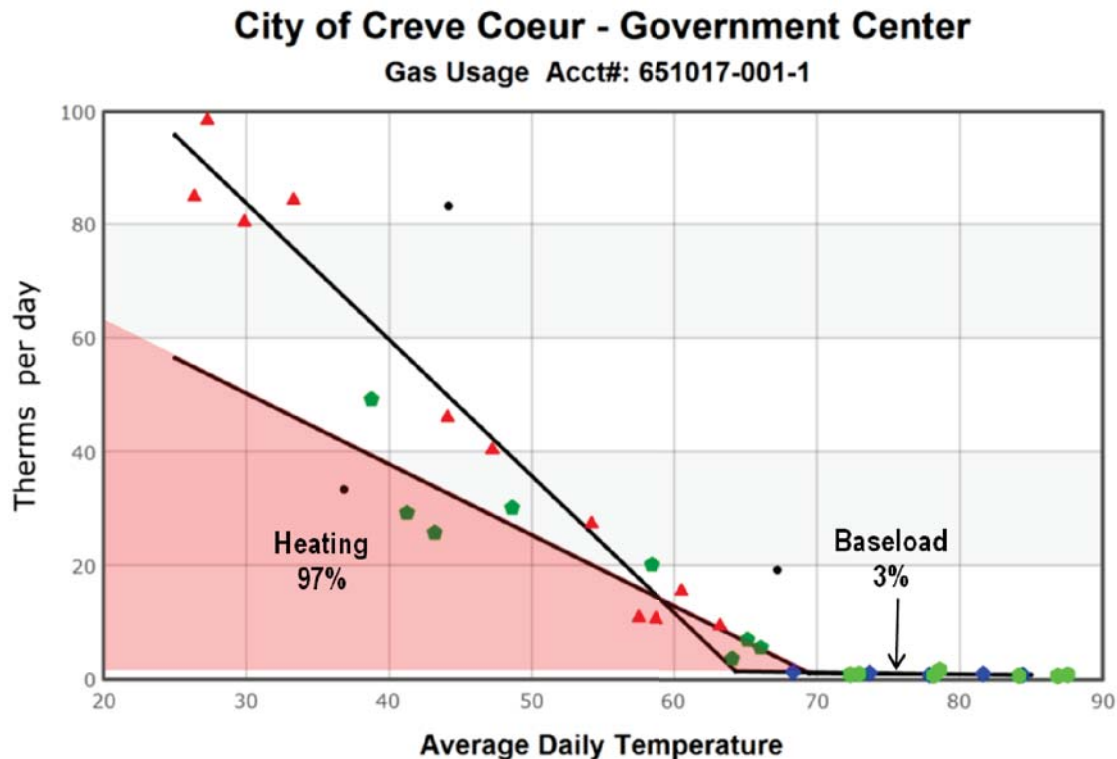


Figure 5 - Gov. Center Normalized Nat Gas Usage

Table 7 displays the annual natural gas usage (therms and dollars) of the Government Center for each of the components discussed above. The values included in the table represent the most recent trend in data (green points in Figure 5).

Building	Account #	Natural Gas Use							
		Baseload		Cooling		Heating		Annual Use	
		\$	Therms	\$	Therms	\$	Therms	\$	Therms
Govt. Center	651017-001-1	\$ 400	400	\$ -	-	\$ 7,700	7,400	\$ 8,100	7,700

Table 7 - Annual Nat. Gas Usage (Normalized)

When compared to the old trend in usage (red and blue points), the newer usage trend (green points) has significantly lower natural gas consumption. This can be seen visually in Figure 5 as the dark green points are generally lower than the red.



Numerically, the decrease in usage was calculated to be approximately 4,000 therms per year, translating to a monetary savings of \$4,200 annually. Moreover, this decrease in usage represents a 34% drop in overall natural gas usage based on a June 2011 split in usage.

Dielmann Recreation Center

Electricity and natural gas data for the City of Creve Coeur's Recreation Center (Ice Rink/Golf Pro Shop) was analyzed from November 2009 to present (November/December 2012).

Electricity Use

Within the Recreation Center, Ameren has in operation two separate electric meters: one serves the Ice Rink and support spaces and one for the Golf Shop, main lobby, and multi-purpose room.

Ice Rink

Figure 6 displays the electricity usage (kWh per day) for the Recreation Center's Ice Rink against the average daily temperature for each month. The line containing the blue points reflects usage between September 2010 and present (November 2012). The slight increase in electrical consumption is primarily due to the increases compressor and cooling tower load when the outdoor air temperature rises above 60°F. For the majority of the year the electrical load is very consistent as we would expect with a dominate process load like making ice 24/7. The blue shaded triangle represents the weather-related cooling part (1-3%) of the overall electric consumption. The gray rectangle represents the component of the electric use that is weather-independent, or "baseload". As stated before, the baseload includes things such as lights, computers, electric hot water heaters, ice making usage, and as well as any other year-round loads. Due to the large cooling effect the ice has on the actual ice rink, the use of electric heaters in the locker rooms is a year round need. In this heating case, since the use of the heat is independent of the outdoor weather, it would be identified as part of the baseload and included in the 97% value.

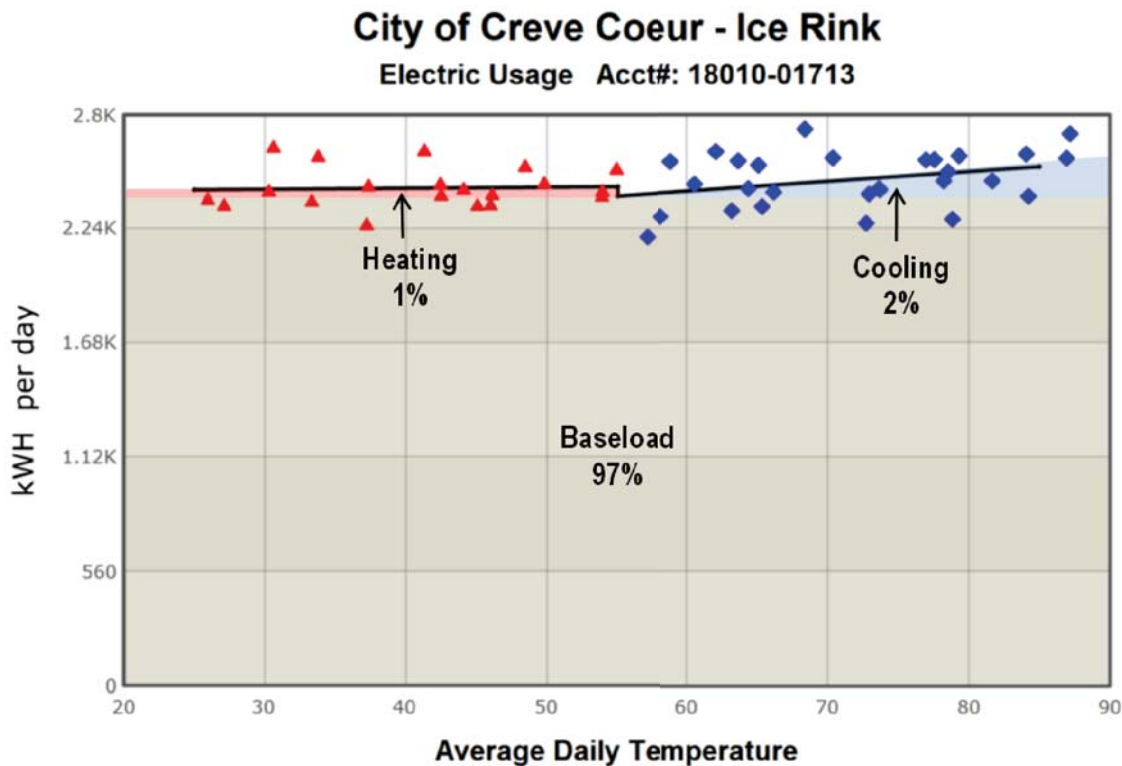


Figure 6 - Ice Rink Normalized Electrical Usage

Table 8 displays the annual electricity usage (kWh and dollars) of the Ice Rink for each of the components discussed above.

Electricity Use									
Building	Account #	Baseload		Cooling		Heating		Annual Use	
		\$	kWh	\$	kWh	\$	kWh	\$	kWh
Ice Rink	18010-01713	\$ 62,400	878,400	\$ 1,500	17,100	\$ 400	5,900	\$ 64,300	901,400

Table 8 - Annual Electrical Usage (Normalized)

A detailed review and audit of the baseload could identify more usage which is not known at this time. This could be done through a RCx program. Additional sensors and data logging equipment will be needed to isolate systems and identify more baseload items.

Golf Shop

Figure 7 displays the electricity usage (kWh per day) for the Recreation Center's Golf Shop against the average daily temperature for each month. The line containing the red/blue points reflects usage between December 2009 and June 2010. Since then (July 2011 until present), a newer trend has presented itself, represented by the light and dark green points. The blue shaded triangle represents the weather-related cooling part of the overall electric consumption for the most recent cooling period. The gray rectangle represents the component of the electric use that is weather-independent, or "baseload". As stated before, the baseload includes things such as lights, computers, electric hot water heaters, as well as any other year-round loads. Due to the relatively large size of the baseload for the building type, as well as the slight cold-weather correlation (slight downward slope of line as OATs got colder), it was predicted that the equipment was cooling unnecessarily at certain periods during colder weather. This behavior would also lead to a falsely higher heating load, though this is difficult to corroborate in the gas data as both the Golf Shop and Ice Rink are on the same meter. Additional metering through RCx could identify these loads allowing for additional savings from revised schedules.

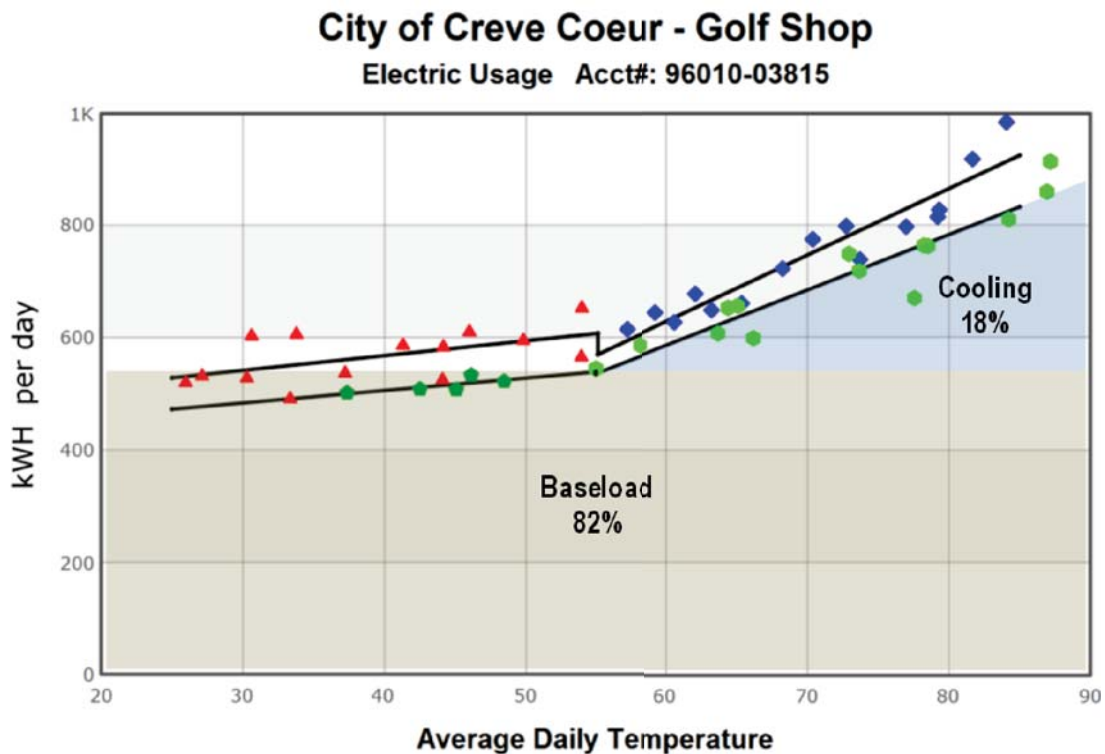


Figure 7 - Golf Shop Normalized Electrical Usage

Table 9 displays the annual electricity usage (kWh and dollars) of the Golf Shop for each of the components discussed above.

Building	Account #	Electricity Use							
		Baseload		Cooling		Heating		Annual Use	
		\$	kWh	\$	kWh	\$	kWh	\$	kWh
Golf Shop	96010-03815	\$ 15,700	182,300	\$ 4,400	42,900	\$ -	-	\$ 20,100	225,200

Table 9 - Annual Electrical Usage (Normalized)

When compared to the old trend in usage (red and blue points), the newer usage trend (green points) has lower overall electricity consumption. This can be seen visually in Figure 7 as the points of the newer trend are lower than the points of the older trend. Numerically, the total decrease in usage was calculated to be approximately 22,600 kWh per year, translating to a monetary savings of \$2,100 annually. This decrease in usage represents a 10% drop in overall electricity usage for the building from a split date of June 2011.

Natural Gas Use (Ice Rink and Golf Shop)

While two electric meters exist for the Recreation Center, Laclede only has a single gas meter which is shared by both the Ice Rink and the Golf Shop spaces. Figure 8 displays the natural gas usage (therms per day) for this meter against the average daily temperature for each month. The line containing the red/blue points reflects usage between September 2010 and November 2011. Since November 2011 until present, a newer trend has presented itself, represented by the light and dark green points. The black dots represent a separate gas usage trend, dating prior to September 2010, and thus are omitted from analysis. The red shaded triangle represents the weather-related heating part of the overall natural gas consumption. In Figure 8, this heating triangle is placed on the most recent data trend. The gray rectangle represents the component of the natural gas use that is weather-independent, or “baseload”. In an ice rink, the baseload for natural gas includes anything that would be a year-round load in an office building, such as a gas-fired domestic hot water heater, boilers, and gas fired heaters in AHU-001. Natural gas is used by the heat recovery process in AHU-001. This regenerative process uses natural gas fired heater to increase the outdoor air to a temperature to aid in removing moisture from the outside air. This can be seen by the slight slopes of the data on days above 65/70°F (i.e. blue and light green points).

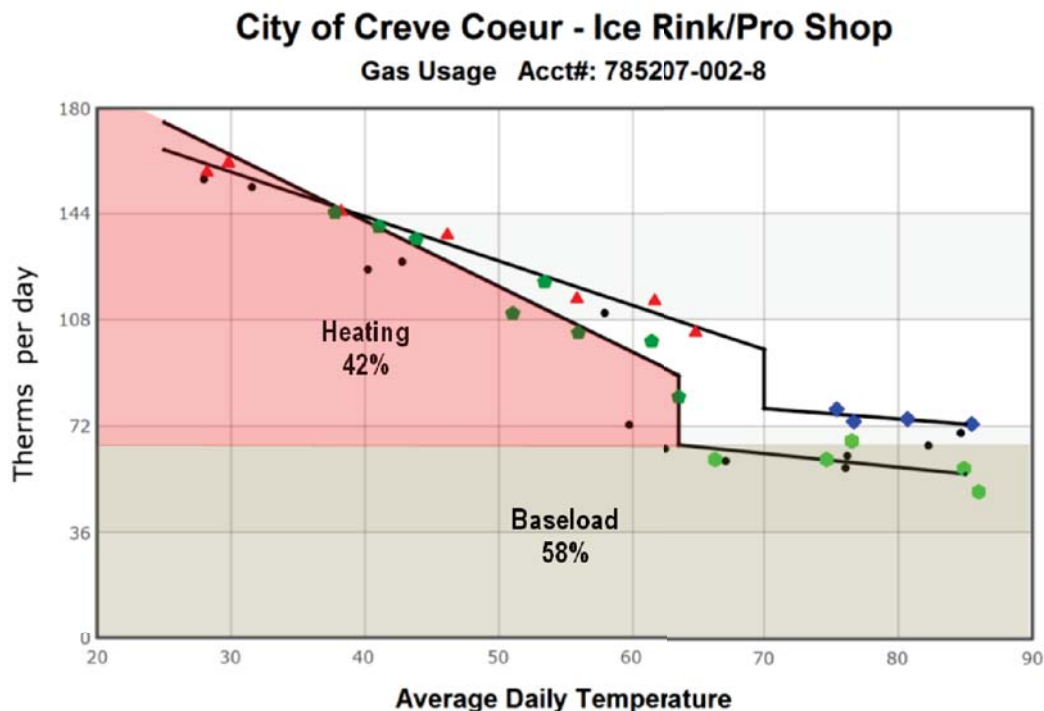


Figure 8 - Golf/Ice Rink Normalized Nat. Gas Usage



Table 10 displays the annual natural gas usage (Therms and dollars) of the Recreation Center for each of the components discussed above. The values included in the table represent the most recent trend in data (green points in **Error! eference source not found.**).

Natural Gas Use									
Building	Account #	Baseload		Cooling		Heating		Annual Use	
		\$	Therms	\$	Therms	\$	Therms	\$	Therms
Ice Rink/Pro Shop	785207-002-8	\$ 17,300	22,100	\$ -	-	\$ 12,600	16,100	\$ 29,900	38,200

Table 10- Annual Nat. Gas Usage (Normalized)

When compared to the old trend in usage (red and blue points), the newer usage trend (green points) has lower overall natural gas consumption. This can be seen visually in Figure 10 as the baseload of the newer trend is lower than the (not plotted) baseload of the older trend. Numerically, the total decrease in usage was calculated to be approximately 4,000 Therms per year, translating to a monetary savings of \$3,200 annually. This decrease in usage represents a 10% drop in overall natural gas usage for the building from a split date of November 2011.

It should be noted that these savings were primarily a result of a decreased baseload. While the appearance in Figure 10 may suggest otherwise, the heating usage in the new trend actually consumes 1,400 more Therms than in the old one, costing the City approximately \$1,100. However, this slight increase in usage during the heating season is overcome by the decrease in the baseload, such that the net savings is the \$3,200 mentioned above.

Note: Only winter for comparison was very mild (no points below 35F on new trend). This data could be update with 2012-2013 winter data to provide a more complete range in temperatures and associated usages.

Public Works Facility

Electricity and natural gas data for the City of Creve Coeur's Public Works Facility was analyzed from November 2009 to present (November/December 2012).

Electricity Use

Figure 9 displays the electricity usage (kWh per day) against the average daily temperature for each month. The line containing the red/blue points reflects usage between October 2010 and December 2011. Since then (January 2012 until present), a newer trend has presented itself, represented by the light and dark green points. The black dots represent a separate electric usage trend, dating prior to October 2010, and thus are omitted from analysis.

The red and blue shaded triangles represent the weather-related heating and cooling parts (respectively) of the overall electric consumption. The gray rectangle represents the component of the electric use that is weather-independent, or "baseload". As stated before, the baseload includes things such as lights, computers, electric hot water heaters, as well as any other year-round loads. In the Public Works building, this can also be expanded to include air compressors and tools.

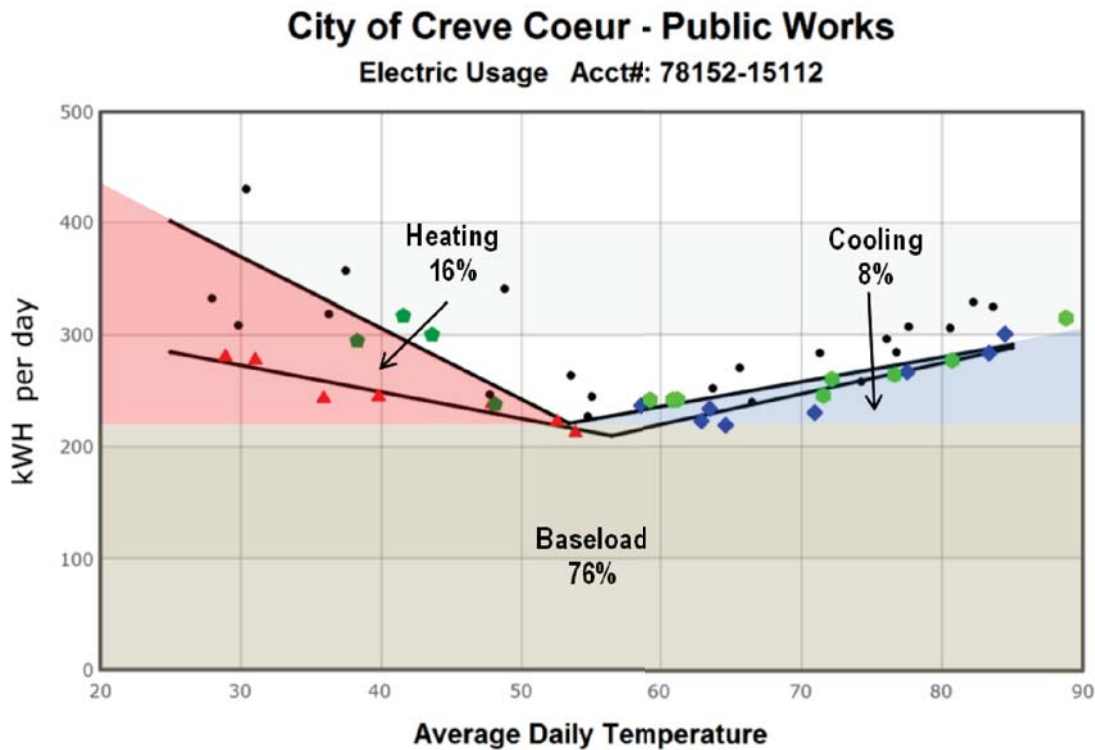


Figure 9 - Public Works Normalized Electrical Usage

Table 11 displays the annual electricity usage (kWh and dollars) of the Public Works Facility for each of the components discussed above. The values included in the table represent the most recent trend in data (green points in Figure 11).

Building	Account #	Electricity Use							
		Baseload		Cooling		Heating		Annual Use	
		\$	kWh	\$	kWh	\$	kWh	\$	kWh
Public Works	78152-15112	\$ 7,200	81,100	\$ 900	8,500	\$ 1,300	17,500	\$ 9,400	107,100

Table 11 - Annual Electric Usage (Normalized)

When compared to the old trend in usage (red and blue points), the newer usage trend (green points) has higher overall electric consumption. This can be seen visually in Figure 11 as the green points are generally higher than the red/blue points. Numerically, the total increase in usage was calculated to be approximately 13,100 kWh per year, translating to a \$1,100 increase in the annual electric bill. This added usage represents a 10% increase in overall electricity usage for the building. It should be noted this most recent increase was primarily due to an increased heating load. The heating in the current trend consumes 9,700 kWh (\$800) more than the old one. However, since the transition between the old and current electricity usage trends in the Public Works Facility occurred in January 2011, and since the 2011/2012 winter was so mild, there are only 3 points in the heating regime available in the current trend. As such, the current heating trend is subject to change as new, and especially colder-weather, data becomes available. Another partial cause may be added winter load of using crankcase heaters for the street maintenance fleet. Perhaps an additional study or inventory analysis on this usage could identify a possibility for small solar stations to heat the trucks.

Natural Gas Use

Figure 10 displays the natural gas usage (therms per day) against the average daily temperature for each month. The line containing the red points reflects usage attributed to heating between September 2010 and present (November 2012). The black dots represent a separate electric usage trend, dating prior to September 2010, and thus are omitted from analysis. (It



is possible that the current trend began as early as May 2010; however, due to the low levels of natural gas usage during the summer months, this distinction cannot be made purely from the data.) The lack of a significant upward or downward trend within the blue points suggests that there is no gas-based cooling present in the building. The red shaded triangle represents the weather-related heating part of the overall gas consumption. The gray rectangle represents the component of the natural gas use that is weather-independent, or “baseload”. As stated before, the baseload includes things such as domestic gas-fired hot water heaters, as well as any other year-round gas loads.

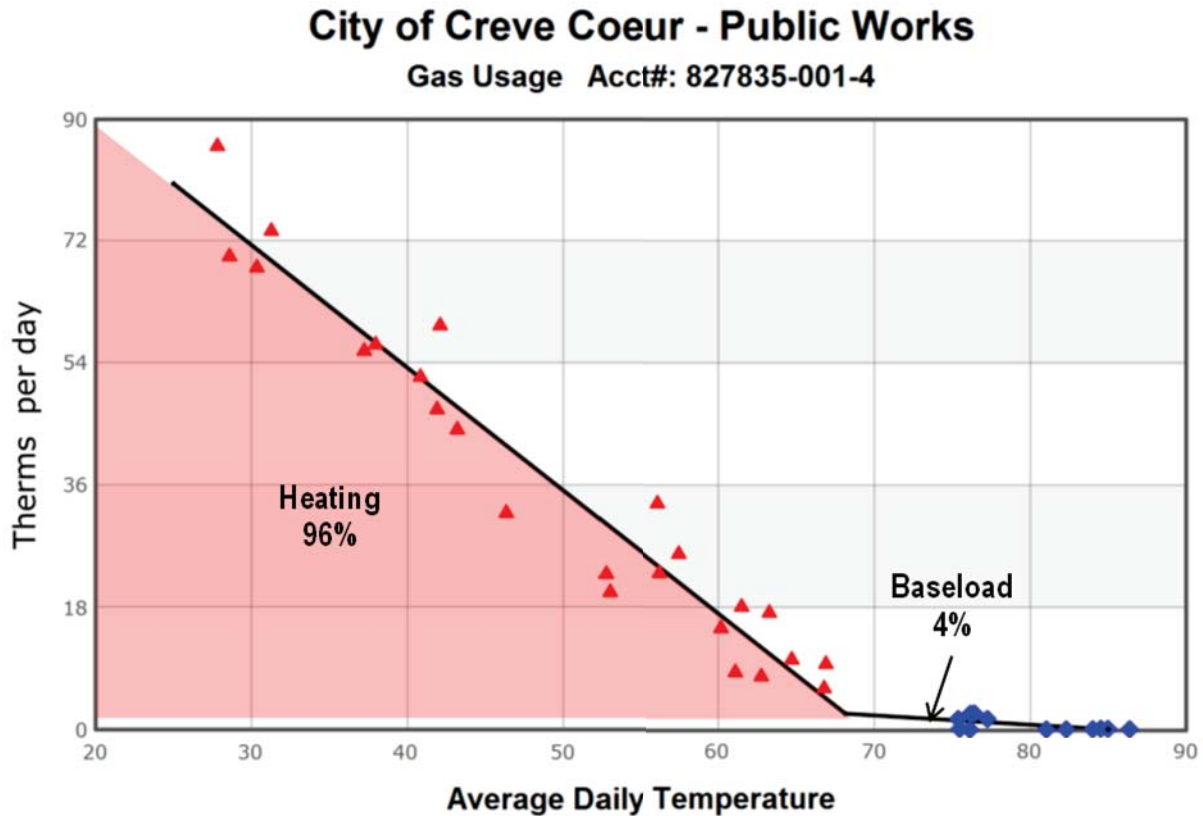


Figure 10 - Public Works Normalized Nat. Gas Usage

Table 12 displays the annual natural gas usage (therms and dollars) of the Public Works Facility for each of the components discussed above.

Building	Account #	Natural Gas Use							
		Baseload		Cooling		Heating		Annual Use	
		\$	Therms	\$	Therms	\$	Therms	\$	Therms
Public Works	827835-001-4	\$ 400	400	\$ -	-	\$ 10,100	10,400	\$ 10,500	10,800

Table 12 - Annual Nat. Gas Usage (Normalized)

The above values do not reflect the recent addition of insulation to the bay doors and bay ceilings. It would be very interesting to do this analysis during the summer of 2013 to capture the impact this insulation had on the natural gas usage. It should be noted based on the data in Figure 10, the usage of natural gas does appear to start earlier than we would have expected. Based on the type of facility the heating of the bays and office heating we would have expected the heating to start close to 60°F (or slightly below).



4. Heating/Cooling Load Analysis and Equipment Assessment

The goal of this section is to compare the current heating and cooling loads done by computer simulation to the actual installed heating and cooling equipment for each building.

Refer to the assessment section at the end of this report for the assessment tables for each building and major equipment.

Note: We recommended when it is time to replace any of the current HVAC system, a brief and focused audit be done on the equipment size and actual space usage. It appears much of the installed equipment is oversized beyond a traditional 10% safety factor. This is/may be causing performance issues in spaces which are not loaded as originally intended. This future assessment could reduce the replacement costs and improve performance and life of the equipment. Typically unless this specific item is requested of the design team, a “like-for-like” replacement of the equipment will be done by the designer to reduce liability and design time effort.



5. Recommended Energy Conservation Measures

Energy Efficiency Measures (EEMs) which were determined to reduce utility consumption and greenhouse gases are identified below in Table 13. The associated energy savings, costs of implementation, paybacks, and incentives are included in Table 14. The analysis for each EEM starts on the next page. Please refer to section 2 for a more detailed description of the current conditions as they relate to the EEMs listed below.

EEM #	EEM Description	Government Center	Dielmann Rec Complex	Public Works Garage
EEM-1	Lighting - Interior	✓	✓	
EEM-2	Lighting - Exterior (1)	✓	✓	✓
EEM-3	DDC Upgrade	✓	✓	✓
EEM-4	Reto- Commissioning (RCx)	✓	✓	✓
EEM-5	System Rebalancing	✓	✓	✓
EEM-6	Solar PV	✓	✓	
EEM-7	Heat Recovery		✓	
EEM-8	Building Envelope	✓	✓	✓
EEM-9	VFD - Pump(s)	✓		
EEM-10	New Meeting Room HVAC		✓	
EEM-11	Ice Rink Bleacher Heaters (2)		✓	
EEM-12	Ice Rink Operational Changes		✓	

Table 13 - EEM Matrix

EEM #	Description	Savings					Cost	Simple Payback	Incentive	Payback w/ Incentive
		kWh	Therms	kBtu/year	Greenhouse Gas (Metric Tons)	\$				
EEM-1	Lighting - Interior	89,801	-	306,401	64.6	\$9,161	\$30,543	3.3	\$6,286	2.6
EEM-2	Lighting - Exterior (1)	49,336	-	168,336	35.5	\$4,617	\$51,246	11.1	\$3,454	10.4
EEM-3	DDC Upgrade	103,350	1,670	519,630	83.2	\$10,794	\$179,394	16.6	\$8,342	15.8
EEM-4	Reto- Commissioning (RCx)	297,136	5,105	1,524,328	240.8	\$25,538	\$57,263	2.2	\$27,262	1.2
EEM-5	System Rebalancing	111,260	900	469,619	84.8	\$8,945	\$21,200	2.4	\$ 8,361	1.4
EEM-6	Solar PV	32,274	-	110,119	23.2	\$2,180	\$105,000	48.2	\$87,700	7.9
EEM-7	Heat Recovery	346,499	-	1,182,254	249.2	\$30,734	\$18,000	0.6	\$18,000	0.0
EEM-8	Building Envelope	69,646	2,810	518,634	65.0	\$7,682	\$26,408	3.4	\$6,738	2.6
EEM-9	VFD - Pump(s)	148,788	1,540	661,663	115.2	\$11,633	\$54,780	4.7	\$11,436	3.7
EEM-10	New Meeting Room HVAC	36,691	-	125,190	26.4	\$2,623	\$20,500	7.8	\$2,568	6.8
EEM-11	Ice Rink Bleacher Heaters (2)	(97,945)	-	(334,187)	-70.4	\$ (8,687.69)	\$ 15,200.00	None	None	None
EEM-12	Ice Rink Operational Changes	54,018	458	230,149	41.3	\$4,205	\$8,000	1.9	\$561	1.8

(1) The cost does not include a reduction in maintenance costs over the life of the new fixture which would occur 2-3 times in the life of the LED fixtures

(2) These values are not savings but additional usage "negative savings"

Table 14 - Detailed EEM List



EEM-1: Lighting – Interior

Building lighting typically consumes close to 35% of the electricity used in commercial buildings today. Continual advances in lighting and lighting controls technology offer opportunities to lower the building's lighting load.

Current Condition:

Recreation Center: The office areas are lit with T8 fixtures with 32 watt lamps. Lobby area has 12" can fixtures with 50 watt metal halide lamps. Ice rink is lit with 400 watt metal halide lamps with manual on/off switching.

Public Works Garage: Office areas are lit with T8 fixtures with 32 watt lamps. The high-bay areas are lit with T5 fixtures. Lighting levels appear to be appropriate for the usage

Government Center: Most lighting interior has been upgraded to T8 fixtures with 32 watt lamps with manual on/off operation. Some spaces appear to be over lit and could benefit from a FC study to determine if de-lamping is acceptable.



Photo 4 - Existing Lighting Fixture

Recommended Action:

FDH recommends the lighting retrofits and upgrades in the following locations:

Recreation Center:

- Ice rink lighting to be T5-4 lamp fixtures
- De-lamp lobby cove lighting by 50%
- Install occupancy sensors for restroom, corridors, and vending machines

Public Works Garage:

- Occupancy sensors

Government Center:

- Occupancy sensors
- Multi-purpose room lighting to be T5-4 lamp fixtures
- Lighting foot-candle analysis and utilization survey.



Photo 5 - Ice Rink Fixture

Analysis:

Electric Usage Reduction	89,801	kWh/year
Natural Gas Usage Reduction	NA	therms/year
Total Annual Savings	\$9,161	per year
Estimated Implementation Cost:	\$30,543	
Simple Payback:	3.3	Years
Incentive/Rebates:	\$6,286	
Payback with Incentive/Rebates:	2.6	Years

Assumptions/Notes:

- A complete space by space lighting audit was not completed with this energy audit and should be done to provide accurate fixture and lamp counts.
- Installing occupancy sensors in 62 additional spaces were used to calculate the savings.



EEM-2: Lighting – Exterior

EEM-1 stated that lighting consumes close to 35% of the electricity a building uses, this includes both interior and exterior lighting. Exterior light offers a good opportunity for energy savings with longer run time hours and tremendous advances in lighting technologies that lend themselves to exterior lighting.

Current Condition:

The current exterior lighting is metal halide lighting technologies. These lights are used to illuminate the surface parking lot and the building entries. All the exterior fixtures are controlled by a combination of lighting schedules located in the BAS, building specific time clocks, and/or building specific photocells.



Photo 6 - Typical LED Fixture

Note: The exterior lighting at the Recreation Center is not connected to the buildings electric utility meter or maintained by the Cities staff.

Recommended Action:

FDH recommends replacing all current exterior light fixtures with LED lamps to reduce energy and maintenance costs. The LED lamps last 3 times as long as the current lamps and this reduces maintenance costs significantly.

Analysis:

Electric Usage Reduction	49,336	kWh/year
Natural Gas Usage Reduction	NA	therms/year
Total Annual Savings	\$4,617	per year
Estimated Implementation Cost:	\$51,246	
Simple Payback:	11.1	years
Incentive/Rebates:	\$3,454	
Payback with Incentive/Rebates:	10.4	years

Assumptions/Notes:

- The LED fixture life is estimated to be 100,000 hours which is 3+ times as long as the current fixtures.
- The cost does not include a reduction in maintenance and replacement costs over the life of the new fixture.
- Additional lifetime savings could approach \$20,000 depending on actual material and labor replacement costs.



EEM-3: Direct Digital Control (DDC) Upgrade

Upgrade and retrofit the current building control system(s) to a more robust direct digital control (DDC) system. A modern DDC or BAS system can be web based and accessible on any PC authorized to have access (Similar to the DDC used at the Recreation Center). The system can include wireless thermostats, improved graphical interface for all equipment, improved trending capabilities, improved scheduling, and increased ability to control equipment set-points.

Current Condition:

The current building control system is a mixture of electro-pneumatic and direct digital control. The DDC system is primarily a tool for trending and user interface for schedules with limited set point adjustments.

Recreation Center:

- JCI Metasys system for the non-Ice rink spaces. System does not have any graphics and is not easily navigated. Several systems could not be viewed and have limited function.
- Delta controls for the ice rink and related processes. System has nice graphics and is easy to navigate.

Public Works Garage:

- Local stand-alone controls. This level of control is adequate for this type of facility.

Government Center:

- Vintage DDC system (Access was not possible)
- Local stand-alone controls

Recommended Action:

FHD recommends the current BAS control system at the Government Center and Dielmann Recreation Center be upgraded to a 100% DDC system. This upgrade should include the integration of all fans, AHU, heat pumps, pumps, and space thermostats connected to the DDC system. This upgrade will provide significant improvement to the facility and how it is operated and maintained. Additional points of monitoring and of control to maximize energy conservation strategies will be possible. In addition to increased savings, the comfort level should be expected to improve as system feedback is now possible from the space and terminal equipment level. This increased level of control will provide faster response time for the maintenance staff when components are out of tolerance and for improved space temperature control with less temperature swings. This EEM includes the installation of the following:

- Updated DDC user interface at the Dielmann Recreation Center
- New DDC user interface and associated control points and devices at the Government Center.
- Training for approved users

Analysis:

Electric Usage Reduction	103,350	kWh/year
Natural Gas Usage Reduction	1,670	therms/year
Total Annual Savings	\$10,794	per year
Estimated Implementation Cost:	\$179,394	
Simple Payback:	16.6	Years
Incentive/Rebates:	\$8,342	
Payback with Incentive/Rebates:	15.8	Years

Assumptions/Notes:

- It is recommended all buildings be on the same DDC platform (vendor) to insure consistency and users are fully trained and versed on how to use the system.



EEM-4: Retro-Commissioning (RCx)

The RCx agent (FDH) conducts a detailed facility assessment to diagnose and identify issues with existing equipment, control sequences, and sensor operation problems by the use of field observations and trending. After the data is analyzed, recommendations are made for minor low-cost adjustments that can be made quickly, as well as recommendations for more substantial improvements. Part of the RCx services is an assessment of cost, savings, rebate/incentives, and payback for each item, or group of items identified. If desired, the RCx agent can work with the City's project management team to fully design, implement, and provide measurement and verification after the recommendations are implemented.



Current Condition:

During the course of the energy audit several items were observed to be out of tolerances or settings. This along with the age and complexity of the HVAC systems make the Government Center and Dielmann Recreation Center ideal candidates for an RCx activity.

This new RCx process would be a holistic process which looks at all the HVAC, control, and lighting systems. During this audit several items were identified and witnessed which could be corrected and validated by an RCx process.

- Potential RCx items identified during the development of this audit:
 - AHU on/off schedule
 - Outdoor air damper operation and set-point
 - Economizer method and set-point
 - Space temperature overrides
 - DDC system access and training
 - Hot water and condenser water pump operation
 - Supply heater output capacity
 - Adding VFDs to the pumps
 - Domestic water heating

Recommended Action:

FDH recommends the City apply to participate in the 2013 RCx program with Ameren Missouri. This program provides significant incentives and rebates for having the building retro-commissioned and any issues found corrected.

Analysis:

Electric Usage Reduction	297,136	kWh/year
Natural Gas Usage Reduction	5,105	therms/year
Total Annual Savings	\$25,538	per year
Estimated Implementation Cost:	\$57,263	
Simple Payback:	2.2	Years
Incentive/Rebates:	\$27,262	
Payback with Incentive/Rebates:	1.2	Years

Assumptions/Notes:

- Ameren Missouri will reimburse the City up to \$0.09/kWh "saved" as part of the RCx program. These incentives can be used toward procurement of material and/or professional engineering fees spent as part of an approved retro-commissioning effort. FDH is in the Ameren Trade Ally Network and can assist the City in completing the application and communicating with Ameren on their behalf when requested.

EEM-5: HVAC System Rebalance

Over time and after a recent renovation, the system flow rates (air and water) can become unbalanced. This unbalance can cause a variety of issues ranging from indoor air discomfort for occupants to equipment malfunction(s) and failures.

Current Condition:

Public Works Garage: The air flow associated with the recently replace RTU appears to be unbalanced. A post retrofit balancing report was not able to be found and the current air-flow rates could not be verified. The break room appears to be low on capacity while the front office areas seem to have an excess in capacity.

Government Center: AHU-1 and AHU-2 airflow capacities should be reviewed and verified to current space utilization. Pump flow rates should be verified and recalibrated to what is needed to eliminate any excess.

Recreation Center: The air flow differential between the ice rink and lobby appears to be negative. This is causing infiltration from the ice rink into the lobby. OA CFM and exhaust CFM values should be measured and rebalanced to design values.



Photo 7 - Typical Air Balancing Activity

Recommended Action:

FDH recommends the RTU system be rebalanced by a certified AABC or NEBB balancing contractor to +/- 10% of the design air flows to each space. The indoor comfort will be greatly improved and the use of the portable A/C unit should no longer be needed.

Analysis:

Electric Usage Reduction	111,260	kWh/year
Natural Gas Usage Reduction	900	therms/year
Total Annual Savings	\$8,945	per year
Estimated Implementation Cost:	\$21,200	
Simple Payback:	2.4	Years
Incentive/Rebates:	\$8,361	
Payback with Incentive/Rebates:	1.4	Years

Assumptions/Notes:

- The existing equipment has adequate capacity to heat and cool the current space utilization



EEM-6: Solar Panels (PV)

Solar (PV) panel systems produce electricity for direct “consumption” by the building it is installed on. The panel system can produce approximately the same number of kW as the panel is rated for. If the building requires additional kW beyond what the panels can produce, the already connected utility company will seamlessly provide the needed kW as it is currently doing now. If the building needs less power than the panel is producing, the excess electricity is sent into the Ameren system and a credit is provided to the building meter charges.

Current Condition:

No solar (PV) panels are currently installed at the buildings.

Recommended Action:

If a renewable and solar presence is desired, FDH recommends that a 25kW array be installed. The current government and utility company incentives coupled with the increased competition in the solar PV market have made the price of solar panel installation drop significantly over the last 2-3 years. This EEM includes the installation of the following:

- Design, installation, and owner training for a 25 kW array (the below analysis can be applied to any building the City wishes to install the arrays on)



Analysis:

Electric Usage Reduction	32,274	kWh/year
Natural Gas Usage Reduction	NA	therms/year
Total Annual Savings	\$2,180	per year
Estimated Implementation Cost:	\$105,000	
Simple Payback:	48.2	years
Incentive/Rebates/Tax Credits:	\$87,700	
Payback with Incentive/Rebates:	7.9	years

Assumptions/Notes:

- The analysis above is based on installing a 25 kW array.
- The above array can be installed on all three buildings. The above analysis will be the same for each building with a possible reduction in the installed costs due to the increased volume purchased, if purchased together.

The cost estimates are order of magnitude estimates. A formal solar study and design will be needed to gauge the actual costs of the solar (PV) system installed on the actual roof system. FDH has working relationships with some local solar equipment vendors and can put the City in contact with these companies. Please let us know if the City would like further assistance with this EEM analysis or if a proposal is desired.

EEM-7: Heat Recovery

There are many hours in the year in most HVAC system when heat is rejected to the outdoors (through air or water) while at the same time heat is needed within the building. Using a “heat recovery” strategy in these types of situations can be very cost effective, save significant energy costs, and help extend the life of the existing HVAC equipment.

Current Condition:

Recreation Center: This facility has a very significant need to heat and cool simultaneously as part of the ice making, dehumidification, and occupant comfort processes. Some examples of this are:

- 9kW of heat is used year round to melt ice shavings from the ice resurfacer.
- Ice making is needed year round and heat is rejected to the outside via the cooling tower.
- Heat is needed to keep the ice rink between 55°F and 62°F.
- Heat is needed to make use of the regenerative process included with the “Munters” AHU.
- Heat is needed to create hot water for “flood water” and locker room uses.

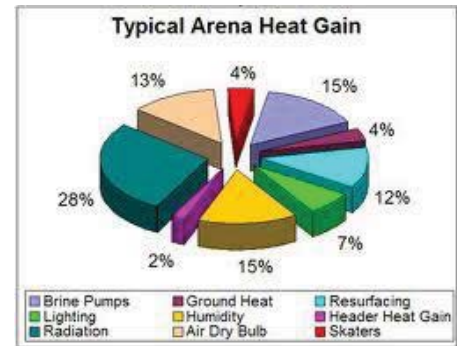


Figure 11 - Ice Rink Energy Usage

Recommended Action:

FDH recommends heat recovery devices be used to capture and reuse the “waste” heat from the needed processes in the ice rink. The following items will need further investigating and preliminary designs done to obtain more accurate estimate of costs or savings.

- Use the waste heat from the ice making chillers/process to melt the ice shavings, provide supplemental heat to the ice rink, and/or meet other heating needs prior to rejecting the heat with the cooling tower.

Analysis:

Electric Usage Reduction	346,499	kWh/year
Natural Gas Usage Reduction	NA	therms/year
Total Annual Savings	\$30,734	per year
Estimated Implementation Cost:	\$18,000	
Simple Payback:	< 1.0	Years
Incentive/Rebates:	\$18,000	
Payback with Incentive/Rebates:	< 1.0	Years

Assumptions/Notes:

- Ice melting is on 8760hrs per year at 9kW total.
- Adequate refrigerant temps and tonnage are available to be reclaimed
- Assumed compressor run-time was used for calculations.

EEM-8: Building Envelope Improvements

Most conventional buildings experience some level of air leakage through the building envelope. The level of leakage greatly depends on building pressurization, construction type, and building orientation. This uncontrolled infiltration (leakage) can affect the thermal comfort of the inhabitants of the building, introduce contaminants, moisture, and increase utility bills.

Current Condition:

The building envelope does not show signs of any recent improvements or any attempts to seal the common points of infiltration. A comprehensive site survey by a building envelope consultant was not done, but it is recommended, especially at the Recreation Center

Recommended Action:

FDH recommends a building envelope audit be conducted by a specialty contractor to determine the actual needs of the building. We fully expect the need to upgrade the building envelope to minimize the amount of air leakage. This includes sealing cracks and holes with 2-part foam, weather-stripping, caulking, sealing exterior doors, and sealing the window system. This EEM could include the installation of the following:

- Detailed survey of all three buildings for points of infiltration.
- Two part foam at all roof / wall points of connection to seal large gaps
- New door seals and sweeps
- Sealing of penetrations through walls and ceiling planes

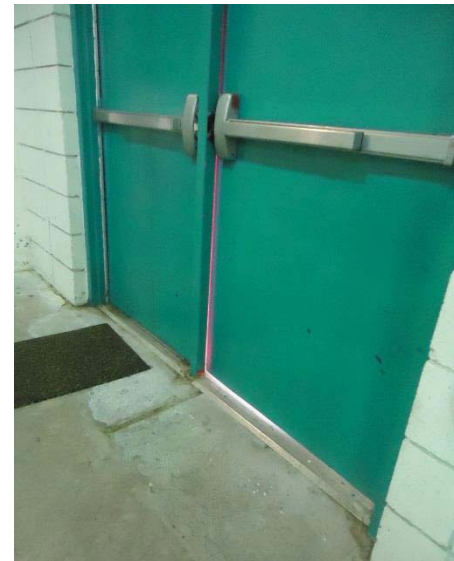


Photo 8 – Major Leakage from bad door seals

Analysis:

Electric Usage Reduction	69,646	kWh/year
Natural Gas Usage Reduction	2,810	therms/year
Total Annual Savings	\$7,682	per year
Estimated Implementation Cost:	\$26,408	
Simple Payback:	3.4	Years
Incentive/Rebates:	\$6,738	
Payback with Incentive/Rebates:	2.6	Years

Assumptions/Notes:

- Building pressurization is corrected and is positive with respect to the outdoors.
- Significant savings should be realized at the Ice Rink due to air leaks and pressure issues witnessed.

The preliminary estimates are order of magnitude estimates. A formal “hands on” envelope assessment should be conducted and measures identified with the appropriate sealing method. FDH has working relationships with an envelope sealing specialist who provides great results with documented success. Please let us know if the City would like further assistance with this EEM analysis or if a proposal is desired.



EEM-9: Addition of VFD's

When energy conservation is desired, all electrical loads should be controlled by a variable operating mode based on demand or load. This type of arrangement is intended to match the impacted equipment's output to the actual real-time needs and not for the "peak" conditions. As the building occupancy changes the impacted equipment should also change.

Current Condition:

The hot water pumps and OA fans operate as constant volume systems. With this type of system the same amount of water/glycol mixture and/or outside air flows regardless of the internal load or outside air temperature.

Recommended Action:

FDH recommends the following items be considered for implementation.

- Install four (4) VFDs for the pump loop. One for each pump
- Install two 2-way control valves to operate as zone valves to open close with occupancy
- Install one (1) VFD's on the outside air system serving the admin portions of the building
- Add DDC points to the new or existing DDC system to control the operation of the pumps and fans based on building load demand.

Analysis:

Electric Usage Reduction	148,788	kWh/year
Natural Gas Usage Reduction	1,540	therms/year
Total Annual Savings	\$11,633	per year
Estimated Implementation Cost:	\$54,780	
Simple Payback:	4.7	Years
Incentive/Rebates:	\$11,436	
Payback with Incentive/Rebates:	3.7	Years

Assumptions/Notes:

- Adequate capacity/space is available in the DDC system for the ice making process to incorporate additional sensors and set-points schedules

EEM-10: New Meeting Room HVAC

Isolating a large meeting room from the central HVAC system can improve occupant comfort and reduce over heating and cooling during peak usage.

Current Condition:

The meeting room is served by AHU-2 which also heats and cools the main lobby and office areas. Since the main lobby often experiences large fluctuations in heating and cooling requirements the connected spaces are often uncomfortable.



Photo 9 – Typical Wall Mounted Ductless FCU

Recommendations:

FDH recommends installing a new dedicated Variable Refrigerant Volume (VRV) system to condition the meeting room. This EEM includes the installation of the following:

- Two (2) 3 ton ductless wall mount FCU's in the meeting room
- Condensing unit mounted outside at grade.
- Rebalancing of AHU-2 with damper installation.
- Two new thermostats
- New Condensate piping routed to outside

This isolation of the meeting room will allow the space to be heated and cooled independently of the main AHU-2 and the needs for the public lobby.

Analysis:

Electric Usage Reduction	36,691	kWh/year
Natural Gas Usage Reduction	NA	therms/year
Total Annual Savings	\$2,623	per year
Estimated Implementation Cost:	\$20,500	
Simple Payback:	7.8	years
Incentive/Rebates:	\$2,568	
Payback with Incentive/Rebates:	6.8	years

Assumptions/Notes:

- Current usage requires 6 tons of cooling.
- Existing AHU system can be rebalanced to reflect the reduction in load.
- Adequate electrical capacity is available

EEM-11: Ice Rink Bleacher Heaters

Adding supplemental heat to the spectator area can be very beneficial to the ice rink. This can increase the number of spectators which can increase the use and revenue from snacks and membership.

Current Condition:

Currently no supplemental heat is used for the spectator area (bleachers). This area has seen temperatures as low as 45°F and very sporadic spectator usage.

Recommended Action:

FDH recommends three to four (3-4) Infra Red (IR) heaters be installed above the bleachers to provide increased comfort while minimizing heat gain to the ice rink. New thermostats and occupancy sensors can be used to control the IR heaters use efficiently.



Photo 10 – Typical IR Heater

Analysis:

Electric Usage Reduction	54,018	kWh/year
Natural Gas Usage Reduction	458	therms/year
Total Annual Savings	\$4,205	per year
Estimated Implementation Cost:	\$8,000	
Simple Payback:	1.9	Years
Incentive/Rebates:	\$561	
Payback with Incentive/Rebates:	1.8	Years

Assumptions/Notes:

- Adequate electrical capacity is available to power the heaters.
- Integration into the DDC system is possible with current controllers.



EEM-12: ICE Rink Operational and Control Changes

Controlling and monitoring the ice making process is critical to efficient production of quality ice for the patrons of the ice rink. Often energy is wasted due to the lack of proper monitoring, equipment, and/or operational procedures. By fully investigating the ice make process improvements can be made without the sacrifice of ice quality or occupant comfort.

Current Condition:

Ice temperature is sensed by subsurface temperature sensors. No setbacks are currently utilized for air, ice, or water set-points.

Recommended Action:

FDH recommends the following items be considered for further investigation and implementation.

- Reduction in ice temperature and/or thickness by $\frac{1}{2}$ " to $\frac{1}{4}$ " from the current $1\frac{1}{2}$ " thickness
- Night set back/up for space temperature.
- Installed IR surface sensor to measure ice temperature and adjust for use if acceptable.
- Install occupancy sensors for locker room exhaust on/off operation
- Closing locker rooms during times of low occupancy.
- Adding space temperature control to the Delta or JCI system.

Analysis:

Electric Usage Reduction	54,108	kWh/year
Natural Gas Usage Reduction	458	therms/year
Total Annual Savings	\$4,205	per year
Estimated Implementation Cost:	\$8,000	
Simple Payback:	1.9	Years
Incentive/Rebates:	\$561	
Payback with Incentive/Rebates:	1.8	Years

Assumptions/Notes:

- Adequate capacity/space is available in the DDC system for the ice making process to incorporate additional sensors and set-points schedules



6. Financing Options

Because of our extensive track record in accurately measuring and verifying savings, FDH can provide clients with an investment grade energy audit that is accepted by many financial institutions. In many cases this ability to predict energy savings based on budgeted utility and operation expenses allows clients to arrange for loans or a lease/purchase with little or zero out of pocket costs. Most lenders recognize the increased value of property which results from these types of energy upgrades and feel secure with these lending practices. We have outlined a few possible paths to implementation which could allow some construction to start this spring and be completed most likely by the end of summer.

Utility Spend Scenarios

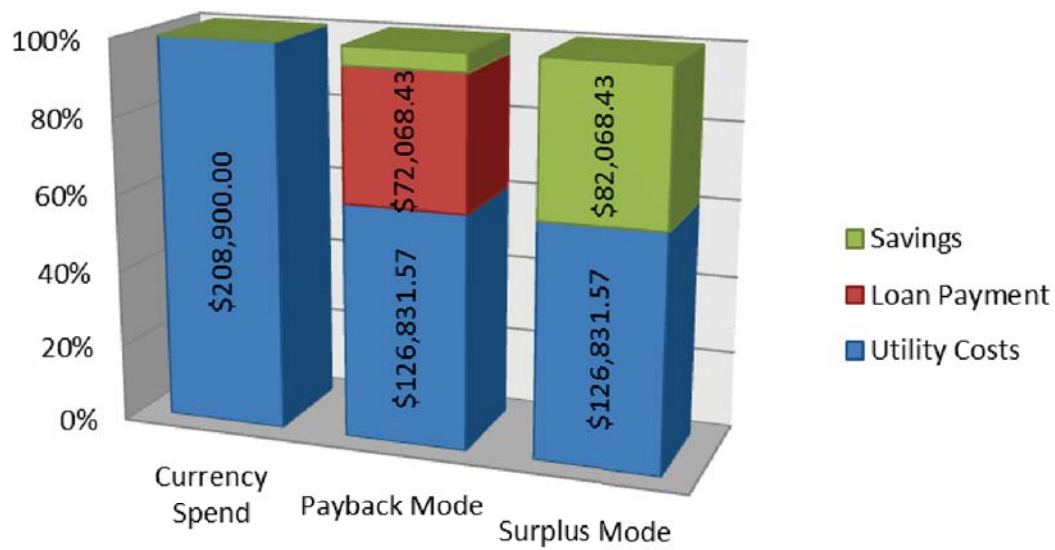


Figure 12 - Savings Funded Option



6.1. Capital Contribution Method

The City may choose to fund the selected EEMs by the use of capital contributions or other internal means. This would be considered the more traditional approach to making facility improvements and does not rely on the generated savings to pay back the loan (if used). Depending on the City's budget making process the savings generated from these EEM implementations could be lost for future use by the facilities. Often times the utility projections become based on the new improved utility spend. This does not allow for real reinvestment into the facilities for future upgrades and enhancements.

6.2. Low interest loans through PNC and FDH relationships

PNC Bank will provide a net-zero financing option which utilizes savings derived from reduced energy utilization to pay down the debt associated with the cost of the project. Our objective is to implement a project which does not require capital investment by the City. The reduction in Client's operating budget, through lower utility bills, along with funding from incentives and rebates, will be used to pay for the project. Ultimately, the energy savings will provide a positive cash-flow over the payback period, that is, the annual utility savings will exceed the annual principal and interest payments to the bank.

6.3. Energy Savings Performance Contract (ESPC)

An Energy Savings Performance Contract (ESPC) offers an alternative way of purchasing capital improvements. (See State of Missouri Energy Savings Contracts for Government Units – RSMO 8.231 & 640.651).

An ESPC is a partnership between a City and an energy service company (ESCO). The ESCO conducts a comprehensive energy audit for the City and identifies improvements to save energy and address any operating issues to further reduce costs. The ESCO designs and constructs a project which meets the City's needs and through third party lenders, arranges the necessary funding with the backing of guaranteed performance. These projects are typically 100% financed through a lease arrangement and aid in securing the reinvestment of energy savings back into the facilities. Therefore, they do not require capital from the City. As a lease, they are not counted as debt. The ESCO also guarantees the improvements will generate annual energy and operational savings sufficient to cover the annual lease payment making the project revenue neutral.

FDH can assist the City in perusing this avenue and take on the role of the owner's representative. This role will utilize FDH's extensive experience with ESPC, energy audits, and the resulting calculations to insure the City's best interests are maintained over the life of the performance contract. With the proper guidance an ESPC can be a very effective and positive experience for all involved.



7. Observation Items

The following items should be looked into further by the maintenance staff. These items were noticed during our audit and felt they should be mentioned.

Government Center:

1. The heat pump which serves the IT/server room should have a ducted return. The current installation is un-ducted and not performing as it should, partly due to this.
2. DDC control system should be reviewed and made operational to the current staff. Training should be provided along with login and passwords.
3. AHU-1 and AHU-2 do not appear to be operational. During both visits neither of these units was operating.
4. Cooling tower water quality looks bad. A cooling tower water specialist should conduct a water analysis and cooling tower analysis and make recommendations to improve the water quality.
5. Some of the sally port unit heaters were not operational.
6. Verify the number of boilers needed and their sequence.

Dielmann Recreation Center:

1. The heat pump which serves the IT/server room should have a ducted return. The current installation is unducted and not performing as it should, partly due to this.
2. Additional pump insulation should be added to repair or increases the insulating effectiveness at the base-mounted pumps.

Public Works Garage:

1. RTU roof access is not ideal and should be changed. Plans/design should be done to assess the current access and structural limitations for adding a new point of access for maintenance. One possible solution would be to add a door/hatch from the mezzanine level to the lower roof.

8. Conclusion

As previously stated, The City of Creve Coeur has already done an excellent job of identifying and implementing energy efficiency projects to reduce energy consumption in their facilities. This report should reinforce this since it has validated the previous projects are in fact saving energy.

If the majority of the EEMs listed in Table 14 are implemented, the initial investment would be approximately \$500,000 - \$600,000 and should provide a payback, after incentives, of less than 7 years. After which the City would have a savings surplus of approximately \$82,000 + / year (as noted in Figure 12) which could be further invested into additional improvements to the facilities. As these EEMs are implemented, a second look is recommended at the end of the Design Development stage of the design process where the energy savings and construction cost are re-evaluated to insure the project expectations are still on track and will produce the anticipated savings and timeframes.

FDH is excited to part of this sustainability project and can provide the needed engineering and construction activity services needed, if desired by the City. Our professional engineering team and construction management team can provide a "turn-key" retrofit project for the City. If a traditional design – bid –build approach is desired we can engineer full plans and specifications for bidding and construction and follow through with construction administration and commissioning.

We look forward to working with the City and its staff to assist in implementing the above strategies and identifying more opportunities which coincide with capital improvement projects.

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Appendix A - Equipment Assessment



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Appendix A - Equipment Life Cycle Comparison and Assessment

TAG	Description	Location	Cooling Over-Sizing	Heating Over-Sizing	Condition / Comments	Action
Government Center Equipment						
HP-1	Ceiling Mounted Heat Pump	Women's Locker (PD214) & Men's Locker (PD215)	-68%	-72%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-2	Ceiling Mounted Heat Pump	Exercise Room (PD216)	55%	1%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-3	Ceiling Mounted Heat Pump	Interview Room (PD211-213)	83%	143%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-4	Ceiling Mounted Heat Pump	Detectives (PD210)	26%	32%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-7	Ceiling Mounted Heat Pump	Chief (PD206), Conference (PD207), and Lieutenant (PD209)	18%	5%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-8	Ceiling Mounted Heat Pump	Waiting (PD202), Secretary (PD203) & Photo Lab (PD208)	138%	173%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-9	Ceiling Mounted Heat Pump	Corridor (PD201), Electrical (PD218), Mechanical (PD219), Janitor (PD221) & Women's Bathroom (PD222)	-1%	-8%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-12	Ceiling Mounted Heat Pump	Corridor (AL201)	32%	-13%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-13	Ceiling Mounted Heat Pump	Council Chambers (AL206)	62%	214%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-14	Ceiling Mounted Heat Pump	Corridor (AL202), Conference (AL203) & Judge (AL204)	37%	41%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-16	Ceiling Mounted Heat Pump	Conference Rooms (AL205, AL208 & AL209) & Storage (AL212)	40%	8%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-18	Ceiling Mounted Heat Pump	Toilet (AL214) & Mayor (AL215)	15%	1%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-19	Ceiling Mounted Heat Pump	City Clerk (AL217), Office Machines (AL217A) & Secretaries (AL218)	21%	26%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-21	Ceiling Mounted Heat Pump	City Administrator (AL220)	29%	27%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-22	Ceiling Mounted Heat Pump	Vault (AL216), Assistant Admin (AL219) Corridor (AL222) & Office Mach (F202)	32%	65%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-23	Ceiling Mounted Heat Pump	Supervisor (F205)	20%	-20%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-24	Ceiling Mounted Heat Pump	Offices (F203 & F204)	-5%	18%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-25	Ceiling Mounted Heat Pump	Finance/General (F201)	70%	34%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-26	Ceiling Mounted Heat Pump	Vestibule (PL201) & Lobby (PL202)	44%	262%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-27	Ceiling Mounted Heat Pump	Corridor (PW201), Secretary/Reception (PW208), Electrical (PW217)	26%	11%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-28	Ceiling Mounted Heat Pump	Toilets (PW202 & PW203) & Janitor (PW204)	-70%	-74%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-29	Ceiling Mounted Heat Pump	Lounge (PW206) & Conference (PW207)	51%	123%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-31	Ceiling Mounted Heat Pump	Current Events (PW205), Office Machines (PW209) & Secretary (PW227)	26%	40%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-32	Ceiling Mounted Heat Pump	Corridor (PW214), Mud Room (PW212), Archives (PW213), Storage (PW218), Zoning Admin (PW220) Planning Admin (PW221) & Corridor (PW222)	50%	52%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-33	Ceiling Mounted Heat Pump	Corridor (PW210), Director (PW223) & City Engineer (PW224)	25%	4%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-34	Ceiling Mounted Heat Pump	Drafting Area (PW226) (serving half the room)	85%	79%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years

Appendix A - Equipment Load Comparison and Assessment

TAG	Description	Location	Cooling Over-Sizing	Heating Over-Sizing	Condition / Comments	Action
HP-35	Ceiling Mounted Heat Pump	Drafting Area (PW226) (serving half the room)	85%	79%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-36	Ceiling Mounted Heat Pump	Cell Entry (PD123A) & Men's & Women's Cells (PD127-133)	-70%	-71%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-37	Ceiling Mounted Heat Pump	Holding (PD123), Prints (PD124) & DWI (PD125)	84%	506%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-38	Ceiling Mounted Heat Pump	Booking (PD121)	-3%	74%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-39	Ceiling Mounted Heat Pump	Corridor (PD114), Armory (PD118), Corridor (PD119), Interview (PD120) & Juvenile (PD126)	83%	189%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-40	Ceiling Mounted Heat Pump	Reports & Lineup (PD117), Briefing (PD112), Elevator Lobby & Elevator (PD143) & Evidence Storage (PD148)	54%	73%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-41	Ceiling Mounted Heat Pump	Radio (PD107), Patrol Div (PD115), Watch Commander (PD116) & Evidence (PD1218)	51%	36%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-44	Ceiling Mounted Heat Pump	Corridor (PD101), Records (PD102), Closets (PD103, PD108 & PD109) & Service Div. Commander (PD110)	61%	19%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-45	Ceiling Mounted Heat Pump	Communications (PD104), Closet (PD105) & Toilet (PD106)	32%	90%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-46	Ceiling Mounted Heat Pump	Lobby (CC101) & Corridors (CC102 & CC117) & Gym Storage (CC118)	95%	284%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-47	Ceiling Mounted Heat Pump	Meeting Room (CC103) & Electrical (CC127)	88%	21%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-49	Ceiling Mounted Heat Pump	Parks & Rec Director (CC104), Conference (CC105) & Staff (CC107)	44%	109%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-50	Ceiling Mounted Heat Pump	Meeting Room (CC106)	135%	39%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-52	Ceiling Mounted Heat Pump	Gymnasium (CC112) & Mech. Equip. Room (CC113)	184%	162%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-53	Ceiling Mounted Heat Pump	Offices (CC114 & CC115) & Vestibule (CC116)	3%	155%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
HP-54	Ceiling Mounted Heat Pump	Gym/Multipurpose Bathrooms (CC120/121), Multipurpose (CC122), Kitchen (CC123), Storage (CC124) & Mech Room (CC125)	46%	150%	Actual condition was not reviewed.	Monitor/Replace as failures occur < 5 years
AHU-1	Ventilation AHU	Serves Police	Rcx	Rcx	Unit was not operating at the times of our field surveys. This unit is original and replacements should be done within the next 2-3 years.	Rcx and then replace < 3 years with a unit which fully conditions all outside air.
AHU-2	Ventilation AHU	Serves Gov. Building	Rcx	Rcx	Unit was not operating at the times of our field surveys. This unit is original and replacements should be done within the next 2-3 years.	Rcx and then replace < 3 years with a unit which fully conditions all outside air.
Boilers	Four Natural Gas Boilers	All spaces	-	-	Replaced in 2012 with 4 condensing boilers. Only two boilers are needed based on anticipated loads.	Verify led/lag sequence and OA temp reset is active for the leaving water temperature.
CWP-1	Condenser Pump	All spaces	-	-	Original CV flow system	Monitor/Replace < 5 years
CWP-2	Condenser Pump	All spaces	-	-	Original CV flow system	Monitor/Replace < 5 years
HWP-1	Hot Water Distribution Pump	All spaces	-	-	Recently replaced (2012?) but operates as a CV system	Monitor and service as normal
HWP-2	Hot Water Distribution Pump	All spaces	-	-	Not original but operates as a CV system	Monitor/Replace < 10 years
CT-1	Cooling Tower	All spaces	-	-	Scale and metal build-up	Measure quality, clean, and treat water/cooling tower system
DDC	Direct Digital Control	All spaces	-	-	Not used by staff. Additional training and upgrade is recommended to improve performance and reliability	New training and upgrade to web-based system < 5 years
Dielmann Recreation Center						
AHU-001 "Ice"	Heat Recovery AHU	Ice Rink & Bleachers	Rcx	Rcx	Unit was new in 2003. Unit is not adequately maintaining temperature within the ice rink. No temperature control exists at the bleachers and the space is very cold at times (low 50's high 40's)	Rcx < 1 year to restore performance or determine limits of AHU

Appendix A - Equipment Location Comparison and Assessment

TAG	Description	Location	Cooling Over-Sizing	Heating Over-Sizing	Condition / Comments	Action
AHU-1	Part of AHU-1	Party Room, Ice Pro Shop	-	-	Space temperature is reported to be very difficult to control. Thermostat is located in the main lobby.	Remove space from AHU-1 < 3 years
Electric Heat	Electric Baseboard	Team Rooms & Bathrooms	-	-	Covers were added to prevent burns and damage to equipment. Thermostats are not part of the DDC system issues appear to exist.	Monitor and service as normal
AHU-1	Main AHU	Warming Room, Offices, Meeting Room, Concessions, Lounge	27%	Unknown	AHU is original to the building/major renovation. No major issues appear to exist.	Clean unit and rebalance, replace < 8 years
AHU-2	Main AHU	Golf Pro Shop, Golf Pro Bathrooms	35%	Unknown	AHU is original to the building/major renovation. No major issues appear to exist.	Clean unit and rebalance, replace < 8 years
B-1	Natural Gas Boiler	AHU-1 and AHU-2 Spaces	-	-	Boiler is operating properly.	Monitor/Replace < 5 years with condensing boiler with high turndown. Can possibly use one of the Gov Center Boilers if needed
B-2	Natural Gas Boiler	AHU-1 and AHU-2 Spaces	-	-	New boiler and is operating properly.	Monitor and service as normal
Comp-1	R22 Compressor	Ice Making Process	-	-	R22 compressor appear to be in good shape and operating within tolerances.	Verify units are cycle based on runtime hours
Comp-2	R22 Compressor	Ice Making Process	-	-	R22 compressor appear to be in good shape and operating within tolerances.	Verify units are cycle based on runtime hours
Comp-3	R22 Compressor	Ice Making Process	-	-	R22 compressor appear to be in good shape and operating within tolerances.	Verify units are cycle based on runtime hours
CT-1	Cooling Tower	Ice Making Process	-	-	Cooling tower appears to be operating acceptable and maintaining R22 temps/pressures within tolerances.	Monitor and service as normal
DDC	Direct Digital Control	All spaces	-	-	Web-based and two distinct systems are used and appear to be used daily by the staff. Very critical to the operation and maintenance activities.	Upgrade the DDC system to include graphics and trending of systems.
Public Works Garage						
RTU-1	Roof Top Unit	Garage office, lobby, and break room	13%	114%	Replaced in 2012. There is operational issues with air flow to the break room. This is possibly contributed to an imbalance of air flow. A portable AC unit is used in the summer to keep the space cool. This unit should not be needed.	Rebalance air flow < 1 year
IRH-1	Infrared Ceiling Mounted Heater	Garage Bay	-	Unknown	New in 2012 and appear to be operating as designed	Monitor and service as normal
IRH-2	Infrared Ceiling Mounted Heater	Garage Bay	-	Unknown	New in 2012 and appear to be operating as designed	Monitor and service as normal
IRH-3	Infrared Ceiling Mounted Heater	Garage Bay	-	Unknown	New in 2012 and appear to be operating as designed	Monitor and service as normal



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Appendix B - Ice Rink Ice Making Diagram



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REQUEST FOR QUALIFICATIONS

ARCHITECTURAL AND ENGINEERING SERVICES FOR A GOVERNMENT CENTER SPACE NEEDS FEASIBILITY STUDY

CITY OF CREVE COEUR, MISSOURI

PROPOSALS DUE: TO BE DETERMINED

The City of Creve Coeur is soliciting Qualifications from qualified firms interested in providing Architectural and Engineering (A/E) Services related to the feasibility to alter the existing Government Center to allow for better use of space, and meet the growing needs of departments. Firms with relevant design experience and qualifications are encouraged to submit a qualification package as described in Section 6 below.

The intent of this Request for Qualifications (RFQ) is to have the A/E firms under consideration specifically address the services required and provide a qualifications-based proposal for those services in order to identify the most qualified respondents. The firm ultimately selected by the City will provide architectural and engineering services for assessing the effectiveness of the use of space at the Government Center and for making recommendations for improvement.

1. PROJECT BACKGROUND

The Government Center is located at 300 North New Ballas Road, Creve Coeur, Missouri. The City encompasses 10.25 square miles with a population of approximately 18,000 served by approximately 100 full-time employees, over 50 of who occupy the Government Center. The Creve Coeur Government Center, located at 300 North New Ballas Road, was originally constructed in 1949 as Weber Elementary School and was renovated to become the Creve Coeur Government Center in 1989. The building is 49,594 square feet on three floors, which includes the City Council chambers, administrative offices, a police department, and a community center with meeting rooms and a gymnasium. The City wishes to determine if it is feasible to improve accessibility, aesthetics, security, use of space, and use of technology at the Government Center

2. SCOPE OF SERVICES

The A/E Scope of Services will be more fully defined during the contract negotiation phase, and the final Scope of Services, together with the A/E fee, will be included in the final executed agreement.

The A/E shall provide architectural and engineering services including Programming, Architectural, Interior Design, Mechanical, Electrical, Plumbing, Fire Protection, Structural and Civil Engineering appropriate to the Project. A/E Services are further defined as consisting of the following:

- Preliminary Scope Architectural Services, including Programming, Design, Construction Documents and Construction Administration.
- Interior Design
- Landscape Design
- Structural Engineering
- Civil Engineering
- Coordination with Mechanical, Electrical, Plumbing and Fire Protection Engineering.

The A/E firm selected will work with the City staff to create a Space Needs and Improvement Program as a starting point for the new design work. Major issues to be considered include the following:

- Review space requirements for each department
- North Wing – suggest renovating this area to allow use, consider alternatives for use of this space for record archiving and/or municipal court offices, community policing offices, information technology.
- Council Chambers – Improve aesthetics, modernize the décor, include handicap accessibility for the dais, eliminate the step in front of the dais, install new carpet, update the lighting, chairs, construct a new dais, upgrade video, and audio technology
- Gymnasium and community center technology, comfort, and aesthetics
- Interior signage improvements throughout
- ADA accessibility improvements throughout
- Conference room (s) – Add technology improvements, windows and natural light improvements
- Review parking needs and possible lot expansion
- Bathroom updates and additions
- Record and archival room expansion
- Exterior curb appeal
- Courtyard improvements
- Consider Public art and history display areas
- Promote employee wellness through better office design, and new technology
- Lighting improvements throughout
- Energy audit – include the recommendations from the study to reduce the City’s long term energy needs.

In order to determine an appropriate renovation plan for the Government Center, the Consulting Services will be phased. The initial phase will be to update the Space Needs Assessment for the Government Center, which will form the basis for conceptual design and budget development for a phased renovation.

3. PROJECT PARTICIPANTS

A Selection Committee consisting of designated City representatives will be responsible for developing a short list of approximately A/E firms to interview. Selected firms will be invited to make an oral presentation to the Selection Committee. The Selection Committee will then make a recommendation of the most qualified A/E firm. The City staff will then begin contract negotiation with the most qualified A/E firm. Should those contract negotiations prove unsuccessful, the City would then proceed to the next most qualified firm for contract negotiations.

4. CRITERIA FOR SELECTION

The purpose of this RFQ process, as previously stated, is to identify qualified A/E firms that are the most capable of providing the described services. The RFQ submittal should be organized to clearly address the following criteria which, will be used in the evaluation of qualifications:

- Relevant staff experience.....40 points
- Past familiarity with Government Center space needs feasibility studies.....20 points
- Project references for projects of similar scope.....30 points
- Anticipated schedule and current availability.....10 points

5. SUBMITTAL REQUIREMENTS

In total, ten (10) copies of the Submittals, including attachments, are required. Nine (9) of the copies shall be spirally bound (or other semi-permanent binding method) to ensure that pages are not lost. One

(1) copy should be clipped together to facilitate document reproduction. Also provide a digital copy on a CD, or thumb drive.

The envelope in which the Submittals are delivered must be clearly labeled on the outside with the Respondent's name and the project identification, "City of Creve Coeur Government Center Space Needs Feasibility Study".

Submittals shall be delivered to the following addressee at or before (to be determined) to:

**George Seifried
Project Manager
300 North New Ballas Road
Creve Coeur, MO 63141**

Late submittals will not be accepted. Qualification responses should be prepared simply and economically, providing a straightforward and concise description of the Respondent's capabilities for satisfying the requirement of this RFQ. Emphasis should be on completeness and clarity of content.

- A. SUBMITTAL CONTENT: Each Submittal shall be organized in the following order:
- Outside Cover and First Page: Shall contain (i) the title, "Statement of Qualifications for Architectural/Engineering Services Relating to Government Center Space Needs Feasibility Study, (ii) the name of the Respondent, and (iii) the Submittal Date.
 - Table of Contents
 - Transmittal Letter: include a short transmittal letter that summarizes why the Respondent believes itself to be the most qualified.
 - Contain the statement that to the best of the Respondent's abilities, all information contained in the RFQ submittal is complete and accurate.
 - Contain a statement granting the City of Creve Coeur the authorization to contact any previous client of the Respondent (or a Respondent's Team Member) for purposes of ascertaining an independent evaluation of the Respondent's performance.
 - At least one copy of the transmittal letter must have the original signature of an officer of the responding firm.
 - The RFQ should not exceed 20 pages.

Section I – Description of the Respondent

Firm Description: Include a complete narrative description of the Respondent's firm (or firms if the Respondent is comprised of a team of firms). Information should include:

- The Respondent's areas of architectural specialization
- Firm History
- Location of office (s)
- Name of Principal Officers
- Identification of the major consultants

Organization Chart: Include a simple organization chart showing how the Respondent, if selected, would organize its personnel for the project.

Key Professionals: Identify the key members of your team that would be involved in the project and describe their area of expertise and what role they will perform in the Architect's team. Indicate their availability for this project.

Resumes: Provide resumes of any person identified as a key professional. The resumes should contain the following:

- Name
- Educational Background
- Proposed Role in the Project
- An identification of other relevant projects in which the person has been involved.
- Other information you believe to be relevant.

Section II – Narrative

Set forth in Section 5 are the criteria on which the selection will be made. The Respondent may use this section to make his or her case for how they are uniquely qualified for the desired services.

Section III – Relevant Experience of the Respondent

List no more than four relevant projects. A relevant project is one which best exemplifies your qualifications for this project. Special focus and emphasis will be placed on projects that have a high degree of similarity to the Project. Include the following information as appropriate for each example project:

- Name of project.
- Type of building.
- Project location.
- Total project cost.
- Project description.
- Project delivery method.
- Describe the services your firm provided.
- Indicate which team members were actually involved in the project and specify their role.
- Provide a statement acknowledging if the project was completed on time/on budget.
- Provide a few illustrative photographs or renderings.

6. RESERVATION OF RIGHTS

The City reserves the sole right to (1) evaluate the qualifications submitted; (2) waive any irregularities therein; and (3) reject any or all Respondents submitting qualifications, should it be deemed in the best interest of the City of Creve Coeur to do so.

Nothing in this document shall require the City of Creve Coeur to proceed with the Government Center Space Needs Feasibility Study.

A RFQ pre-submittal conference will not be held. Individual meetings with City staff or elected public officials prior to the RFQ submittal will not be held. However, the City welcomes questions on or before **(To be determined)** PM CST regarding this solicitation. **All questions shall be submitted in writing via email to George Seifried, Project Manager**

George Seifried
Project Manager
300 North New Ballas Rd.
Creve Coeur, MO 63141
(314) 223-2338
gseifried@ci.creve-coeur.mo.us