

Alan Cram, Chair  
Michael Doddridge, Vice Chair  
Andrea Dunlap  
Tim Johnson  
Bernie Marzonie  
Justin Montgomery  
Rick Reider

City Council Chambers  
City Hall West  
300 Laporte Avenue  
Fort Collins, Colorado

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The City of Fort Collins will make reasonable accommodations for access to City services, programs, and activities and will make special communication arrangements for persons with disabilities. Please call 221-6515 (TDD 224-6001) for assistance.

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## **Regular Hearing Agenda November 30, 2018 1:00 PM**

- **CALL TO ORDER**
- **ROLL CALL**
- **PUBLIC COMMENT ON ITEMS NOT ON THE AGENDA**
- **DISCUSSION AGENDA**
  1. Approval of Draft BRB Hearing Minutes for April 27, 2017
  2. Presentation on “Engage” Software – Christine Macrina
  3. Adoption of the BRB 2018 Work Plan – Russ Hovland
  4. Consideration of a Proposal to Modify the Building Code Adoption Cycle – Russ Hovland
- **OTHER BUSINESS**
- **ADJOURNMENT**

## Roll Call & Voting Record Building Review Board Hearing

Date: 11-30-17

Roll Call	Doddridge	Dunlap	Johnson	Marzonie	Montgomery	Reider	Cram	Vote
	✓	✓	✓	✓	✓	Excused	✓	
<b>April 2017 Minutes</b>	Dunlap	Johnson	Marzonie	Montgomery	Reider	Doddridge	<b>Cram</b>	
	Yes	Yes	Yes	Yes	N/A	Yes	Yes	<b>6:0</b>
<b>2018 Work Plan</b>	Johnson	Marzonie	Montgomery	Reider	Doddridge	Dunlap	<b>Cram</b>	
	Yes	Yes	Yes	N/A	Yes	Yes	Yes	<b>6:0</b>
<b>Code Adoption Cycle Modification</b>	Marzonie	Montgomery	Reider	Doddridge	Dunlap	Johnson	<b>Cram</b>	
	Yes	Yes	N/A	Yes	Yes	No	Yes	<b>5:1</b>

**STAFF**

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Gretchen Schiager, Administrative Assistant

**SUBJECT**

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**CONSIDERATION AND APPROVAL OF THE MINUTES OF THE APRIL 27, 2017 MEETING**

**EXECUTIVE SUMMARY**

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The purpose of this item is to approve the minutes from the April 27, 2017 meeting of the Building Review Board.

**ATTACHMENTS**

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1. BRB April 27, 2017 Minutes - DRAFT

Alan Cram, Chair  
Michael Doddridge, Vice Chair  
Andrea Dunlap  
Tim Johnson  
Bernie Marzonie  
Justin Montgomery  
Rick Reider

City Council Chambers  
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Fort Collins, Colorado

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## Regular Hearing Minutes April 27, 2017

A regular meeting of the Building Review Board was held on Thursday, April 27, 2017, at 1:00 p.m. in the Council Chambers of the Fort Collins Municipal Building at 300 Laporte Avenue, Fort Collins, Colorado.

**Board Members Present:** Alan Cram, Chair  
Mike Doddridge, Vice Chair  
Andrea Dunlap  
Justin Montgomery  
Tim Johnson  
Bernie Marzonie  
Rick Reider

**Absent:** None

**Staff Present:** Mike Gebo, Chief Building Official  
Cindy Cosmas, Administrative Assistant

Cram noted that a quorum was present for this hearing.

## BOARD ITEMS FOR CONSIDERATION

### 1. Approval of January 26, 2017, Draft Minutes

**Montgomery made a motion, seconded by Doddridge, to approve the draft minutes of the January 26, 2017, hearing. Vote: 7:0.**

### 2. 2016 Capital Expansion Fee Update

Tiana Smith, Revenue and Project Manager of Finance at the COFC, provided the Board with an updated presentation of the proposed increases to the 2016 capital expansion fees, transportation capital expansion fees, and electric capacity fees. She described the purpose of each fee and how each is calculated. She also discussed in detail the impacts of each fee and how they compare to similar communities. She stated that City Council requested that these fees be “bundled” in order to better communicate in a holistic way to the community at large. Fees are calculated based on “level of service”, rather than trying to build the fee structure to reach a budgeted goal. The City has retained the same methodology since 1996, when impact fees were first introduced.

Ms. Smith described some of the community outreach that occurred for the proposed park developments, restating that a consistent level of service would be assessed for all residents with respect to park fees.

Dean Klingner, Capital Projects Manager, provided more information related to the proposed transportation capital expansion fees (previously street oversizing fees). He discussed several proposed changes:

- Renamed “transportation capital expansion fee”, rather than “street oversizing fee”;
- Charging fees based on unit size (square feet) rather than unit type;
- Commercial/industrial uses are deemed to be similar and will be combined;
- “Trip generation” methodology, which will use traffic engineering studies to identify impacts to the transportation system in order to recognize distance as well as frequency; and
- Fundamental fee increase of approximately 20%, based on improvements necessary for development.

Klingner also discussed several options being proposed:

- Option A – fully funding the program (proportional costs for all necessary transportation improvements in terms of growth)
- Option B – change to vehicle miles travelled (would raise residential fees overall and lower commercial fees)

Lance Smith, Utilities Strategic Finance Director, described what electric capacity fees are used for (cost to build monthly generation and transmission of electricity) and stated that the existing model is outdated. He added that the new methodology will focus on meeting the peak demand when building a distribution system. The calculation will be simpler, noting that large commercial customers represent less than 1% of all customers but 40% of overall electricity demand. Therefore, residential fees are expected to decrease and commercial fees are expected to increase.

Ms. Smith recapped the proposal to bundle all of the fees, highlighting the fee percent changes. She also showed a graph of various land-use types and communities with respect to neighboring communities (Fort Collins' fees appear to be average). Based on new median home sales price in 2016 (\$437,000), she illustrated how fees have changed over time. Her recommendation is to phase in these fees over 3 years, using a calculated average to account for annual revenue loss due to the phasing. She asked the Board for any feedback that she could include in her presentation at the May 16<sup>th</sup> City Council hearing and adoption.

### **Board Questions and Deliberation**

Montgomery asked for more information explaining the methodology of having parks based on level of service rather than plan-based budget. Ms. Smith responded that, while there is a master plan for the parks, the intent is not having the current residents pay for future needs. She added that every 10 years a new community park has been built (only 2 remaining to build). Additionally, these fees will become self-regulating as development decreases and there is less impact to growth. Regarding the electric fees and demand charges, Montgomery also asked if there would be any impact on demand to adopt the most energy-efficient codes; Mr. Smith confirmed that there would be an impact in that total consumption will be lower (approx. a 12% drop per person). She added that the demand and type of energy will also change.

Johnson asked what role CSU has regarding these fees, since they are a major consumer. Klingner responded that CSU does not pay the fee, but alternatives are utilized in order to ensure CSU meets the intent of the fee. Doddridge asked whether multi-family calculations are included in the park fees calculation; Noelle Currell, Sr. Fin Analyst, responded that it is based on equivalent dwelling units.

Regarding Option A for transportation capital expansion fees, Cram asked why commercial and office fees will decrease; Klingner responded that this is a consequence of using vehicle miles per trip as a basis, even though the intent is to use industry best practices. He reminded the group that this option is not trying to incentivize a certain type of development. Cram speculated that driving up these fees could hurt potential low-income housing developments, comparing the proposed fees to levels being charged by Boulder. He added that such large fee impacts to residential may be too major, stating that these fees are really taxes. Doddridge asked if any potential impact analysis has been done on new residential construction. Ms. Smith responded that, because this is based on future development, no such analysis has been done. She reiterated that these calculations are based on usage of current assets, not an attempt to increase revenue.

Regarding the total fee increases as compared to other communities, Gebo asked if there was a particular need for Fort Collins to change their current fee structure. Ms. Smith responded that this chart was just for comparison purposes, and the reason for the fee increases is because asset values have also increased. She added that Fort Collins tries to be competitive. Dunlap asked if other communities have more open space to develop compared to Fort Collins; Smith confirmed that this is the case and that supply and demand is calculated into housing prices.

Doddridge thanked them for doing a second presentation, and he highlighted pros and cons of the fees proposed. Based on various Board comments, Cram concluded that the Board does not care to make a position statement at this time. Ms. Smith added that Phase 2 will include development review fees in the fall of 2017. She stated that any individual or group feedback would be appreciated. Cram suggested that having materials in advance of any future presentations would be helpful.

### **3. I-Code Updates**

Gebo discussed the 2015 I-Code updates, saying the amendment package is now at the City Attorney's office for review. The 1<sup>st</sup> reading by City Council is on June 6<sup>th</sup>, then the 2<sup>nd</sup> reading two weeks later, then adoption. He doesn't anticipate any issues with adoption. Gebo reviewed some of the more controversial issues (mainly the vinyl siding burn situations). There was some discussion of this particular topic, including safety issues and legal involvement.

4. CBO Update

Gebo informed the Board of his intention to retire as CBO on August 1<sup>st</sup>, 2017. There was some discussion regarding a final luncheon for him with the Board and Ross Cunniff, City Council Liaison.

**OTHER BUSINESS**

None noted.

**The meeting adjourned at 2:23p.m.**

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Russell Hovland, Chief Building Official

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Alan Cram, Chair

**STAFF**

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Christine Macrina, Boards and Commissions Coordinator

**SUBJECT**

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**PRESENTATION ON “ENGAGE” SOFTWARE**

**EXECUTIVE SUMMARY**

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Ms. Macrina will make a presentation about the “Engage” software for volunteers.

**ATTACHMENTS**

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1. User Guide for Engage

# Engage Volunteer Help

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## General

Engage is an application that allows the public to easily sign up/register to participate in activities. It also allows volunteers to sign up to help with these activities and track volunteer hours, interests, and more.

Contact Charlotte Boney with Questions

Charlotte Boney, [cboney@fcgov.com](mailto:cboney@fcgov.com), (970) 416-4245

You will receive emails from the system- make sure [engage@mail.offero.com](mailto:engage@mail.offero.com) is added to your contacts.

## Visit your existing account

If you are a current volunteer, you already have an account. Go to [engage.fcgov.com](http://engage.fcgov.com) Click the button on the right, login On the left side of the screen, use your **email address as the username** and **cityfc1** as the password.

## Create your account

1. Go to [Engage.fcgov.com](http://Engage.fcgov.com)
2. Click on Sign up
3. Enter the required information
  - a. First/Last Name
  - b. Email Address
  - c. Primary Phone
  - d. Password
4. Click Create Account

## Logging in to Engage

1. Go to [Engage.fcgov.com](http://Engage.fcgov.com)
2. Click Login
3. Enter email and password
4. Click Login

Forgot your password? Click on the Forgot password link and enter the email address used to create your Engage Account. We will send you link to reset your password.

## Your Dashboard

Each Engage user has a dashboard, each is unique to the type of user you are.

The screenshot shows the City of Fort Collins Engage dashboard for a Police Volunteer. The navigation bar includes Home, Dashboard, My Profile, Calendar, Shifts, Discussion, and Contact Us. The main content area features a 'Welcome: Police Volunteer' message with a 'print schedule' link and a 'Great News' message stating 'You don't have any 'To Do' items right now!'. Below this, a list of activities requiring feedback is shown. The right sidebar contains 'Volunteer Announcements', 'My Profile', and a calendar for January 2017. Callout boxes highlight 'Current Assignments', 'Opportunities', 'Announcements', and 'Schedule'.

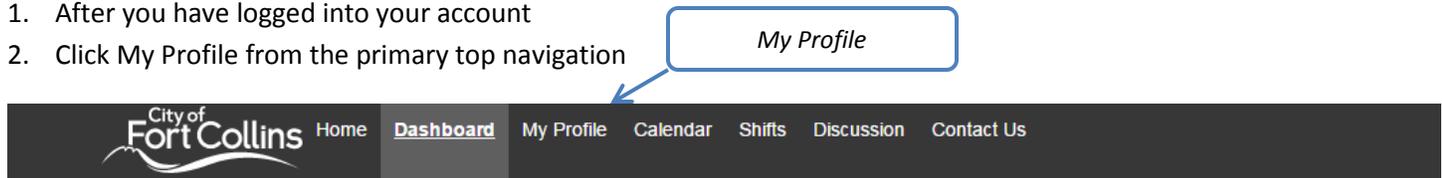
From the dashboard you can:

1. To-Do
  - a. Any activities, assignments, site visits or shifts requiring feedback/reporting
2. See your Upcoming Assignments
  - a. Activities that you are signed up to help with
3. View New Opportunities
  - a. Activities that you can volunteer to help with
4. See/schedule Site Visits (dependent on volunteer role)

- a. Record volunteer hours not associated with an activity
5. Sign up for Shifts (dependent on volunteer role)
  - a. Volunteer assignments on a recurring basis
6. View Activities you are signed up as a participant
7. View upcoming activities
8. View messages from staff- “Announcements”

## Editing your Profile

1. After you have logged into your account
2. Click My Profile from the primary top navigation



3. You can edit the following by clicking the edit icon next to each section
  - a. Personal demographic information
  - b. Availability
  - c. Volunteer biography & Preferences
    - i. The Biography entered will be visible by other volunteers and the public (if you lead public programs) if you specify.
    - ii. *\*Note: Other personal information will not be visible.*
  - d. Skills & Interests
    - i. *\*Note: The interests you select here will filter the activities and assignments that you will see in "Opportunities" and "Upcoming Activities" on your dashboard.*
  - e. Emergency Contact
  - f. Email Opt-Out Preferences
  - g. Copies of all waivers you have signed
  - h. Preferred Departments

## Service History

Engage allows you to generate a report with your service history detail.

1. Go to "My Profile" from the primary top navigation
2. Click on "View Full History" in the service history section
3. Click on the year that you would like to view the information for.

## Calendar

The calendar allows you to view your schedule as well as upcoming activities and opportunities. Click on an activity to get additional details

- Filter activities using the advanced Search options



## Volunteering

### Signing up to help with an activity

There are two ways to sign up to help with an activity.

1. From the Dashboard
2. Click the Opportunities Tab
3. Click the Volunteer button

Welcome: Police Volunteer print schedule

To Do My Assignments **Opportunities** My Site Visits My Shifts My Activities Upcoming Activities

### Volunteer Opportunities

Activities are displayed based on your interests. To show more or less activities, edit the interests on your profile.



**Explorer Meeting / Training**  
📅 01/12/2017 Thursday | ⌚ 06:30 PM | 📍 Police Department  
Explorer Meeting Training will be on Criminal Law by Det Vogel  
Co-Volunteers: Graham A, Hunter D, Levi G, Jeff H, George I, Analia K, Hailey M, Gabriel N, Betsy P, Ayla R, Alliyah S, Xzavior S, Cameron S, Adam V  
16 Assignments unfilled

**Volunteer**

[more](#)

[View more upcoming opportunities »](#)

4. Complete the assignment process

OR

1. From the calendar
2. Click on an activity to help with
3. **If the activity has available positions** to help with you will see the volunteer button

**Volunteer** Close

**Volunteer Button**

4. Click the Volunteer button
5. Complete the assignment process

### Removing yourself from an activity

If you are no longer able to help with an activity you may click the “remove me” button on the Dashboard. If the activity is less than five days away you will have to contact a staff person.

1. From your dashboard
2. Click My Assignments Tab
3. Click the Remove me button

Welcome: Police Volunteer print schedule

To Do **My Assignments** Opportunities My Site Visits My Shifts My Activities Upcoming Activities

### My Assignments

Look here for information about activities that you have volunteered for.



**Explorer / Auxiliary Graduation**  
 01/26/2017 Thursday | 06:30 PM | Police Department  
 Explorer Graduation  
 Co-Volunteers: Graham A, Hunter D, Matthew D, Levi G, Jeff H, George I, Analia K, Hailey M, James M, Gabriel N, Betsy P, Ayla R, Alliyah S, Xzavior S, Cameron S, Stephan S, Adam V

Remove Me [more](#)

Remove Me Button ←

[View Service History »](#)

## Signing up for a site visit

Site visits are at will assignments meaning that there is not a specific date and time that they are required to be completed. This includes volunteers in the VRA, Bird Survey, Adopter groups.

1. From the Dashboard
2. Click on My Site Visits

Welcome: Police Volunteer print schedule

To Do My Assignments Opportunities **My Site Visits** My Shifts My Activities Upcoming Activities

### My Site Visits

Site visits that you are signed up for are displayed.



**Ride Along**  
 Thursday, January 5, 2017 2:52 PM | District One

Remove

[Schedule/Report Admin Visit »](#)  
[Schedule/Report Clerical Visit »](#)  
[Schedule/Report Meetings Visit »](#)  
[Schedule/Report Ride Along Visit »](#)

Links to Schedule ←

3. You will see an option to schedule your site visit, click that link
4. Enter the required information
  - a. Place

- b. Date/Time of visit
  - c. Hours(duration you expect to spend)
  - d. Patrol Type
5. Click Save
6. If you have already completed the visit you can click the Finish Report Now button and complete the report.

## Completing a site visit report

1. From the Dashboard
2. Click on My Site Visits
3. Click the Report button next to the site visit you wish to complete the report for
4. Enter the Required information
  - a. Contact type (Can be informational, Bags of Trash Collected, Birds seen, etc)
  - b. A quantity
  - c. Any notes
  - d. Patrol Description
  - e. Maintenance Title
    - i. Only enter information in the maintenance title or description if maintenance is required.
    - ii. Entering information into these fields will automatically send an email to maintenance staff for review with your name and email to contact you with questions.
5. Click Save

## Removing your scheduled site visit

6. From the Dashboard
7. Click on My Site Visits
8. Click the Remove button next to the site visit you wish to remove. If the button is no longer visible you will need to contact a staff person.

## Signing up for a shift

There are two ways to sign up to help with a shift.

1. From the Dashboard
2. Click the My Shifts Tab
  - a. The next 4 shifts that you are signed up to help with are displayed
3. Click "Sign up to help with a shift"

- To Do
- My Assignments
- Opportunities
- My Site Visits
- My Shifts
- My Activities
- Upcoming Activities

### My Shifts

The next 4 shifts that you are signed up to help with are displayed



#### Council Packets - January

01/12/2017 | 04:00 PM - 06:00 PM | Police Department

Deliver City Council Packets

Remove me

more

Sign up to help with a Shift »

4. Complete the assignment process

View available shifts

OR

5. From the Shifts tab

Click Shifts

The screenshot shows the 'City of Fort Collins' volunteer portal. The navigation bar includes 'Home', 'Dashboard', 'My Profile', 'Calendar', 'Shifts', 'Discussion', and 'Contact Us'. The 'Shifts' tab is selected. Below the navigation bar is a banner image of people riding bicycles. The main content area shows a 'Shifts' section with the text 'Shifts that need help are listed.' and a 'Show Advanced Search Options' link. Below this is a list of three shifts:

Shift Title	Location	Start - End	Slots Available	Action
Council Packets - February	Police Department	02/02/2017 - 02/23/2017	4	Volunteer
Council Packets - January	Police Department	01/05/2017 - 01/26/2017	2	Volunteer
Council Packets - March	Police Department	03/02/2017 - 03/30/2017	5	Volunteer

6. Click on a shift to help with

7. **If the activity has available positions** to help with you will see the volunteer button

8. Click the Volunteer button



The available slots for this shift are listed in the grid below. Check off the slots you would like to help with and click s

*Tip: If you are available to help with all slots, click the check mark in the top, left hand corner of the grid*

### Council Packets - January

Police Department | 01/12/2017 - 01/26/2017

Deliver City Council Packets

Show 25 entries

<input type="checkbox"/>	Day of Week	Date	Start Time	End Time	Description	Other Volunteers on Shift
<input type="checkbox"/>	Thursday	01/19/2017	04:00 PM	06:00 PM	Deliver City Council Packets	
<input type="checkbox"/>	Thursday	01/26/2017	04:00 PM	06:00 PM	Deliver City Council Packets	

Showing 1 to 2 of 2 entries

Previous 1 Next

[Sign up for Slots](#)

9. Select slots you are available to help with
10. Click Sign Up for Slots

**STAFF**

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Russ Hovland, Chief Building Official

**SUBJECT**

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**ADOPTION OF THE BRB 2018 WORK PLAN**

**EXECUTIVE SUMMARY**

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The purpose of this item is to adopt the BRB 2018 work plan.

The City Code requires all boards and commissions to file work plans on or before September 30 for the following year. The City Council will review the work plan for each board and commission in October and November, and the work plans typically take effect at the beginning of the year.

The Board should consider a motion for adoption of the 2018 work plan.

The proposed work plan is attached.

**ATTACHMENTS**

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1. BRB 2018 Work Plan



**Community Development &  
Neighborhood Services  
Planning**  
281 North College Avenue  
P.O. Box 580  
Fort Collins, CO 80522.0580  
**970.221.6376**  
970.224.6111- fax

## **2018 Annual Work Plan Building Review Board**

The Building Review Board will continue to meet on the last Thursday of each month when there are public discussion or hearing items placed on the regular monthly agenda. The Board may also meet as needed in order to convene special hearings.

Staff anticipates that the Building Review Board will hear several appeals by contractor license applicants who do not strictly meet the qualification criteria specified in the City Code. Under its quasi-judicial review authority, the Board is empowered to grant variances from such criteria when it determines there are practical difficulties or that an undue hardship would be imposed on the applicant; or, when the Board determines the applicant has sufficient specialized training, education, or additional relevant experience.

The Board is also empowered to render disciplinary action, including suspension or revocation of regulated contractor licenses, under which any specified infractions listed in the regulations are committed.

Additionally, in its code appellate function, the Board may hear appeals from strict application of the building codes or from an interpretation of the codes by the Building Official. The Board will continue to hear cases involving challenges to the Building Official's interpretation of the adopted building codes, as well as the adopted International Property Maintenance Code (IPMC).

In its advisory capacity, the Board is expected to participate as a member of the Code Review Committee, in the review of the International Building Codes. The Board will be asked to make recommendations to Council regarding any suggested revisions based on local conditions and community standards.

The Board will continue to work on its operational procedures and other matters of interest.

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Alan Cram, Building Review Board Chair

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Date of Approval

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**STAFF**

Russ Hovland, Chief Building Official

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**SUBJECT**

**CONSIDERATION OF A PROPOSAL TO MODIFY THE BUILDING CODE ADOPTION CYCLE**

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**EXECUTIVE SUMMARY**

**Summary:**

Building Services and City Council agreed to a policy of adopting the most current issued series of Building Codes in a reasonably soon time frame after their issuance from ICC. In addition, City of Fort Collins Energy Policy requires the most current IECC to be adopted within one year of publication. These are policies and not municipal ordinances.

Building Services recently adopted the 2015 I-codes in July 2017. Code adoption is an intensive process, requiring staff time, committee involvement, and public outreach. Adoption takes approximately one year to complete.

See attached memo to IECC stakeholders.

**Goal:**

Obtain BRB support to skip the adoption of the next available series of Building Code editions (2018) and wait to adopt the 2021 series of I-Codes in 2022. This includes skipping the 2018 IECC.

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**ATTACHMENTS**

1. IECC Stakeholders Memo



## Planning, Development & Transportation Services

### Community Development & Neighborhood Services

281 North College Avenue  
P.O. Box 580  
Fort Collins, CO 80522.0580

970.416.2740  
970.224.6134- fax  
fcgov.com

October 26, 2017

**TO:** City Stakeholders of IECC Code Adoption

**FROM:** Russ Hovland, Chief Building Official

### **Skip 2018 Building Code adoption cycle including IECC.**

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**History:** The City of Fort Collins Energy policy requires the most current IECC to be adopted within one year of publication. Building Services adopted the 2015 I-codes in July 2017. Code adoption is an intensive process, requiring staff time, committee involvement, and public outreach. Adoption takes approximately 1 year to complete.

**Goal:** Seek support to skip the adoption of the next available series of Building Code editions (2018) and wait to adopt the 2021 series of I-Codes in 2022. This includes skipping the 2018 IECC.

#### **Issues:**

1. Due to the recent code adoption, jumping into another year long code adoption process so soon would cause strain on both staff and the construction community. Examples:
  - a. Stock plan re-review
  - b. Contractor Education
  - c. Industry Practice and Compliance
2. Investment in new code books for staff cost approximately \$10,000.
3. Because each series of I-codes is designed to work together, adopting a single 2018 code does not work well with the existing 2015 codes. Conflicts between the codes will exist.
4. Staff's review of the 2018 IECC showed that changes between the 2015 and 2018 versions are minimal.

**Suggested Solution: Change the current energy policy to allow I-code adoption, including the IECC, every other code cycle.**

#### **Reasons:**

1. Longer time between adoptions will free up department resources to focus on better overall compliance with the City's energy goals.
2. Many Building Department jurisdictions skip every other code cycle to minimize the impact of the adoption process.

3. The ISO (Insurance Rating Organization) has confirmed that a rating downgrade does not occur until a jurisdiction is 2 full code cycles behind the most recent publication (i.e. having the 2012 codes adopted in 2018). The City of Fort Collins' next ISO review is in 2018 and then again in 2022, and therefore would not receive a rating downgrade.
4. An every-other-code adoption model would align better with the BFO process, allowing for better resourcing of the involved departments.

Questions:

1. What is the intent of the policy's requirement that every code year be adopted?
2. How does this requirement affect the industry's ability to reach full compliance?
3. What is the process to change the energy policy?
4. How much time will it take?
5. What stakeholders would be affected by this change?
6. How does it affect other stakeholders?

### **Estimated Impact of Adopting 2015 Code Updates in 2018**

This analysis looks at the impact of adopting 2018 code update. This would affect buildings built in 2019, 2020, and 2021. If this update was skipped, the assumption is that it would be included in the following update.

### **Summary for buildings built in 2019, 2020, and 2021**

- **1,080 new buildings constructed**
  - 1,020 single-family, the rest being multi-family, mixed and commercial
  - estimated from past Fort Collins construction and insights from developer
- **5,000,000 ft<sup>2</sup> of added building area**
  - 2,800,000 ft<sup>2</sup> from single-family with the rest being from multi-family, mixed and commercial
  - estimated from historic Fort Collins median building area by type (using EPA Portfolio Manager types)
- **23,000,000 kWh of electricity use per year**
  - 6,800,000 kWh from single-family with the rest being from multi-family, mixed and commercial
  - estimated from historic Fort Collins electricity use per built area by type (using EPA Portfolio Manager types)
- **An additional 580,000 kWh of electricity use per year, if next code update not adopted until 2021**
  - Low / Medium / High scenarios estimated respectively at 200,000 / 580,000 / 1,000,000 kWh per year
  - Scenarios set at 1% / 3% / 5% savings for commercial and 0.8% / 2% / 4% savings for residential
  - Scenarios determined from preliminary evaluations (i.e. the high scenario was estimated by DOE)
- **Additional electricity use from not adopting code update until 2021 equivalent to 400 tons CO<sub>2e</sub> per year**
  - Low / Medium / High scenarios estimated respectively at 150 / 400 / 700 tons CO<sub>2e</sub> per year
- **Relatively low carbon savings compared to other Climate Action Plan Initiatives, but competitive cost effectiveness**
  - Climate Action Plan initiative average \$81 per tons CO<sub>2e</sub> saved
  - Low / Medium / High scenarios estimated respectively at 116 / 41 / 23 dollars per tons CO<sub>2e</sub> saved
  - Low / Medium / High scenarios estimated respectively at 0.7 / 2.1 / 3.7 benefit cost ratio
  - Assuming a one-time investment every three years of \$50,000 from the building department and additional construction cost of \$400 per building for all buildings constructed during the three years between code cycle