City of Louisville
COLORADO • SINCE 1878

City Council

Agenda

Tuesday, August 6, 2024
Council Chambers
749 Main Street
5:00 PM

Members of the public are welcome to attend and give comments remotely; however, the in-person meeting may continue even if technology issues prevent remote participation.

- *You can call in to +1 719 359 4580 or 877 853 5247 (toll free)*
  Webinar ID #876 9127 0986.
- *You can log in via your computer. Please visit the City's website here to link to the meeting: www.louisvilleco.gov/council*

The Council will accommodate public comments during the meeting. Anyone may also email comments to the Council prior to the meeting at Council@LouisvilleCO.gov.

1. CALL TO ORDER & ROLL CALL

2. EXECUTIVE SESSION

PENDING LITIGATION (Louisville Charter, Section 5-2(d) – Authorized Topics – Consultation with an attorney representing the City with respect to pending litigation, and C.R.S. 24-6-402(4)(b) for a conference with the City Attorney for the purpose of legal advice on specific legal questions concerning pending litigation

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Citizen Information

If you wish to speak at the City Council meeting in person, please fill out a sign-up card and present it to the City Clerk at the meeting; if you are attending remotely, please use the "raise hand" icon to show you wish to speak in public comments.

Persons planning to attend the meeting who need sign language interpretation, translation services, assisted listening systems, Braille, taped material, or special transportation, should contact the City Clerk's Office (303.335.4536 or 303.335.4574) or ClerksOffice@LouisvilleCO.gov. A forty-eight-hour notice is requested.

Si requiere una copia en español de esta publicación o necesita un intérprete durante la reunión del Consejo, por favor llame a la Ciudad al 303.335.4536 o 303.335.4574 o email ClerksOffice@LouisvilleCO.gov.

The City Attorney is Requesting the City Council Convene an Executive Session for the Purpose of Consultation with Respect to Pending Litigation.

- **Requests for Executive Session**
- **City Clerk Statement**
- **City Attorney Statement of Authority**
- **City Council Action on Motion for Executive Session**
- **Council Convenes Executive Session**
- **Council Reconvenes in Open Meeting**

3. REPORT – DISCUSSION/DIRECTION/ACTION – PENDING LITIGATION

THE FOLLOWING MEETING ITEMS WILL START NO EARLIER THAN 6 PM

4. PLEDGE OF ALLEGIANCE

5. APPROVAL OF AGENDA

6. PUBLIC COMMENTS ON ITEMS NOT ON THE AGENDA AND ITEMS ON THE CONSENT AGENDA

Public comments are limited to 3 minutes per speaker. When several people wish to speak on the same position on a given item, Council requests they select a spokesperson to state that position.

7. CONSENT AGENDA

The following items on the City Council Agenda are considered routine by the City Manager and shall be approved, adopted, accepted, etc., by motion of the City Council and voice vote unless the Mayor or a City Council person specifically requests an item be considered under "Regular Business." In such an event the item shall be removed from the "Consent Agenda" and Council action taken separately on said item in the order appearing on the Agenda. Those items so approved under the heading "Consent Agenda" will appear in the Council Minutes in their proper order.

A. Approval of Bills
B. Approval of Resolution No. 31, Series 2024 – A Resolution Approving an Amended and Restated Agreement for Economic Development services with the Boulder SBDC Foundation for Services to Benefit the Louisville Business Community
C. Approval of Proclamation for Louisville, Colorado Italian-American Heritage Day
D. Approval of Resolution No. 32, Series 2024 – A Resolution Approving a Financing Option in Connection with the Windy Gap Project
E. Approval of City Manager Recruiter Request for Proposals

8. COUNCIL INFORMATIONAL COMMENTS ON PERTINENT ITEMS NOT ON THE AGENDA (Council general comments are scheduled at the end of the Agenda.)

9. CITY MANAGER'S REPORT

10. REGULAR BUSINESS

A. ORDINANCE NO. 1881, SERIES 2024 – AN ORDINANCE APPROVING THE VACATION OF EXISTING DRAINAGE EASEMENT LOCATED ON LOTS 8 AND 9 OF THE AMENDED PLAT OF PARKWOOD FILING NO. 2 – 1ST READING – SET PUBLIC HEARING 8/20/2024

- Introduction
- Action

B. RESOLUTION NO. 33, SERIES 2024 – A RESOLUTION PROVIDING FOR THE CONTINUATION OF THE AMENDED DECLARATION OF STAGE 2 FIRE RESTRICTIONS FOR THE CITY OF LOUISVILLE

- Staff Presentation
- Public Comments (Please limit to three minutes each)
- Council Questions & Comments
- Action

C. RESOLUTION NO. 34, SERIES 2024 – A RESOLUTION APPROVING A BUSINESS ASSISTANCE AGREEMENT WITH DILLON COMPANIES, LLC FOR AN ECONOMIC DEVELOPMENT PROJECT IN THE CITY OF LOUISVILLE

- Staff Presentation
- Public Comments (Please limit to three minutes each)
- Council Questions & Comments
- Action

D. ORDINANCE NO. 1876, SERIES 2024 – AN ORDINANCE AMENDING CHAPTER 15.18.030 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE – 2nd READING – PUBLIC HEARING (advertised *Daily Camera* 7/14/24)

- Mayor Opens Public Hearing
- Staff Presentation

- Public Comments (Please limit to three minutes each)
- Council Questions & Comments
- Additional Public Comments (Please limit to three minutes each)
- Mayor Closes Public Hearing
- Action

E. ORDINANCE NO. 1877, SERIES 2024 – AN ORDINANCE AMENDING TITLE 17 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING ELECTRIC VEHICLE CHARGING INFRASTRUCTURE CODE – 2nd READING – PUBLIC HEARING (advertised *Daily Camera* 7/14/24)

- Mayor Opens Public Hearing
- Staff Presentation
- Public Comments (Please limit to three minutes each)
- Council Questions & Comments
- Additional Public Comments (Please limit to three minutes each)
- Mayor Closes Public Hearing
- Action

F. ORDINANCE NO. 1878, SERIES 2024 – AN ORDINANCE EXEMPTING CONSTRUCTION MATERIALS FROM THE CITY'S USE TAX FOR BUILDING PERMITS ISSUED FOR REPAIR AND RECONSTRUCTION OF FENCES, WALLS, AND ACCESSORY STRUCTURES THAT SUSTAINED FIRE, SMOKE, HEAT, WATER, ASH OR OTHER DAMAGE AS A RESULT OF THE MARSHALL FIRE – 2nd Reading – PUBLIC HEARING (advertised *Daily Camera* 7/21/24)

- Mayor Opens Public Hearing
- Staff Presentation
- Public Comments (Please limit to three minutes each)
- Council Questions & Comments
- Additional Public Comments (Please limit to three minutes each)
- Mayor Closes Public Hearing
- Action

G. THIRD REPLAT OF THE ENCLAVE AND EASEMENT VACATION TO ADJUST THE LOCATION OF THE LOT LINE BETWEEN 1147 AND 1149 W ENCLAVE

i. ORDINANCE NO. 1879, SERIES 2024 – AN ORDINANCE APPROVING THE VACATION OF AN EXISTING DRAINAGE EASEMENT LOCATED ON LOTS 3 AND 4,

BLOCK 1 OF THE ENCLAVE REPLAT

ii. RESOLUTION NO. 35, SERIES 2024 – A RESOLUTION APPROVING THE THIRD REPLAT OF THE ENCLAVE AND EASEMENT VACATION

- Mayor Opens Public Hearing
- Staff Presentation
- Public Comments (Please limit to three minutes each)
- Council Questions & Comments
- Additional Public Comments (Please limit to three minutes each)
- Mayor Closes Public Hearing
- Action

H. ORDINANCE NO. 1880, SERIES 2024 – AN ORDINANCE REPEALING SECTION 13.12.105 TO ELIMINATE A WATER USE REBATE PROGRAM – 2nd Reading – PUBLIC HEARING (advertised *Daily Camera* 7/21/24)

- Mayor Opens Public Hearing
- Staff Presentation
- Public Comments (Please limit to three minutes each)
- Council Questions & Comments
- Additional Public Comments (Please limit to three minutes each)
- Mayor Closes Public Hearing
- Action

I. APPOINTMENT TWO COUNCILMEMBERS TO CONDUCT EVALUATIONS OF MUNICIPAL JUDGE AND PROSECUTING ATTORNEY

- Staff Presentation
- Public Comments (Please limit to three minutes each)
- Council Questions & Comments
- Action

11. CITY ATTORNEY'S REPORT

12. COUNCIL COMMENTS, COMMITTEE REPORTS, AND IDENTIFICATION OF FUTURE AGENDA ITEMS

13. ADJOURN

ITEMS TENTATIVELY SCHEDULED FOR REGULAR MEETING 8/20/24.

This list is not inclusive; items are subject to change; additional items may be added.

- Redtail Ridge Plat
- Harper Minor Subdivision Easement Vacation, 2nd Reading
- 917 Rex Landmark & Grant
- Update OSAB/PPLAB Quasi-Judicial Role, 1st Reading
- Business Assistance Packet for Recycled Photo
- Water Treatment Plant Design Project
- Assignment of Private Activity Bonds

CASH ACCOUNT: 001000 101001 WARRANT: 071124 07/11/2024

VENDOR	VENDOR NAME	PURPOSE	AMOUNT
10773	CENTRIC ELEVATOR CORP	ACCT #164400 MONTHLY MAIN	362.15
10773	CENTRIC ELEVATOR CORP	ACCT #156501 MONTHLY MA	323.50
14621	CHAD ROOT	PER DIEM 8/14/24-8/17/24	176.50
1205	COLORADO DEPT OF REVENUE	Q2 2024 SALES TAX	20,033.50
10056	COLORADO DOORWAYS INC	City Hall South Door Repa	4,090.00
5255	FAMILY SUPPORT REGISTRY	Payroll Run 1 - Warrant 0	173.53
15867	GOVOS, INC.	ACH FEE PER SUTS 5/1/22-4	154.00
15867	GOVOS, INC.	ACH FEE PER SUTS 5/1/23 -	212.00
15626	HORNUCOPIA MUSIC ENTERPRISES,	SUMMER CONCERTS IN THE PA	1,900.00
15858	LIFETIME PRODUCTS, INC.	ORDER #624838Q	2,999.70
99999	IDA BODIZS	RETURNED ACH - PP14 2024	65.64
99999	JUDI KERN	REIMBURSE PER DIEM & MILE	158.45
99999	JUDI KERN	REFUND TRAVEL 6/5/24 - 6/	449.97
99999	JUDI KERN	REFUND MILEAGE 5/29/24 LO	20.10
99999	JUDI KERN	MILEAGE 4/26/24 - 4/27/24	27.20
670	RESOURCE CENTRAL	2024 Water Conservation P	22,591.75
15621	ROBIN AUSTEN LOPATE	SUMMER CONCERTS IN THE PA	100.00
15866	THE SHORTLINE LOUISVILLE	HISTORIC PRESERVATION 115	4,000.00
14065	TYLER TECHNOLOGIES INC	CUST #49183	141.07
11094	WESTERN DISPOSAL SERVICES	TICKET #2421870 & #241936	157.77
10884	WORD OF MOUTH CATERING INC	LUNCHES SERVED 7/4/24 - 7	1,201.25
15860	WRENN VAN MUSIC LLC	ENTERTAINMENT 7/13/24	1,600.00
3875	XCEL ENERGY	ACCT #53-1879596-1	35,383.84
3875	XCEL ENERGY	ACCT #53-1879593-8	129.34
13790	ZAYO GROUP LLC	ACCT #936665	800.68
	25 INVOICES	WARRANT TOTAL	97,251.94

CASH ACCOUNT: 001000 101001 WARRANT: 071124A 07/11/2024

VENDOR	VENDOR NAME	PURPOSE	AMOUNT
15641	LONERS LLC	2024-2025 Ice Rink manage	204,362.00
	1 INVOICES	WARRANT TOTAL	204,362.00

CASH ACCOUNT: 001000 101001 WARRANT: 071824 07/18/2024

VENDOR	VENDOR NAME	PURPOSE	AMOUNT
15874	ALEX ZERBE ENTERTAINMENT LLC	ZANIC COMEDY SHOW 7/22/24	550.00
15841	ANTON JAMES MEICK	SUMMER CONCERTS IN THE PA	100.00
15840	CARD CATALOG LLC	SUMMER CONCERTS IN THE PA	1,500.00
11298	DELTA DENTAL OF COLORADO	007562-0001 AUG 2024 EMPL	15,237.45
15523	GOLF GURU LLC	GOLF LESSONS 6/29/24 - 7/	1,365.00
6455	KAISER PERMANENTE	05920-01-16 AUG 2024 EMPL	190,967.15
15634	MAUREEN SCHREINER	GOLF LESSONS 6/29/24 - 7/	2,499.00
14801	MELENDEZ GOLF LLC	GOLF LESSONS 6/29/24 - 7/	7,700.00
99999	APEX TITLE	UTILITY REFUND - 550 W. W	114.30
99999	FIRST AMERICAN TITLE	UTILITY REFUND 1841 SWEE	123.62
99999	LOWE'S SITE #220	UTILITY REFUND 1171 W. D	1,711.32
99999	LOWE'S SITE #220	UTILITY REFUND 1171 1/4	99.02
99999	LAND TITLE	UTILITY REFUND 1380 GOLD	90.20
99999	MICHAEL NIYOMPONG	UTILITY REFUND 555 RIDGE	66.25
99999	PE ALASKA LLC	UTILITY REFUND 665 W. SA	216.48
15377	PC SERVICE SPECIALISTS, INC.	6/20/24 - 6/19/25 ANNUAL	6,015.00
14867	REBECCA L BENNETTI	6/29/24 WILLMAKER CLASS	700.00
15154	RULE4 INC	2/29/24 IR PLAN, TRAINING	1,950.00
15154	RULE4 INC	2/4 KICKOFF 2/29 MONTHLY	1,535.52
15154	RULE4 INC	3/31/24 MONTHLY RETAINER	1,535.52
15154	RULE4 INC	4/30/24 IR PLAN, TRAINING	1,300.00
15154	RULE4 INC	4/30/24 MONTHLY RETAINER	1,535.52
15154	RULE4 INC	5/31/24 MONTHLY RETAINER	1,535.52
15154	RULE4 INC	6/30/24 IR PLAN, TRAINING	1,625.00
15497	SENERGY PETROLEUM LLC	CUST ID #84628	851.72
10884	WORD OF MOUTH CATERING INC	LUNCHES SERVED 7/10/24 -	2,153.75
3875	XCEL ENERGY	ACCT #53-1879595-0	742.84
	27 INVOICES	WARRANT TOTAL	243,820.18

CASH ACCOUNT: 001000 101001 WARRANT: 072524 07/25/2024

VENDOR	VENDOR NAME	PURPOSE	AMOUNT
15864	DRY BOX INC.	Conex Storage Container	3,700.00
5255	FAMILY SUPPORT REGISTRY	Payroll Run 1 - Warrant 0	173.53
14760	GRANICUS LLC	Gov Delivery Subscription	15,322.92
14760	GRANICUS LLC	GOV DELIVERY SUBSCRIPTION	36,091.25
15835	JOHN BREWSTER SHEEHAN LLC	SENIOR DINNER 8/30/24	350.00
14002	KANSAS PAYMENT CENTER/ SN20DM0	Payroll Run 1 - Warrant 0	17.22
15848	KELLY HUNT	KELLY HUNT CONCERT 8/22/2	650.00
9750	LEGALSHIELD	#22554 JUL 2024 EMPLOYEE	1,082.50
7735	LINCOLN FINANCIAL GROUP	000400001000-26902 JUL 20	1,842.30
7735	LINCOLN FINANCIAL GROUP	000010008469 AUG 2024 LIF	7,944.94
7735	LINCOLN FINANCIAL GROUP	000010008470 AUG 2024 LTD	5,226.93
7735	LINCOLN FINANCIAL GROUP	B00000001696 JULY 2024 AC	1,642.60
7758	MICHAEL MILLER	RETURNED ACH-PP15 2024	175.00
15856	NESLEN ENTERPRISES LLC	BAL DUE - SCREEN RENTAL 7	1,399.50
99999	LAURA JASIEWICZ	MILEAGE JULY 2024	177.89
99999	SCHAFFER CONSTRUCTION LLC	LANDSCAPE DEFERMENT RELEA	87,704.00
14580	PARK PLACE TECHNOLOGIES LLC	CUST ID #0128537 RENEWAL	2,765.76
10951	PINNACOL ASSURANCE	POLICY #4206615	30,298.73
15497	SENERGY PETROLEUM LLC	CUST ID #84627	17,909.73
7917	THE AQUEOUS SOLUTION INC	BLEACH	444.85
7917	THE AQUEOUS SOLUTION INC	BLEACH	811.00
8442	VISION SERVICE PLAN	12059727 AUG 2024 EMPLOYE	1,786.06
8442	VISION SERVICE PLAN	12059727 AUG 2024 EMPLOYE	1,764.16
14373	WEIFIELD GROUP CONTRACTING INC	6/17/24 ELECTRICAL SERVIC	1,428.16
14373	WEIFIELD GROUP CONTRACTING INC	4/18/24 ELECTRICAL SERVI	1,195.00
14373	WEIFIELD GROUP CONTRACTING INC	5/29/24 ELECTRICAL SERVIC	1,390.00
10884	WORD OF MOUTH CATERING INC	LUNCHES SERVED 7/18/24 -	2,171.25
10884	WORD OF MOUTH CATERING INC	BREAKFAST BURRITOS 7/10/2	760.00
	28 INVOICES	WARRANT TOTAL	226,225.28

CASH ACCOUNT: 001000 101001 WARRANT: 080624 08/06/2024

VENDOR	VENDOR NAME	PURPOSE	AMOUNT
14599	120 WATER, INC.	COMPLIANCE SAMPLING 4/19/	5,873.20
14599	120 WATER, INC.	ANNUAL SOFTWARE PLATFORM	136.03
13547	A G WASSENAAR INC	JUNE 2024 PROJ #241802F-	765.00
13547	A G WASSENAAR INC	PROJ #242647A-2024 STREET	11,275.00
14547	ADIDAS AMERICA INC	CUST #38058001	158.00
14547	ADIDAS AMERICA INC	CUST #38058001	111.00
14547	ADIDAS AMERICA INC	CUST #38058001	894.00
14547	ADIDAS AMERICA INC	CUST #38058001	729.00
14547	ADIDAS AMERICA INC	CUST #38058001	-980.00
14547	ADIDAS AMERICA INC	ACCT #38058000	-682.00
14828	ADVANCED FIBER RESPONSE INC	FIBER FOR CITY SERVICES C	9,930.16
15449	AECOM TECHNICAL SERVICES, INC.	6/8/24-7/12/24 Lot Gradin	1,230.50
14623	ANOTHER MILESTONE LLC	JUNE 2024 YOUTH SPORTS	9,967.00
11455	APC CONSTRUCTION CO LLC	SERVICES THROUGH 6/30/24	758,257.68
13556	AQUATIC CHEMICAL SOLUTIONS INC	SEAL KIT FOR HOT TUB PUMP	1,402.73
13881	ASLAN CONSTRUCTION INC	PROJ #2300	134,729.00
15803	AUSMUS LAW FIRM, P.C.	JULY 2024 PROSECUTING ATT	1,500.00
15880	AUTISM COMMUNITY STORE	SENSORY ITEMS FOR MUSEUM	205.90
10801	BADGER METER INC	CUST #51080	108.00
500	BAKER AND TAYLOR	ACCT #415337 L121376 4 B0	24.99
500	BAKER AND TAYLOR	ACCT #415337 L121376 4 B0	22.21
500	BAKER AND TAYLOR	ACCT #415337 L121376 4 B0	52.20
500	BAKER AND TAYLOR	ACCT #415337 L121376 4 B0	119.95
15255	GREEN LANDSCAPE SOLUTION	PO #EST4757025	7,106.00
15566	BIOBAG AMERICAS, INC	SALES ORDER #SO22142	822.00
14251	BK TIRE INC	TRAILER TIRES #6116	504.12
14251	BK TIRE INC	EQUIPMENT TIRES #6117	293.60
14251	BK TIRE INC	CREDIT FOR INV #32087	-20.00
14251	BK TIRE INC	EQUIPMENT TIRES #5380	427.12
14251	BK TIRE INC	EQUIPMENT TIRES #5374	504.12
14251	BK TIRE INC	VEHICLE TIRES #3429	868.40
14140	BLUE RIVER FORESTRY & TREE CAR	JISCHER FARMS 50124	2,400.00
14140	BLUE RIVER FORESTRY & TREE CAR	COTTONWOOD REMOVAL - LAKE	1,700.00

CASH ACCOUNT: 001000 101001 WARRANT: 080624 08/06/2024

VENDOR	VENDOR NAME	PURPOSE	AMOUNT
11605	BOBCAT OF THE ROCKIES LLC	ACCT #021884	42.48
640	BOULDER COUNTY	JUNE 2024 BC CO-RESPONDER	18,845.41
640	BOULDER COUNTY	BOULDER COUNTY USE TAX JU	602,004.13
15204	BOULDER COUNTY PUBLIC WORKS	JUNE 2024 GATE FEES CUST	1,427.20
8371	BOULDER VALLEY SCHOOL DISTRICT	JUNE 2024 CAMP BUSES	1,789.32
7706	BRANNAN SAND & GRAVEL CO LLC	CUST #1488	3,159.46
7706	BRANNAN SAND & GRAVEL CO LLC	ACCT #1488	671.07
7706	BRANNAN SAND & GRAVEL CO LLC	CUST #1488	120.00
7706	BRANNAN SAND & GRAVEL CO LLC	CUST #1488	608.40
1122	BRETSA	6/4/24 & 6/11/24 INTERPRE	34.74
1155	BROOMFIELD RENTALS INC	ACCT #148	66.00
13344	BROWNS HILL ENGINEERING & CONT	PROJ #24-117 SERVICE WORK	2,135.50
14403	CALLAWAY GOLF	ACCT #18883	264.52
248	CDW GOVERNMENT	CUST #5143572	106.19
248	CDW GOVERNMENT	CUST #5143572	363.60
248	CDW GOVERNMENT	CUST #5143572	1,715.19
248	CDW GOVERNMENT	CUST #5143572	425.90
248	CDW GOVERNMENT	CUST #5143572	699.61
15577	CELEBRATE EDU	BAL DUE ART GRANT	1,000.00
10773	CENTRIC ELEVATOR CORP	ACCT #156502 LIBRARY	606.62
10773	CENTRIC ELEVATOR CORP	ACCT #156501 POLICE	323.50
10773	CENTRIC ELEVATOR CORP	ACCT #156600 REC CENTER	365.35
10773	CENTRIC ELEVATOR CORP	ACCT #164400 CITY HALL	362.15
2220	CHEMTRADE CHEMICALS US LLC	ACCT #580079692	6,703.26
2220	CHEMTRADE CHEMICALS US LLC	CUST #401485	6,659.59
8533	CHURCHICH RECREATION LLC	PLAYGROUND PARTS	2,171.30
4785	CINTAS CORPORATION #66	CUST #12522401	361.62
4785	CINTAS CORPORATION #66	CUST #12522401	361.62
4785	CINTAS CORPORATION #66	CUST #12522401	361.62
14849	CLEMENTINE TOWNHOMES LLC	REFUND ROW PERMITS 0827-2	948.53
14849	CLEMENTINE TOWNHOMES LLC	Clementine Commons - City	9,606.00
13260	CLIFTON LARSON ALLEN LLP	ACCT #A509999	16,288.47
10813	COLO ASSOC OF CHIEFS OF POLICE	MEMBERSHIP RENEWAL	1,400.00

CASH ACCOUNT: 001000 101001 WARRANT: 080624 08/06/2024

VENDOR	VENDOR NAME	PURPOSE	AMOUNT
1120	COLORADO ANALYTICAL LABORATORY	CITY OF LOUISVILLE CO0107	32.40
1120	COLORADO ANALYTICAL LABORATORY	CITY OF LOUISVILLE CO0107	156.00
1120	COLORADO ANALYTICAL LABORATORY	WWTP - INFLUENT - WEEKLY	126.00
1120	COLORADO ANALYTICAL LABORATORY	WWTP - INFLUENT - WEEKLY	126.00
1120	COLORADO ANALYTICAL LABORATORY	WWTP - INFLUENT - WEEKLY	126.00
1120	COLORADO ANALYTICAL LABORATORY	WWTP - EFFLUENT - LL HG -	107.10
1120	COLORADO ANALYTICAL LABORATORY	WWTP REG 85 MONTHLY	436.51
1120	COLORADO ANALYTICAL LABORATORY	WWTP - REUSE - MONTHLY	184.50
1120	COLORADO ANALYTICAL LABORATORY	WWTP - EFFLUENT - QUARTER	643.50
1120	COLORADO ANALYTICAL LABORATORY	WWTP UPSTREAM METALS QUAR	282.60
1120	COLORADO ANALYTICAL LABORATORY	WWTP SOLIDS MONTHLY	240.00
10056	COLORADO DOORWAYS INC	RV DUMP SITE SERVICE CALL	140.00
15761	COLORADO OUTHOUSE LLC	CUST ID #C147	546.25
15761	COLORADO OUTHOUSE LLC	CUST ID #C147	287.50
15761	COLORADO OUTHOUSE LLC	CUST ID #C147	241.50
15761	COLORADO OUTHOUSE LLC	CUST ID #C147	241.50
15761	COLORADO OUTHOUSE LLC	CUST ID #C147	241.50
15761	COLORADO OUTHOUSE LLC	CUST ID #C147	287.50
15761	COLORADO OUTHOUSE LLC	CUST ID #C147	287.50
15761	COLORADO OUTHOUSE LLC	CUST ID #C147	241.50
15761	COLORADO OUTHOUSE LLC	CUST ID #C147	287.50
15761	COLORADO OUTHOUSE LLC	CUST ID #C147	287.50
15845	CONCORD TECHNOLOGIES	ACCT #1008561	361.30
13162	CORE & MAIN LP	ACCT #103796	4,176.63
13162	CORE & MAIN LP	ACCT #103796	495.40
13162	CORE & MAIN LP	ACCT #103796	840.92
13162	CORE & MAIN LP	ACCT #103796	2,736.46
13162	CORE & MAIN LP	ACCT #103796	2,206.00
13162	CORE & MAIN LP	ACCT #103796	3,682.44
13162	CORE & MAIN LP	ACCT #103796	2,254.00
13162	CORE & MAIN LP	ACCT #103796	111.60
13162	CORE & MAIN LP	ACCT #103796	4,159.16
15304	CORONA ENVIRONMENTAL CONSULTIN	JUNE 2024	4,395.00
9973	CPS DISTRIBUTORS INC	ACCT #12010000	366.35
9973	CPS DISTRIBUTORS INC	ACCT #12010000	389.73
9973	CPS DISTRIBUTORS INC	ACCT #12010000	55.00
9973	CPS DISTRIBUTORS INC	ACCT #12010000	596.44
9973	CPS DISTRIBUTORS INC	ACCT #12010000	156.94
15830	CRANE REPAIR COMPANY INC.	ANNUAL OSHA INSPECTION	1,423.51
15818	CREATIVE DANCE KIDS	HIP HOP SUMMER 1 K-5TH	330.00

CASH ACCOUNT: 001000 101001 WARRANT: 080624 08/06/2024

VENDOR	VENDOR NAME	PURPOSE	AMOUNT
15190	DANIEL LASHER	JULY ASL TRANSLATION FOR	661.64
14182	DAWSON INFRASTRUCTURE SOLUTION	REEL SWIVEL	358.28
11476	DBC IRRIGATION SUPPLY	CUST #1268	298.46
11476	DBC IRRIGATION SUPPLY	CUST #1268	80.84
11476	DBC IRRIGATION SUPPLY	CUST #1268	595.76
11476	DBC IRRIGATION SUPPLY	CUST #1268	75.10
11476	DBC IRRIGATION SUPPLY	CUST #1268	89.70
15149	DENALI WATER SOLUTIONS LLC	CUST #1120056 TRANSPORT-	2,047.03
15149	DENALI WATER SOLUTIONS LLC	CUST #1120056 TRANSPORT-	1,014.06
15149	DENALI WATER SOLUTIONS LLC	CUST #1120056 TRANSPORT-	1,066.19
15149	DENALI WATER SOLUTIONS LLC	CUST #1120056 TRANSPORT-	2,101.73
15689	DENVER WINPUMP CO	CUST #00321-002908	960.00
15683	DESIGN WORKSHOP, INC.	JUNE 2024 PROJ #007131.0	9,142.50
13929	DHE COMPUTER SYSTEMS LLC	ACCT #C00004557	4,908.38
15561	DIANA WALLEY	NUTRITION COACHING PACKAG	227.00
15193	ECS IMAGING INC	ANNUAL RENEWAL 8/1/24 - 7	2,000.00
11037	ENVIRONMENTAL RESOURCE ASSOCIA	ACCT #C449601	544.65
11545	EVOQUA WATER TECHNOLOGIES LLC	CUST #1035400	2,482.00
11545	EVOQUA WATER TECHNOLOGIES LLC	CUST #1035400	24,179.41
14606	FEHR AND PEERS	6/1/24 - 6/28/24 DRCOG TE	1,547.50
14606	FEHR AND PEERS	11/26/22 - 12/30/22 PROJ	1,810.00
14070	FORENSIC TRUTH VERIFICATION GR	PRE-EMPLOYMENT 24-0968	165.00
14070	FORENSIC TRUTH VERIFICATION GR	PRE-EMPLOYMENT POLYGRAPHS	330.00
15863	FRESHLY LAID FOOD TRUCK LLC	FOOD TRUCK 6/26/24	1,500.00
15358	FRONT RANGE WINWATER WORKS CO	CUST #00369-001891	1,552.81
14936	GOLDEN AUTOMATION LLC	ETHERNET MIGRATION	2,866.70
2310	GRAINGER	ACCT #802864512	85.58
246	GREEN MILL SPORTSMAN CLUB	RANGE USE 6/18/24	150.00
2405	HACH COMPANY	ACCT #094039	3,177.00
2405	HACH COMPANY	ACCT #094039	-1,058.00
2415	HARCROS CHEMICALS INC	CUST #01605450-GOL10	1,396.50

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VENDOR	VENDOR NAME	PURPOSE	AMOUNT
2415	HARCROS CHEMICALS INC	CUST #01605450-GOL10	931.00
2415	HARCROS CHEMICALS INC	CUST #01605450-GOL10	931.00
2415	HARCROS CHEMICALS INC	CUST #01605450-GOL10	931.00
15820	HARRELL'S, INC.	CUST #CITLOU	1,392.89
14138	HORIZON WEST BUILDERS INC	REFUND HYDRANT METER RENT	2,350.00
15619	ICON ENGINEERING INC	SERVICES THROUGH 6/28/24	307.50
15261	WESTERN PAPER DISTRIBUTORS	CUST ID #244097	365.04
15261	WESTERN PAPER DISTRIBUTORS	CUST ID #244097	145.53
15261	WESTERN PAPER DISTRIBUTORS	CUST ID #244097	175.22
15261	WESTERN PAPER DISTRIBUTORS	CUST ID #244097	145.53
15261	WESTERN PAPER DISTRIBUTORS	CUST ID #244097	695.58
15261	WESTERN PAPER DISTRIBUTORS	CUST ID #244097	291.72
15261	WESTERN PAPER DISTRIBUTORS	CUST ID #244097	283.26
15261	WESTERN PAPER DISTRIBUTORS	CUST ID #244097	113.95
15261	WESTERN PAPER DISTRIBUTORS	CUST ID #244097	174.99
15261	WESTERN PAPER DISTRIBUTORS	CUST ID #244097	333.96
15261	WESTERN PAPER DISTRIBUTORS	CUST ID #244097	4,042.99
9710	INDUSTRIAL CHEMICALS CORP	CUST #4218000	17,828.76
15189	INNOVATIVE UTILITY SOLUTIONS L	2024 Water meters	13,720.79
13280	INSIGHT PUBLIC SECTOR INC	ACCT #10669545	71.56
13280	INSIGHT PUBLIC SECTOR INC	ACCT #10669545	1,459.79
13778	INVISION GIS LLC	JUNE 2024	2,538.75
14239	JC GOLF ACCESSORIES	ACCT #COALCRK	174.04
14239	JC GOLF ACCESSORIES	ACCT #COALCRK	195.82
14239	JC GOLF ACCESSORIES	ACCT #COALCRK	186.68
11289	JVA INC	MAY 2024 PROJ #240803.EN	536.00
11289	JVA INC	JUNE 2024 PROJ #240871.E	978.00
11289	JVA INC	June 2024 WTP Chlorine D	11,717.40
15238	SNAPOLOGY OF GOLDEN-LITTLETON	SNAPOLOGY MINECRAFT 7/15/	1,417.50
15506	KIDCREATE STUDIO BROOMFIELD	PET SHOP SUMMER CAMP 7/8/	1,323.00
15862	KIDOKINETICS NORTH DENVER	6/3/24 - 6/29/24 SUMMER C	720.00
15862	KIDOKINETICS NORTH DENVER	6/3/24 - 6/29/24 SUMMER C	720.00
14219	KIMLEY-HORN AND ASSOCIATES INC	SERVICES THROUGH 5/31/24	91,064.63
14219	KIMLEY-HORN AND ASSOCIATES INC	JUNE 2024 Design & Const	8,277.50
15633	KRISCHE CONSTRUCTION, INC.	PROJ #24046 PERIOD ENDI	104,773.43

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VENDOR	VENDOR NAME	PURPOSE	AMOUNT
6464	LAND TITLE GUARANTEE CO	REFUND UTILITIES 1040 LA	25.00
15415	LEVITATE JUMP ROPE T	5/20/24-6/20/24 LEVITATE	238.00
3070	LL JOHNSON DISTRIBUTING CO	MEDIUM SAIL BLADE	74.97
3070	LL JOHNSON DISTRIBUTING CO	BLADE RETAINER	136.61
3070	LL JOHNSON DISTRIBUTING CO	CUST #158907	49.82
3070	LL JOHNSON DISTRIBUTING CO	CUST #158907	3,977.31
3070	LL JOHNSON DISTRIBUTING CO	CUST #158907	63.16
5432	LOUISVILLE FIRE PROTECTION DIS	BLOOD DRAW 6/29/24	35.00
5432	LOUISVILLE FIRE PROTECTION DIS	BLOOD DRAW 7/4/24	70.00
5432	LOUISVILLE FIRE PROTECTION DIS	BLOOD DRAW 7/8/24	35.00
5432	LOUISVILLE FIRE PROTECTION DIS	JUNE 2024 FIRE PROT DISTR	10,410.00
5432	LOUISVILLE FIRE PROTECTION DIS	PATIENT TRANSFER 7/5/24	250.00
15723	MAGDO MUSIC	CUST ID #LSVLREC	714.00
10630	MARVS QUALITY TOWING INC	5/2/24 VINC #C5082777	2,042.50
6939	MCCANDLESS TRUCK CENTER LLC	CUST #100743	4,903.46
13703	MCDONALD FARMS ENTERPRISES INC	CUST #30-0004131	1,634.00
15526	MINES AND ASSOCIATES INC.	CUST ID #LOUISVILLE	1,721.60
14918	MIZUNO USA INC - NDC	CUST #161027	180.87
14918	MIZUNO USA INC - NDC	CUST #161027	1,189.58
11061	MOUNTAIN PEAK CONTROLS INC	LIFT STATION LEVEL TRANSM	1,400.00
15856	NESLEN ENTERPRISES LLC	JUNE 224 ACCT #CITY OF L	3,236.84
13926	NICOLETTI-FLATER ASSOCIATES PL	CONSULTATION & COUNSELING	330.00
14370	NORTHWESTERN UNIVERSITY	DIGIOVANNI ID #CPS133000	1,100.00
14370	NORTHWESTERN UNIVERSITY	BLACKNEY CPS133001 7/2	1,100.00
99999	MARK MCDERMOTT	REFUND LOUISVILLE REC CEN	306.00
99999	EUNHEI CHO	REFUND LOUISVILLE REC CEN	99.00
99999	GORDANA DUKOVIC	REFUND LOUISVILLE REC CEN	50.00
99999	SUSTAINABLE IMPROVEMENTS	REFUND LIC #LSVL-005115-2	116.00
99999	MARK WIRANOWSKI AND MELISSA J.	MARSHALL FIRE USE TAX CR	24,090.00
99999	ICEM, LLC	REFUND HYDRANT METER RENT	2,450.00
99999	HAUSMANN CONSTRUCTION	APERTURE 23-304 HYDRANT	1,000.00
99999	DUSTY ANDERSON	REFUND LOUISVILLE REC CEN	70.00
99999	ROY & WILCO	REFUND HYDRANT #461396	1,850.00
99999	JHL CONSTRUCTORS	REFUND HYDRANT #17612550	2,200.00
99999	LINDA NELSON	REFUND LOUISVILLE REC CEN	78.00

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VENDOR	VENDOR NAME	PURPOSE	AMOUNT
99999	DAVID SUMMERS	MARHSALL FIRE USE TAX CR	1,133.48
99999	BRIAN SMITH	REFUND LOUISVILLE REC CEN	27.00
99999	WESTERN GOLF HOSPITALITY	50% REIMB FOR EQUIP SPLIT	1,222.00
14481	ONTOGOLF LLC	PI KIT DISPLAY	632.76
14899	OTAK INC	SERVICES THROUGH 6/30/24	10,208.00
14899	OTAK INC	MF Site Supervisor Servic	9,547.00
15755	P&W GOLF SUPPLY LLC	ACCT #126010	1,072.05
14144	PING INC	CUST #40692	73.81
14144	PING INC	CUST #40692	151.65
14144	PING INC	CUST #40692	124.93
14144	PING INC	Cust #40692	260.78
14555	POLICY CONFLUENCE INC	2024 Resident Survey	16,000.00
13792	POLLARDWATER	CUST #45446	1,063.53
13317	POTESTIO BROTHERS EQUIPMENT	ACCT #19374	24.30
14394	PROS PLUS LLC	SENIOR SOFTBALL UMPIRE	95.00
14394	PROS PLUS LLC	SENIOR SOFTBALL UMPIRE	95.00
14394	PROS PLUS LLC	SENIOR SOFTBALL UMPIRE	95.00
13549	PUSH PEDAL PULL INC	CUST #0002335	6,654.00
13549	PUSH PEDAL PULL INC	CUST #0002335	292.03
13549	PUSH PEDAL PULL INC	Maintenance on weight and	3,277.94
15859	QUALITY COUNTS LLC	CO42 Traffic Counts	5,900.00
14078	RANGE SERVANT AMERICA INC	CUST ID #COAL CREEK	243.88
14078	RANGE SERVANT AMERICA INC	CUST ID #COAL CREEK	758.80
11325	RENNER SPORTS SURFACES	Mission Greens tennis cou	83,823.25
14844	REPUBLIC SERVICES INC #535	ACCT #3-0535-9535390	131,822.41
14844	REPUBLIC SERVICES INC #535	ACCT #3-0535-0109715	5,367.93
670	RESOURCE CENTRAL	2024 Water Conservation P	11,534.92
15150	RITA VALI CERAMICS	COMMUNITY RESILIENCE SCUL	7,500.00
13419	ROADSAFE TRAFFIC SYSTEMS CORP	CUST #11720 RES PARKING	152.68
13419	ROADSAFE TRAFFIC SYSTEMS CORP	CUST #11720 30x30 AFEG/B	759.80
13419	ROADSAFE TRAFFIC SYSTEMS CORP	CUST #11720 Signs and Th	690.00
13419	ROADSAFE TRAFFIC SYSTEMS CORP	CUST #11720 Signs and Th	85.94
15296	ROCKSOL CONSULTING GROUP INC	2/23/24-4/30/24 PROJ #73	696.07

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VENDOR	VENDOR NAME	PURPOSE	AMOUNT
15154	RULE4 INC	JUNE 2024	1,535.52
13912	SERVPRO OF GREATER BOULDER	GREASE CLEANUP	2,926.40
14818	SITEONE LANDSCAPE SUPPLY LLC	CUST #290129	564.24
7766	SNAP-ON TOOLS	Fleet Diagnostic Tool	3,995.00
13059	SPRAGUE PEST SOLUTIONS	7/9/24 WATER TRMT S WT SO	90.75
13059	SPRAGUE PEST SOLUTIONS	7/9/24 WATER TRMT N WT NO	82.50
13059	SPRAGUE PEST SOLUTIONS	7/11/24 REC/SENIOR CENTER	105.00
13059	SPRAGUE PEST SOLUTIONS	7/9/24 POLICE DEPT	75.00
13059	SPRAGUE PEST SOLUTIONS	7/9/24 CITY HALL	82.50
13059	SPRAGUE PEST SOLUTIONS	7/5/24 MUSEUM	75.00
13059	SPRAGUE PEST SOLUTIONS	7/5/24 ART CENTER & MS	75.00
13059	SPRAGUE PEST SOLUTIONS	7/15/24 CITY SERVICES	145.00
13059	SPRAGUE PEST SOLUTIONS	7/9/24 WASTE WATER TRMT	82.50
13059	SPRAGUE PEST SOLUTIONS	7/5/24 LIBRARY	75.00
13059	SPRAGUE PEST SOLUTIONS	7/19/24 COAL CREEK GC	92.00
13059	SPRAGUE PEST SOLUTIONS	7/15/24 CITY HALL	175.00
14396	SPRONK WATER ENGINEERS INC	6/2/24-6/30/24 WATER RIGH	14,400.00
15872	SUNDANCE WINDOW TINTING	AU85 FILM ON WINDOWS	1,600.00
14550	TAYLOR MADE GOLF COMPANY INC	ACCT #632413	482.34
15758	TEXTRON E-Z-GO LLC	CUST #700012259	1,447.16
15758	TEXTRON E-Z-GO LLC	CUST #700012259	491.54
15758	TEXTRON E-Z-GO LLC	CUST #700012259	585.56
15758	TEXTRON E-Z-GO LLC	CUST #700012259	230.53
7917	THE AQUEOUS SOLUTION INC	CUST PO #DANIEL050824	296.65
7917	THE AQUEOUS SOLUTION INC	CUST PO #BULK RA 4/22/24	775.00
7917	THE AQUEOUS SOLUTION INC	CUST PO #BULK RA 6/1/24	597.50
15821	THE COLD PLUNGE STORE	BAL DUE THE COMMERCIAL QO	5,344.50
15870	TINYMOBILEROBOTS US LLC	SOURCE: SO215283	33,000.00
13603	TOSHIBA BUSINESS SOLUTIONS INC	CUST #T0B5E4W	323.79
15320	TRIPLE M CONSTRUCTION LLC	2022 Concrete Replacement	66,032.73
15320	TRIPLE M CONSTRUCTION LLC	SERVICES THROUGH 5/6/24	1,007,433.20
15320	TRIPLE M CONSTRUCTION LLC	Concrete Replacement serv	74,940.75
4765	UNCC	JUNE 2024 MEMBER ID #487	1,324.83
11087	UNITED SITE SERVICES OF COLORA	CUST ID #DEN-02653	2,160.00

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VENDOR	VENDOR NAME	PURPOSE	AMOUNT
6009	UNIVERSITY OF COLORADO	METEORITES PROGRAM	195.00
15767	US FLEET SOURCE	VIN #KM8JBCD1XRU209864	32,931.00
15560	USABLUEBOOK	CUST #69261	400.18
13805	USALCO LLC	CUSTOMER PART CC2000	12,281.04
4880	VALUE LINE PUBLISHING LLC	9/6/24 - 8/29/25 ACCT #14	1,167.00
14792	VEOLIA WATER TECHNOLOGIES TREA	CUST #491718	2,333.61
4885	VERMEER SALES & SERVICE OF CO	ACCT #05210	1,602.94
15881	VIRTUOUS PAWS DOG TRAINING	TUG DOG TOY PROGRAM	75.00
15688	VTECH CONTROLLER TECHNOLOGY, L	IRRIGATION REPAIRS & REPL	965.25
11053	WATER TECHNOLOGY GROUP	CUST ID #400328	2,499.00
11053	WATER TECHNOLOGY GROUP	CUST ID #400328 EMERGENC	16,401.00
14373	WEIFIELD GROUP CONTRACTING INC	SPORTS COMPLEX	555.00
14373	WEIFIELD GROUP CONTRACTING INC	NW CORNER OF DILLON & DAH	1,299.09
14373	WEIFIELD GROUP CONTRACTING INC	LED LIGHTING UPGRADES	27,185.14
14373	WEIFIELD GROUP CONTRACTING INC	7/17/24 REC CENTER AIR CU	8,400.00
14373	WEIFIELD GROUP CONTRACTING INC	7/9/24 REC CENTER AIR CUR	2,200.25
290	INVOICES	WARRANT TOTAL	3,705,136.78

SUBJECT: **APPROVAL OF RESOLUTION NO. 31, SERIES 2024 – A RESOLUTION APPROVING AN AMENDED AND RESTATED AGREEMENT FOR ECONOMIC DEVELOPMENT SERVICES WITH THE BOULDER SBDC FOUNDATION FOR SERVICES TO BENEFIT THE LOUISVILLE BUSINESS COMMUNITY**

DATE: **AUGUST 6, 2024**

PRESENTED BY: **AUSTIN BROWN, ECONOMIC VITALITY SPECIALIST**

SUMMARY:
In 2022, the City of Louisville entered into a Professional Services Agreement *(Attachment #1)* with the Boulder Small Business Development Center (SBDC) to provide business support services in the City of Louisville. In 2022, the SBDC received a total of $50,000, consisting of $22,500 for one-on-one consulting, $9,700 for outreach and marketing, $7,800 for workshops and training programs, and $10,000 for management and implementation. The SBDC proposed an increase in funding to $70,800 for 2023 to reflect an increase in the number of services offered, however the commitment was never formally captured in an updated service agreement.

The attached Amended and Restated Agreement for Economic Development Services *(Attachment #2)* formalizes the $70,800 compensation amount retroactive to 2023. This agreement increases the funding for Workshop and Training Programs from $7,800 to $28,600. All other costs included in the scope remain the same. This agreement is intended to automatically renew for successive one year terms.

As part of the agreement, the SBDC is required to provide an annual activities report, which shall include program metrics, summaries of key programs offered, and copies of relevant outreach and marketing materials. The program metrics were designed to ensure the services are achieving the desired outcomes for local businesses and may be updated in future contract years once baseline data is available. The program metrics are included below:

1. 300 hours per year of consulting to Louisville businesses, focusing on small businesses and entrepreneurs, including reports of:
    a. Number of clients served
    b. Number of consulting sessions
2. 8 hours per month by a dedicated Lead SBDC representative, including meetings with local strategic partners and organizations as well as business outreach
3. 4 specialized programs in collaboration with City of Lafayette
    a. 2 Co-Hosted Workshops: Target = 12 businesses per community
    b. 2 Rounds of the three-part Take Action! Marketing 1.0 (Peer Group Series): Target = maximum of 10 businesses in attendance

4. Economic impact metrics (as reported by Louisville businesses/residents who participate in consulting and/or workshops)
    a. Sales increases realized: Target = $500,000
    b. Capital formulated: Target = $500,000

The Boulder SBDC submitted its 2023 annual activities report on February 20, 2024. The report is included as *Attachment #3*. In 2023, the Boulder SBDC provided 157 hours of consulting to 51 Louisville small businesses. The SBDC team indicated that they exceeded their eight hours per month included in the program metrics. The Boulder SBDC produced six specialized programs, resulting in 25 Louisville attendees. In 2023, Louisville small businesses that the Boulder SBDC assisted with one-on-one consulting reported sales increases of $12,500 and capital formulation of $1,083,000.

DISCUSSION:
The Boulder SBDC met many of its metrics, including the number of workshops and the economic impact metrics. Despite these achievements, the SBDC did not reach its target of 300 hours per year of consulting to Louisville small businesses. Because this was the second year of the services agreement, staff anticipates that the number of businesses utilizing these services will increase as the program continues to grow.

The agreement is structured so that it automatically renews each year, unless either party notifies the other party of its intent not to renew. Any further changes to the agreement would need to be captured through either an amendment to the existing agreement, or a new agreement. A Resolution approving the Amended and Restated Agreement with Boulder SBDC is included as *Attachment #4.*

FISCAL IMPACT:
The Amended and Restated Agreement with the Boulder Small Business Development Center has a one-year fiscal impact of $70,800. The agreement automatically renews each year, although it is possible that the amount of funding requested could increase in future years as the number of services offered increases.

PROGRAM/SUB-PROGRAM IMPACT:
The Professional Services Agreement furthers the Economic Prosperity Program goal to promote a thriving business climate by helping to maintain positive business relationships throughout the community and to retain a diverse mix of businesses that provide good employment opportunities for Louisville residents.

RECOMMENDATION:
Staff recommends approval of Resolution No. 31, Series 2024 approving the Amended and Restated Agreement with Boulder SBDC.

ATTACHMENTS:

1. Resolution No. 31, Series 2024
2. Agreement for Economic Development Services
3. Amended and Restated Agreement with Boulder SBDC
4. Boulder SBDC 2023 Annual Activities Report

STRATEGIC PLAN IMPACT:

☐	**Financial Stewardship & Asset Management**	☐	**Reliable Core Services**
☒	**Vibrant Economic Climate**	☐	**Quality Programs & Amenities**
☐	**Engaged Community**	☐	**Healthy Workforce**
☐	**Supportive Technology**	☐	**Collaborative Regional Partner**

RESOLUTION NO. 31
SERIES 2024

A RESOLUTION APPROVING AN AMENDED AND RESTATED AGREEMENT FOR ECONOMIC DEVELOPMENT SERVICES WITH THE BOULDER SBDC FOUNDATION FOR SERVICES TO BENEFIT THE LOUISVILLE BUSINESS COMMUNITY

WHEREAS, by Resolution No. 91, Series 2021, the City Council approved an agreement with the Boulder SBDC Foundation, d.b.a. Boulder Small Business Development Center (the "SBDC"), for the SBDC's provision of services to the Louisville business community (the "Original Agreement");

WHEREAS, SBDC and the City desire to amend and restate the Original Agreement to expand SBDC's services as further set forth in the Scope of Services set forth in Exhibit A hereto, in exchange for increased compensation; and

WHEREAS, the City Council by this Resolution desires to approve the Amended and Restated Agreement, a copy of which is attached hereto as Exhibit A (the "Agreement").

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

Section 1. That the Amended and Restated Agreement for Economic Development Services between the City of Louisville and the Boulder SBDC Foundation ("Agreement"), a copy of which Agreement accompanies this Resolution, is hereby approved.

Section 2. The Mayor and City Clerk are hereby authorized to execute the Agreement, and the Mayor is hereby further authorized to negotiate and approve such revisions to the Agreement as the Mayor determines are necessary or desirable for the protection of the City, so long as the essential terms and conditions of the Agreement are not altered.

PASSED AND ADOPTED this 6th day of August, 2024.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Genny Kline, Interim City Clerk

RESOLUTION NO. 91
SERIES 2021

A RESOLUTION APPROVING AN AGREEMENT FOR ECONOMIC DEVELOPMENT SERVICES WITH THE BOULDER SBDC FOUNDATION FOR SERVICES TO BENEFIT THE LOUISVILLE BUSINESS COMMUNITY

WHEREAS, the City desires to approve an agreement with the Boulder SBDC Foundation, d.b.a. Boulder Small Business Development Center (the "SBDC"), for the SBDC's provision of services to the Louisville business community (the "Agreement"); and

WHEREAS, the City Council by this Resolution desires to approve the Agreement.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

Section 1. That the Agreement for Economic Development Services between the City of Louisville and the Boulder SBDC Foundation ("Agreement"), a copy of which Agreement accompanies this Resolution, is hereby approved.

Section 2. The Mayor and City Clerk are hereby authorized to execute the Agreement, and the Mayor is hereby further authorized to negotiate and approve such revisions to the Agreement as the Mayor determines are necessary or desirable for the protection of the City, so long as the essential terms and conditions of the Agreement are not altered.

PASSED AND ADOPTED this 21st day of December, 2021.

Ashley Stolzmann, Mayor

ATTEST:

Meredyth Muth, City Clerk

CITY OF LOUISVILLE SEAL COLORADO

AGREEMENT FOR ECONOMIC DEVELOPMENT SERVICES

THIS AGREEMENT is made and entered into this ~~XX~~ 21st day of December, 2021 ("Effective Date"), by and between the City of Louisville, a Colorado home rule municipal corporation (the "City"), and the Boulder SBDC Foundation, a Colorado nonprofit corporation, d.b.a. Boulder Small Business Development Center ("SBDC").

WHEREAS, SBDC provides support services for the small business, including but not limited to training workshops, consulting, programming, and access to valuable resources; and

WHEREAS, the SBDC helps small businesses analyze marketing and growth issues, set reasonable short and long-term goals, obtain financing, and prosper in competitive markets; and

WHEREAS, the stimulation of economic growth is recognized to serve both the public interest and municipal purposes of the City by enhancing the tax base and creating employment opportunities; and

WHEREAS, the City Council desires to contract with SBDC for the SBDC's Services as further set forth in the Scope of Services set forth in Exhibit A hereto.

NOW, THEREFORE, in consideration of the mutual promises set forth herein, it is agreed as follows:

1. SERVICES AND DUTIES. SBDC agrees to provide the services as outlined in the Scope of Services attached hereto and incorporated herein as Exhibit A (the "Services"). SBDC shall not endorse or campaign for anyone running for City of Louisville elected positions.

2. COMPENSATION. The City will pay SBDC a total not to exceed Fifty Thousand Dollars ($50,000) to compensate SBDC for the Services for each calendar year this Agreement is in effect (the "Compensation"). The City shall pay the Compensation in twelve equal monthly installments of $4,166.67 each, to be made no later than the tenth (10th) day of each month during the term of this Agreement. The Compensation is inclusive of all costs of whatsoever nature associated with SBDC's efforts, including but not limited to salaries, benefits, expenses, overhead, administration, profits, and outside consultant fees. The Scope of Services and payment therefor shall only be changed by a properly authorized amendment to this Agreement. No City employee has the authority to bind the City with regard to any payment for any services which exceeds the amounts payable under the terms of this Agreement.

3. TERM. The term of this Agreement shall be from January 1, 2022 to December 31, 2022 ("Initial Term"), unless sooner terminated as provided herein. Following the Initial Term, this Agreement shall automatically renew for successive one (1) year terms, unless one party provides the other party with thirty (30) days' written notice in advance of the expiration of the then-current term of its intent not to renew for a successive term. Nothing in this Agreement is intended or shall be deemed or construed as creating any multiple-fiscal year direct or indirect debt or financial obligation on the part of the City within the meaning of Colorado Constitution Article X, Section 20 or any other constitutional or statutory provision. All financial obligations of the City under this Agreement are subject to annual budgeting and appropriation by the Louisville City Council, in its sole discretion. In the event of a non-appropriation, this Agreement shall terminate effective December 31 of the then-current fiscal year.

4. REPORTING REQUIREMENTS. Commencing in 2023, and annually thereafter, SBDC further agrees to submit a Final Report to the Louisville Director of Economic Vitality by no later than February 1. The Final Report shall include complete and accurate statements of Services rendered in the previous year, categorized under the Program Metrics set forth in Exhibit A, and must be signed by SBDC. In addition to any other remedies available in law and equity, the City may decline to consider further contracts with SBDC if the SBDC does not submit its Final Report by the annual deadline.

5. RELIABILITY OF REPORTS. SBDC represents and warrants that all information SBDC has provided or will provide to the City is true and correct, and that the City may rely on such information in modifying, making payments, or taking any other action concerning this Agreement. Any false or misleading material information or omission provided or caused by SBDC is just cause for the City to terminate this Agreement and to pursue any other available remedies against the SBDC.

6. NON-PROFIT STATUS. SBDC, during the term hereof, agrees to remain a nonprofit corporation dedicated to the rendition of the Services described in this Agreement, and no part of the income or assets of SBDC shall be distributed to, or inure to the benefit of, any individual or for any other private purpose.

7. STATUS OF SBDC. SBDC shall perform all services under this Agreement as an independent contractor and not as an agent or employee of the City. It is mutually agreed and understood that nothing contained in this Agreement is intended or shall be construed as in any way establishing the relationship of co-partners or joint ventures between the parties hereto, or as construing SBDC, including its agents and employees, as an agent of the City. SBDC shall remain an independent and separate entity. SBDC shall not be supervised by any employee or official of the City, nor will SBDC exercise supervision over any employee or official of the City. SBDC shall not represent that SBDC is an employee or agent of the City in any capacity. **As an independent contractor, SBDC is not entitled to workers' compensation benefits or unemployment insurance benefits, except as may be provided by SBDC or some other entity. If applicable, SBDC is obligated to pay all federal and state income tax on any moneys earned or paid pursuant to this Agreement.**

8. COMPLIANCE WITH LAWS; WORKERS WITHOUT AUTHORIZATION. A. SBDC shall be solely responsible for compliance with all applicable federal, state, and local laws, including the ordinances, resolutions, rules, and regulations of the City; for payment of all applicable taxes; and obtaining and keeping in force all applicable permits and approvals.

B. Exhibit B, the "City of Louisville Public Services Contract Addendum-Prohibition Against Employing Workers Without Authorization", is attached hereto and incorporated herein by reference. There is also attached hereto a copy of SBDC's Pre-Contract Certification which SBDC has executed and delivered to the City prior to or concurrently with SBDC's execution of this Agreement.

9. DAMAGES FOR BREACH OF CONTRACT. In addition to any other legal or equitable remedy to which the City may be entitled for a breach of this Agreement, if the City terminates this Agreement, in whole or in part due to SBDC's breach of any provision of this Agreement, SBDC shall be liable for actual damages to the City.

10. INSURANCE. A. SBDC agrees to procure and maintain, at its own cost, the following policy or policies of insurance. SBDC shall not be relieved of any liability, claims, demands, or other

obligations assumed pursuant to this Agreement by reason of its failure to procure or maintain insurance, or by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types.

B. SBDC shall procure and maintain, and shall cause each subcontractor of SBDC to procure and maintain or insure the activity of SBDC's subcontractors in SBDC's own policy, the minimum insurance coverages listed below. Such coverages shall be procured and maintained with forms and insurers acceptable to the City. All coverages shall be continuously maintained from the date of commencement of services hereunder. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage.

1. Workers' Compensation insurance to cover obligations imposed by the Workers' Compensation Act of Colorado and any other applicable laws for any employee engaged in the performance of Work under this contract, and Employers' Liability insurance with minimum limits of FIVE HUNDRED THOUSAND DOLLARS ($500,000) each accident, FIVE HUNDRED THOUSAND DOLLARS ($500,000) disease - policy limit, and FIVE HUNDRED THOUSAND DOLLARS ($500,000) disease - each employee.

2. Comprehensive General Liability insurance with minimum combined single limits of TWO MILLION DOLLARS ($2,000,000) each occurrence and ONE MILLION DOLLARS ($1,000,000) aggregate. The policy shall be applicable to all premises and operations. The policy shall include coverage for bodily injury, broad form property damage (including completed operations), personal injury (including coverage for contractual and employee acts), blanket contractual, independent contractors, products, completed operations, and pollution and chemicals. The policy shall contain a severability of interests provision.

3. Comprehensive Automobile Liability insurance with minimum combined single limits for bodily injury and property damage of not less than ONE MILLION DOLLARS ($1,000,000) each occurrence and TWO MILLION DOLLARS ($2,000,000) aggregate with respect to each of SBDC's owned, hired and/or non-owned vehicles assigned to or used in performance of the services. The policy shall contain a severability of interests provision.

C. The policies required above, except for the Workers' Compensation insurance and Employers' Liability insurance, shall be endorsed to include the City, and its officers and employees, as additional insureds. Every policy required above shall be primary insurance, and any insurance carried by the City, its officers, or its employees, shall be excess and not contributory insurance to that provided by SBDC. The additional insured endorsement for the Comprehensive General Liability insurance required above shall not contain any exclusion for bodily injury or property damage arising from completed operations. SBDC shall be solely responsible for any deductible losses under each of the policies required above.

D. Certificates of insurance shall be completed by the SBDC's insurance agent as evidence that policies providing the required coverages, conditions, and minimum limits are in full force and effect, and shall be subject to review and approval by the City. Each certificate shall identify the Project and shall provide that the coverages afforded under the policies shall not be cancelled, terminated or materially changed until at least 30 days prior written notice has been given to the City. If the words "endeavor to" appear in the portion of the certificate addressing cancellation, those words shall be stricken from the certificate by the agent(s) completing the certificate. The City reserves the right to request and receive a certified copy of any policy and any endorsement thereto.

E. Failure on the part of SBDC to procure or maintain policies providing the required coverages, conditions, and minimum limits shall constitute a material breach of contract upon which the City may immediately terminate the contract, or at its discretion may procure or renew any such policy or any extended reporting period thereto and may pay any and all premiums in connection therewith, and all monies so paid by the City shall be repaid by SBDC to the City upon demand, or the City may offset the cost of the premiums against any monies due to SBDC from the City.

F. The parties hereto understand and agree that the City is relying on, and does not waive or intend to waive by any provision of this Agreement, the monetary limitations or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, § 24-10-101 et seq., C.R.S., as from time to time amended, or otherwise available to the City, its officers, or its employees.

11. INDEMNITY. To the fullest extent permitted by law, SBDC agrees to indemnify and hold harmless the City, and its elected and appointed officers and its employees, from and against all liability, claims, and demands, on account of any injury, loss, or damage, which arise out of or are connected with the Services hereunder or SBDC's use of City facilities, if and to the extent such injury, loss, or damage is caused by the negligent act, omission, or other fault of SBDC or any subcontractor of SBDC, or any officer, employee, or agent of SBDC or of any subcontractor of SBDC, or any other person for whom SBDC is responsible. SBDC shall investigate, handle, respond to, and provide defense for and defend against any such liability, claims, and demands. SBDC shall further bear all other costs and expenses incurred by the City or SBDC and related to any such liability, claims and demands, including but not limited to court costs, expert witness fees and attorneys' fees if the court determines that these incurred costs and expenses are related to such negligent acts, errors, and omissions or other fault of SBDC. The City shall be entitled to its costs and attorneys' fees incurred in any action to enforce the provisions of this Section. SBDC's indemnification obligation shall not be construed to extend to any injury, loss, or damage which is caused by the act, omission, or other fault of the City.

12. ENFORCEMENT. A. This Agreement shall be deemed entered into in Boulder County, Colorado, and shall be governed by and interpreted under the laws of the State of Colorado. Any action arising out of, in connection with, or relating to this Agreement shall be filed in the District Court of Boulder County of the State of Colorado, and in no other court.

B. In the event that suit is brought upon this Agreement to enforce its terms, the prevailing party shall be entitled to its reasonable attorneys' fees and related court costs.

13. COMPLIANCE WITH LAWS. SBDC shall perform all obligations under this Agreement in strict compliance with all federal, state, and City laws, rules, statutes, charter provisions, ordinances, and regulations applicable to the performance of the SBDC's services under this Agreement. SBDC, specifically, shall not discriminate against any person on the basis of age, ancestry, color, creed, sex, race, religion, national origin, disability, sexual orientation, gender status, or as otherwise prohibited by law.

14. TERMINATION. A. This Agreement may be terminated by either party for material breach or default of this Agreement by the other party not caused by any action or omission of the other party by giving the other party written notice at least thirty (30) days in advance of the termination date. SBDC's discontinuance of or reduction in the Services set forth in Exhibit A shall constitute a material breach of this Agreement. Termination pursuant to this subsection shall not prevent either party from exercising any other legal remedies which may be available to it.

B. In addition to the foregoing, this Agreement may be terminated by the City for its convenience and without cause of any nature by giving written notice at least thirty (30) days in advance of the termination date. In the event of such termination, SBDC will be paid for the reasonable value of the services rendered to the date of termination, not to exceed a prorated daily rate, and upon such payment, all obligations of the City to SBDC under this Agreement will cease. Termination pursuant to this subsection shall not prevent either party from exercising any other legal remedies which may be available to it.

15. INSPECTION. The City and its duly authorized representatives shall have access to any books, documents, papers, and records of SBDC that are related to this Agreement for the purpose of making audits, examinations, excerpts, and transcriptions.

16. NO THIRD PARTY BENEFICIARIES. It is expressly understood and agreed that enforcement of the terms and conditions of this Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to City and SBDC, and nothing contained in this Agreement shall give or allow any such claim or right of action by any other third party on such Agreement. It is the express intention of the parties that any person other than City or SBDC receiving services or benefits under this Agreement shall be deemed to be an incidental beneficiary only.

17. ASSIGNMENT. SBDC shall not assign or delegate this Agreement or any portion thereof, or any monies due or which become due hereunder without the City's prior written consent.

18. DEFAULT. Each and every term and condition hereof shall be deemed to be a material element of this Agreement. In the event either party should fail or refuse to perform according to the terms of this Agreement, such party may be declared in default.

19. INTEGRATION AND AMENDMENT. This Agreement represents the entire Agreement between the parties and there are no oral or collateral agreements or understandings. This Agreement may be amended only by an instrument in writing signed by the parties.

20. PROVISIONS CONSTRUED AS TO FAIR MEANING. The provisions of this Agreement shall be construed as to their fair meaning, and not for or against any party based upon any attribution to such party as the source of the language in question.

21. HEADINGS FOR CONVENIENCE. All headings, captions and titles are for convenience and reference only, and of no meaning in the interpretation or effect of this Agreement.

22. WAIVER. No waiver of any breach or default under this Agreement shall be a waiver of any other or subsequent breach or default.

23. AUTHORITY TO BIND. Each of the persons signing below on behalf of any party hereby represents and warrants that such person is signing with full and complete authority to bind the party on whose behalf of whom such person is signing, to each and every term of this Agreement.

24. SEVERABILITY. Invalidation of any specific provisions of this Agreement shall not affect the validity of any other provision of this Agreement.

25. NOTICES. All notices required or permitted under this Agreement shall be in writing and shall be given by hand delivery, by United States first class mail, postage prepaid, registered or certified, return receipt requested, by national overnight carrier, or by facsimile transmission, addressed to the party for whom it is intended at the following address:

If to the City:

City of Louisville
Attn: City Manager
749 Main Street
Louisville, Colorado 80027
Telephone: (303) 335-4533
Fax: (303) 335-4550

If to SBDC:

Boulder SBDC Foundation
Attn: Sharon R. King
1001 Arapahoe Ave
Boulder, CO 80302

Tele: (303) 442-1475
During COVID—
(720) 207-4303 cell

In witness whereof, the parties have executed this Agreement to be effective on the date first above written.

CITY OF LOUISVILLE

By: Ashley Stolzmann
Ashley Stolzmann, Mayor

Attest: Meredyth Muth
Meredyth Muth, City Clerk

BOULDER SBDC FOUNDATION, d.b.a.
Boulder Small Business Development Center

By: Sharon R. King

Title: Executive Director

Attest: Rachel L. Garcia
Secretary

EXHIBIT A

SCOPE OF SERVICES

In cooperation, the City of Lafayette and City of Louisville seek to establish satellite support programs with the Boulder Small Business Development Center (SBDC). The Boulder SBDC will provide programs and services that enhance and supplement the cities' current economic development efforts and goals without duplicating existing efforts. The satellite support programs defined in this Scope of Services include: 1) one-on-one consulting, 2) outreach & marketing, 3) workshops and training programs, and 4) management and implementation. Services will be provided on an annual basis (January 1 – December 31), subject to consideration and renewal of the Professional Services Agreement by each community.

Satellite Support Programs Defined:

1) **One-on-One Consulting:** For each City, the SBDC will provide 300 hours of consulting per satellite program operated. At an average of 25 hours/month, that would include Initial (Discovery) Meetings to assess the business' needs and preferences and match-up relevant expertise, as well as follow-on sessions to deliver targeted assistance that helps the businesses to move forward.

   Consulting topics may consist of, but are not limited to, start-up issues; development of a business plan (or other planning format) for start-up, growth, and financing; development of marketing strategies and action plans; development and understanding of financial projections and access to capital; and development of business management skills and processes. For businesses in the advanced industries, on a limited basis, assistance may include strategic research & analysis, technology commercialization, support for innovation grants and contract opportunities as well as access to other capital. For Latinx entrepreneurs and businesses, bilingual assistance may include business planning, access to capital, and all of the other topics previously listed.

   The SBDC has built a network of professional service providers, entrepreneurs, and other business assistance and government contacts that further assist our small businesses, especially when the scope of the request is outside the SBDC mission or resource constraints. Our network of commercial banks and other financing sources such as micro lending institutions (Colorado Enterprise Fund, Colorado Lending Source and others) leads to warm introductions for financial accessibility. SBDC specialists, in collaboration with lender representatives, meet with our small business clients to explain the financing landscape, and if appropriate, provide an introduction for further conversation.

   The Boulder SBDC will not establish a permanent office in either Lafayette or Louisville to provide these services. Consultants will use a combination of virtual and in-person sessions; the Cities, at no-cost to the SBDC, will provide short-term, temporary meeting space at city facilities on an as-needed basis so that the SBDC can have a community presence.

   Annual cost per satellite program: $22,500

2) **Outreach & Marketing:** Since the SBDC satellite offices will be new resources in the communities, extra efforts will be made to build the SBDC presence. The Lead Consultant and SBDC Representative will attend various meetings and activities to immerse himself and our

team in the business community and to build relationships with business owners and leaders. The Boulder SBDC Executive Director will participate as well, whenever available.

Boulder SBDC will incorporate these new satellite offices into our marketing & outreach communication plans, platforms, and materials (including our website, broadcast newsletters, social media channels, public relations efforts and, on a limited basis, in emails to target business, organizations and community leaders). The goals will be to build awareness and usage of SBDC programs and services. The SBDC will add any relevant lists provided by each city to our marketing databases to increase outreach.

Annual cost per satellite program: $9,700

3) **Workshops and Training Programs:** Boulder SBDC produces practical and actionable workshops, presented by high-caliber, experienced subject matter experts (SME). Specific workshop and program topics have not yet been selected. Prior to each satellite program year, the Cities will meet with the Boulder SBDC Executive Director and Lead Consultant to brainstorm and determine appropriate and relevant topics.

   Business input and needs served by the SBDC will influence planned topics and workshop formats. The length and frequency of programs will determine the number offered each year. Programming may be offered as a combination of virtual and in-person settings, which will also be set by agreement of both Cities. Each City will work cooperatively with the Lead Consultant to identify available sites at which to hold programming.

   Annual cost per satellite program: $7,800

4) **Management and Implementation:** Boulder SBDC's Team Lead and Executive Director will work directly with representatives in Lafayette and Louisville to get input on business' needs and preferences, to understand other resources in place (in order to avoid duplication of services/programs and nurture collaboration), to build relationships with key business leaders and owners, and to get input in order to develop the most effective programs that fill gaps in each business community. The SBDC's Marketing & Program Coordinator will handle all logistics, marketing coordination, and program implementation.

   The Lead Consultant (supported by all members of the SBDC team) will provide periodic informal updates to our partners at each City. The Lead Consultant will also participate in at least one annual joint meeting of the City partners to convey such updates as well as provide information on resource allocations and conduct program planning.

   Annual cost per satellite program: $10,000

By November 15 each year, the Boulder SBDC will provide to the City Managers of both communities an annual activities report. The annual report will include program metrics as defined below, summaries of key programs offered, and copies of relevant outreach & marketing materials. The annual report will be provided to each community's City Council as part of the consideration to renew a Professional Services Agreement for an additional year. In addition, no later than February 1 each year, the Boulder SBDC will provide final metrics that capture the end of the prior service year.

Program Metrics Defined:

1) 300 hours per year of consulting to Louisville businesses, focusing on small businesses and entrepreneurs, including reports (by community) of:
    a. Number of clients served
    b. Number of consulting sessions
2) 8 hours per month by a dedicated Lead SBDC representative, including meetings with local strategic partners and organizations as well as business outreach
3) 4 specialized programs in collaboration with City of Lafayette
    a. 2 Co-Hosted Workshops: Target= 15 businesses per community
    b. 2 Rounds of Marketing Peer Group Series: Target= 10 businesses in attendance
4) Economic impact metrics (as reported by Louisville businesses/residents who participate in consulting and/or workshops):
    a. Sales increases realized: Target= $500,000
    b. Capital formulated: Target $500,000

Exhibit B

City of Louisville Public Services Contract Addendum
Prohibition Against Employing Workers Without Authorization

Prohibition Against Employing Workers Without Authorization. Contractor shall not knowingly employ or contract with a worker without authorization to perform work under this contract. Contractor shall not enter into a contract with a subcontractor that fails to certify to the Contractor that the subcontractor shall not knowingly employ or contract with a worker without authorization to perform work under this contract.

Contractor will participate in either the E-verify program or the Department program, as defined in C.R.S. § § 8-17.5-101(3.3) and 8-17.5-101(3.7), respectively, in order to confirm the employment eligibility of all employees who are newly hired for employment to perform work under the public contract for services. Contractor is prohibited from using the E-verify program or the Department program procedures to undertake pre-employment screening of job applicants while this contract is being performed.

If Contractor obtains actual knowledge that a subcontractor performing work under this contract for services knowingly employs or contracts with a worker without authorization, Contractor shall:

a. Notify the subcontractor and the City within three days that the Contractor has actual knowledge that the subcontractor is employing or contracting with a worker without authorization; and

b. Terminate the subcontract with the subcontractor if within three days of receiving the notice required pursuant to this paragraph the subcontractor does not stop employing or contracting with the worker without authorization; except that the Contractor shall not terminate the contract with the subcontractor if during such three days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with a worker without authorization.

Contractor shall comply with any reasonable request by the Department of Labor and Employment made in the course of an investigation that the Department is undertaking pursuant to the authority established in C.R.S. § 8-17.5-102(5).

If Contractor violates a provision of this Contract required pursuant to C.R.S. § 8-17.5-102, City may terminate the contract for breach of contract. If the contract is so terminated, the Contractor shall be liable for actual and consequential damages to the City.

Pre-Contract Certification in Compliance with C.R.S. Section 8-17.5-102(1)

The undersigned hereby certifies as follows:

That at the time of providing this certification, the undersigned does not knowingly employ or contract with a worker without authorization; and that the undersigned will participate in the E-Verify program or the Department program, as defined in C.R.S. § § 8-17.5-101(3.3) and 8-17.5-101(3.7), respectively, in order to confirm the employment eligibility of all employees who are newly hired for employment to perform under the public contract for services.

Proposer: Megan E. Pier

By Sharon R. King
Title: Executive Director

12/15/21
Date

AMENDED AND RESTATED AGREEMENT
FOR ECONOMIC DEVELOPMENT SERVICES

THIS AMENDED AND RESTATED AGREEMENT ("Agreement") is made and entered into this ____ day of _____, 20___ ("Effective Date"), by and between the City of Louisville, a Colorado home rule municipal corporation (the "City"), and the Boulder SBDC Foundation, a Colorado nonprofit corporation, d.b.a. Boulder Small Business Development Center ("SBDC").

WHEREAS, SBDC provides support services for small businesses, including but not limited to training workshops, consulting, programming, and access to valuable resources; and

WHEREAS, the SBDC helps small businesses analyze marketing and growth issues, set reasonable short and long-term goals, obtain financing, and prosper in competitive markets; and

WHEREAS, the stimulation of economic growth is recognized to serve both the public interest and municipal purposes of the City by enhancing the tax base and creating employment opportunities; and

WHEREAS, SBDC and the City are parties to that certain Agreement for Economic Development Services, dated December 21, 2021 (the "Original Agreement"), for SBDC's provision of certain programs and services that enhance and supplement the City's current economic development efforts and goals without duplicating existing efforts; and

WHEREAS, the parties desire to amend and restate the Original Agreement to expand SBDC's Services as further set forth in the Scope of Services set forth in Exhibit A hereto, in exchange for increased compensation.

NOW, THEREFORE, in consideration of the mutual promises set forth herein, it is agreed as follows:

1. SERVICES AND DUTIES. SBDC agrees to provide the services as outlined in the Scope of Services attached hereto and incorporated herein as Exhibit A (the "Services"). SBDC shall not endorse or campaign for anyone running for City of Louisville elected positions.

2. COMPENSATION. The City will pay SBDC a total not to exceed Seventy Thousand Eight Hundred Dollars ($70,800) to compensate SBDC for the Services for each calendar year this Agreement is in effect (the "Compensation"). The City shall pay the Compensation in twelve equal monthly installments of $5,900 each, to be made no later than the tenth (10^{th}) day of each month during the term of this Agreement. The Compensation is inclusive of all costs of whatsoever nature associated with SBDC's efforts, including but not limited to salaries, benefits, expenses, overhead, administration, profits, and outside consultant fees. The Scope of Services and payment therefor shall only be changed by a properly authorized amendment to this Agreement. No City employee has the authority to bind the City with regard to any payment for any services which exceeds the amounts payable under the terms of this Agreement.

3. TERM. The term of this Agreement shall be from January 1, 2024 to December 31, 2024 ("Initial Term"), unless sooner terminated as provided herein. Following the Initial Term, this Agreement shall automatically renew for successive one (1) year terms, unless one party

provides the other party with thirty (30) days' written notice in advance of the expiration of the then-current term of its intent not to renew for a successive term. Nothing in this Agreement is intended or shall be deemed or construed as creating any multiple-fiscal year direct or indirect debt or financial obligation on the part of the City within the meaning of Colorado Constitution Article X, Section 20 or any other constitutional or statutory provision. All financial obligations of the City under this Agreement are subject to annual budgeting and appropriation by the Louisville City Council, in its sole discretion. In the event of a non-appropriation, this Agreement shall terminate effective December 31 of the then-current fiscal year.

4. REPORTING REQUIREMENTS. Commencing in 2023, and annually thereafter, SBDC further agrees to submit a Final Report to the Louisville Director of Economic Vitality by no later than February 1. The Final Report shall include complete and accurate statements of Services rendered in the previous year, categorized under the Program Metrics set forth in Exhibit A, and must be signed by SBDC. In addition to any other remedies available in law and equity, the City may decline to consider further contracts with SBDC if the SBDC does not submit its Final Report by the annual deadline.

5. RELIABILITY OF REPORTS. SBDC represents and warrants that all information SBDC has provided or will provide to the City is true and correct, and that the City may rely on such information in modifying, making payments, or taking any other action concerning this Agreement. Any false or misleading material information or omission provided or caused by SBDC is just cause for the City to terminate this Agreement and to pursue any other available remedies against the SBDC.

6. NON-PROFIT STATUS. SBDC, during the term hereof, agrees to remain a nonprofit corporation dedicated to the rendition of the Services described in this Agreement, and no part of the income or assets of SBDC shall be distributed to, or inure to the benefit of, any individual or for any other private purpose.

7. STATUS OF SBDC. SBDC shall perform all services under this Agreement as an independent contractor and not as an agent or employee of the City. It is mutually agreed and understood that nothing contained in this Agreement is intended or shall be construed as in any way establishing the relationship of co-partners or joint ventures between the parties hereto, or as construing SBDC, including its agents and employees, as an agent of the City. SBDC shall remain an independent and separate entity. SBDC shall not be supervised by any employee or official of the City, nor will SBDC exercise supervision over any employee or official of the City. SBDC shall not represent that SBDC is an employee or agent of the City in any capacity. **As an independent contractor, SBDC is not entitled to workers' compensation benefits or unemployment insurance benefits, except as may be provided by SBDC or some other entity. If applicable, SBDC is obligated to pay all federal and state income tax on any moneys earned or paid pursuant to this Agreement.**

8. COMPLIANCE WITH LAWS; WORKERS WITHOUT AUTHORIZATION. A. SBDC shall be solely responsible for compliance with all applicable federal, state, and local laws, including the ordinances, resolutions, rules, and regulations of the City; for payment of all applicable taxes; and obtaining and keeping in force all applicable permits and approvals.

B. Exhibit B, the "City of Louisville Public Services Contract Addendum-Prohibition Against Employing Workers Without Authorization", is attached hereto and incorporated herein by reference. There is also attached hereto a copy of SBDC's Pre-Contract Certification which SBDC has executed and delivered to the City prior to or concurrently with SBDC's execution of this Agreement.

9. DAMAGES FOR BREACH OF CONTRACT. In addition to any other legal or equitable remedy to which the City may be entitled for a breach of this Agreement, if the City terminates this Agreement, in whole or in part due to SBDC's breach of any provision of this Agreement, SBDC shall be liable for actual damages to the City.

10. INSURANCE. A. SBDC agrees to procure and maintain, at its own cost, the following policy or policies of insurance. SBDC shall not be relieved of any liability, claims, demands, or other obligations assumed pursuant to this Agreement by reason of its failure to procure or maintain insurance, or by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types.

B. SBDC shall procure and maintain, and shall cause each subcontractor of SBDC to procure and maintain or insure the activity of SBDC's subcontractors in SBDC's own policy, the minimum insurance coverages listed below. Such coverages shall be procured and maintained with forms and insurers acceptable to the City. All coverages shall be continuously maintained from the date of commencement of services hereunder. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage.

1. Workers' Compensation insurance to cover obligations imposed by the Workers' Compensation Act of Colorado and any other applicable laws for any employee engaged in the performance of Work under this contract, and Employers' Liability insurance with minimum limits of FIVE HUNDRED THOUSAND DOLLARS ($500,000) each accident, FIVE HUNDRED THOUSAND DOLLARS ($500,000) disease - policy limit, and FIVE HUNDRED THOUSAND DOLLARS ($500,000) disease - each employee.

2. Comprehensive General Liability insurance with minimum combined single limits of TWO MILLION DOLLARS ($2,000,000) each occurrence and ONE MILLION DOLLARS ($1,000,000) aggregate. The policy shall be applicable to all premises and operations. The policy shall include coverage for bodily injury, broad form property damage (including completed operations), personal injury (including coverage for contractual and employee acts), blanket contractual, independent contractors, products, completed operations, and pollution and chemicals. The policy shall contain a severability of interests provision.

3. Comprehensive Automobile Liability insurance with minimum combined single limits for bodily injury and property damage of not less than ONE MILLION DOLLARS ($1,000,000) each occurrence and TWO MILLION DOLLARS ($2,000,000) aggregate with respect to each of SBDC's owned, hired and/or non-owned vehicles assigned to or used in performance of the services. The policy shall contain a severability of interests provision.

C. The policies required above, except for the Workers' Compensation insurance and Employers' Liability insurance, shall be endorsed to include the City, and its

officers and employees, as additional insureds. Every policy required above shall be primary insurance, and any insurance carried by the City, its officers, or its employees, shall be excess and not contributory insurance to that provided by SBDC. The additional insured endorsement for the Comprehensive General Liability insurance required above shall not contain any exclusion for bodily injury or property damage arising from completed operations. SBDC shall be solely responsible for any deductible losses under each of the policies required above.

D. Certificates of insurance shall be completed by the SBDC's insurance agent as evidence that policies providing the required coverages, conditions, and minimum limits are in full force and effect, and shall be subject to review and approval by the City. Each certificate shall identify the Project and shall provide that the coverages afforded under the policies shall not be cancelled, terminated or materially changed until at least 30 days prior written notice has been given to the City. If the words "endeavor to" appear in the portion of the certificate addressing cancellation, those words shall be stricken from the certificate by the agent(s) completing the certificate. The City reserves the right to request and receive a certified copy of any policy and any endorsement thereto.

E. Failure on the part of SBDC to procure or maintain policies providing the required coverages, conditions, and minimum limits shall constitute a material breach of contract upon which the City may immediately terminate the contract, or at its discretion may procure or renew any such policy or any extended reporting period thereto and may pay any and all premiums in connection therewith, and all monies so paid by the City shall be repaid by SBDC to the City upon demand, or the City may offset the cost of the premiums against any monies due to SBDC from the City.

F. The parties hereto understand and agree that the City is relying on, and does not waive or intend to waive by any provision of this Agreement, the monetary limitations or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, § 24-10-101 et seq., C.R.S., as from time to time amended, or otherwise available to the City, its officers, or its employees.

11. INDEMNITY. To the fullest extent permitted by law, SBDC agrees to indemnify and hold harmless the City, and its elected and appointed officers and its employees, from and against all liability, claims, and demands, on account of any injury, loss, or damage, which arise out of or are connected with the Services hereunder or SBDC's use of City facilities, if and to the extent such injury, loss, or damage is caused by the negligent act, omission, or other fault of SBDC or any subcontractor of SBDC, or any officer, employee, or agent of SBDC or of any subcontractor of SBDC, or any other person for whom SBDC is responsible. SBDC shall investigate, handle, respond to, and provide defense for and defend against any such liability, claims, and demands. SBDC shall further bear all other costs and expenses incurred by the City or SBDC and related to any such liability, claims and demands, including but not limited to court costs, expert witness fees and attorneys' fees if the court determines that these incurred costs and expenses are related to such negligent acts, errors, and omissions or other fault of SBDC. The City shall be entitled to its costs and attorneys' fees incurred in any action to enforce the provisions of this Section. SBDC's indemnification obligation shall not be construed to extend to any injury, loss, or damage which is caused by the act, omission, or other fault of the City.

12. ENFORCEMENT. A. This Agreement shall be deemed entered into in Boulder County, Colorado, and shall be governed by and interpreted under the laws of the State of Colorado. Any action arising out of, in connection with, or relating to this Agreement shall be filed in the District Court of Boulder County of the State of Colorado, and in no other court.

B. In the event that suit is brought upon this Agreement to enforce its terms, the prevailing party shall be entitled to its reasonable attorneys' fees and related court costs.

13. COMPLIANCE WITH LAWS. SBDC shall perform all obligations under this Agreement in strict compliance with all federal, state, and City laws, rules, statutes, charter provisions, ordinances, and regulations applicable to the performance of the SBDC's services under this Agreement. SBDC, specifically, shall not discriminate against any person on the basis of age, ancestry, color, creed, sex, race, religion, national origin, disability, sexual orientation, gender status, or as otherwise prohibited by law.

14. TERMINATION. A. This Agreement may be terminated by either party for material breach or default of this Agreement by the other party not caused by any action or omission of the other party by giving the other party written notice at least thirty (30) days in advance of the termination date. SBDC's discontinuance of or reduction in the Services set forth in Exhibit A shall constitute a material breach of this Agreement. Termination pursuant to this subsection shall not prevent either party from exercising any other legal remedies which may be available to it.

B. In addition to the foregoing, this Agreement may be terminated by the City for its convenience and without cause of any nature by giving written notice at least thirty (30) days in advance of the termination date. In the event of such termination, SBDC will be paid for the reasonable value of the services rendered to the date of termination, not to exceed a prorated daily rate, and upon such payment, all obligations of the City to SBDC under this Agreement will cease. Termination pursuant to this subsection shall not prevent either party from exercising any other legal remedies which may be available to it.

15. INSPECTION. The City and its duly authorized representatives shall have access to any books, documents, papers, and records of SBDC that are related to this Agreement for the purpose of making audits, examinations, excerpts, and transcriptions.

16. NO THIRD PARTY BENEFICIARIES. It is expressly understood and agreed that enforcement of the terms and conditions of this Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to City and SBDC, and nothing contained in this Agreement shall give or allow any such claim or right of action by any other third party on such Agreement. It is the express intention of the parties that any person other than City or SBDC receiving services or benefits under this Agreement shall be deemed to be an incidental beneficiary only.

17. ASSIGNMENT. SBDC shall not assign or delegate this Agreement or any portion thereof, or any monies due or which become due hereunder without the City's prior written consent.

18. DEFAULT. Each and every term and condition hereof shall be deemed to be a material element of this Agreement. In the event either party should fail or refuse to perform according to the terms of this Agreement, such party may be declared in default.

19. INTEGRATION AND AMENDMENT. This Agreement represents the entire Agreement between the parties and there are no oral or collateral agreements or understandings. This Agreement shall supersede and replace in its entirety that certain Agreement for Economic Development Services, by and between the parties hereto, dated December 21, 2021. This Agreement may be amended only by an instrument in writing signed by the parties.

20. PROVISIONS CONSTRUED AS TO FAIR MEANING. The provisions of this Agreement shall be construed as to their fair meaning, and not for or against any party based upon any attribution to such party as the source of the language in question.

21. HEADINGS FOR CONVENIENCE. All headings, captions and titles are for convenience and reference only, and of no meaning in the interpretation or effect of this Agreement.

22. WAIVER. No waiver of any breach or default under this Agreement shall be a waiver of any other or subsequent breach or default.

23. AUTHORITY TO BIND. Each of the persons signing below on behalf of any party hereby represents and warrants that such person is signing with full and complete authority to bind the party on whose behalf of whom such person is signing, to each and every term of this Agreement.

24. SEVERABILITY. Invalidation of any specific provisions of this Agreement shall not affect the validity of any other provision of this Agreement.

25. NOTICES. All notices required or permitted under this Agreement shall be in writing and shall be given by hand delivery, by United States first class mail, postage prepaid, registered or certified, return receipt requested, by national overnight carrier, or by facsimile transmission, addressed to the party for whom it is intended at the following address:

If to the City:

City of Louisville
Attn: City Manager
749 Main Street
Louisville, Colorado 80027
Telephone: (303) 335-4533
Fax: (303) 335-4550

If to SBDC:

Boulder SBDC Foundation
Attn: Sharon King
1001 Arapahoe Avenue

Boulder, Colorado 80302

In witness whereof, the parties have executed this Agreement to be effective on the date first above written.

CITY OF LOUISVILLE

By:_____
Chris Leh, Mayor

Attest:_____
Meredyth Muth, City Clerk

BOULDER SBDC FOUNDATION, d.b.a. Boulder Small Business Development Center

By:_____

Title:_____

Attest:_____
Secretary

EXHIBIT A

SCOPE OF SERVICES

In cooperation, the City of Lafayette and City of Louisville seek to establish satellite support programs with the Boulder Small Business Development Center (SBDC). The Boulder SBDC will provide programs and services that enhance and supplement the cities' current economic development efforts and goals without duplicating existing efforts. The satellite support programs defined in this Scope of Services include: 1) one-on-one consulting, 2) outreach & marketing, 3) workshops and training programs, and 4) management and implementation. Services will be provided on an annual basis (January 1 – December 31), subject to consideration and renewal of the Professional Services Agreement by each community.

Satellite Support Programs Defined:

1) **One-on-One Consulting:** For each City, the SBDC will provide 300 hours of consulting per satellite program operated. At an average of 25 hours/month, that would include Initial (Discovery) Meetings to assess the business' needs and preferences and match-up relevant expertise, as well as follow-on sessions to deliver targeted assistance that helps the businesses to move forward.

   Consulting topics may consist of, but are not limited to, start-up issues; development of a business plan (or other planning format) for start-up, growth, and financing; development of marketing strategies and action plans; development and understanding of financial projections and access to capital; and development of business management skills and processes. For businesses in the advanced industries, on a limited basis, assistance may include strategic research & analysis, technology commercialization, support for innovation grants and contract opportunities as well as access to other capital. For Latinx entrepreneurs and businesses, bilingual assistance may include business planning, access to capital, and all of the other topics previously listed.

   The SBDC has built a network of professional service providers, entrepreneurs, and other business assistance and government contacts that further assist our small businesses, especially when the scope of the request is outside the SBDC mission or resource constraints. Our network of commercial banks and other financing sources such as micro lending institutions (Colorado Enterprise Fund, Colorado Lending Source and others) leads to warm introductions for financial accessibility. SBDC specialists, in collaboration with lender representatives, meet with our small business clients to explain the financing landscape, and if appropriate, provide an introduction for further conversation.

   The Boulder SBDC will not establish a permanent office in either Lafayette or Louisville to provide these services. Consultants will use a combination of virtual and in-person sessions; the Cities, at no-cost to the SBDC, will provide short-term, temporary meeting

space at city facilities on an as-needed basis so that the SBDC can have a community presence.

Annual cost per satellite program: $22,500

2) **Outreach & Marketing:** Since the SBDC satellite offices will be new resources in the communities, extra efforts will be made to build the SBDC presence. The Lead Consultant and SBDC Representative (Dan King) will attend various meetings and activities to immerse himself and our team in the business community and to build relationships with business owners and leaders. The Boulder SBDC Executive Director will participate as well, whenever available.

   Boulder SBDC will incorporate these new satellite offices into our marketing & outreach communication plans, platforms, and materials (including our website, broadcast newsletters, social media channels, public relations efforts and, on a limited basis, in emails to target business, organizations and community leaders). The goals will be to build awareness and usage of SBDC programs and services. The SBDC will add any relevant lists provided by each city to our marketing databases to increase outreach.

   Annual cost per satellite program: $9,700

3) **Workshops and Training Programs:** Boulder SBDC produces practical and actionable workshops, presented by high-caliber and experienced subject matter experts (SMEs).

   The framework and several of the specific workshop and program topics will be the same as 2022. Two new programs are added in 2023.

   [1] Take Action! Marketing Peer Group Series (1.0) – in person/in Lafayette – 3 part series
   [2] Take Action! Marketing Peer Group Series (1.0) – in person/in Louisville – 3 part series
   [3] Business Basics: For the Early Stage Business and the New Entrepreneur – in person; Lafayette or Louisville location for this individual session; maximum of 12 attending businesses from each city
   [4] Financial Know-How– in person; Lafayette or Louisville location for this individual session; maximum of 12 attending businesses from each city. *This workshop replaces the SEO program done in 2022.*
   [5] Take Action! Marketing Peer Group Series (2.0) – in person; Lafayette or Louisville location for this 2 part series; maximum of 10 attending businesses from each city
   [6] Sales Essentials -- in person; Lafayette or Louisville location for this individual session; maximum of 12 attending businesses attending from each city.

   Annual cost per satellite program: $28,600

4) **Management and Implementation:** Boulder SBDC's Team Lead and Executive Director will work directly with representatives in Lafayette and Louisville to get input on business' needs and preferences, to understand other resources in place (in order to avoid duplication of services/programs and nurture collaboration), to build relationships with key business leaders and owners, and to get input in order to develop the most effective programs that fill gaps in each business community. The SBDC's Marketing & Event Program Manager will handle all logistics, marketing coordination, and program implementation.

   The Lead Consultant (supported by all members of the SBDC team) will provide periodic informal updates to our partners at each City. The Lead Consultant will also participate in at least one annual joint meeting of the City partners to convey such updates as well as provide information on resource allocations and conduct program planning.

   Annual cost per satellite program: $10,000

Total Cost per satellite program:

One-on-One Consulting	**$22,500**
Outreach & Marketing	**$9,700**
Workshops and Training Programs	**$28,600**
Management and Implementation	**$10,000**
Total Cost per satellite program	**$70,800**

By November 15 each year, the Boulder SBDC will provide to the City Managers of both communities an annual activities report. The annual report will include program metrics as defined below, summaries of key programs offered, and copies of relevant outreach & marketing materials. The annual report will be provided to each community's City Council as part of the consideration to renew a Professional Services Agreement for an additional year. In addition, no later than February 1 each year, the Boulder SBDC will provide final metrics that capture the end of the prior service year.

Program Metrics Defined:

1) 300 hours per year of consulting to Louisville businesses, focusing on small businesses and entrepreneurs, including reports (by community) of:
   a. Number of clients served
   b. Number of consulting sessions

2) 8 hours per month by a dedicated Lead SBDC representative, including meetings with local strategic partners and organizations as well as business outreach
3) 4 specialized programs in collaboration with City of Lafayette
    a. 2 Co-Hosted Workshops: Target= 12 businesses per community
    b. 2 Rounds of the 3-part Take Action! Marketing 1.0 (Peer Group Series) – one in Lafayette, one in Louisville: Target= maximum of 10 businesses in attendance
4) Economic impact metrics (as reported by Lafayette and Louisville businesses/residents who participate in consulting and/or workshops):
    a. Sales increases realized: Target= $500,000
    b. Capital formulated: Target $500,000

Exhibit B

City of Louisville Public Services Contract Addendum
Prohibition Against Employing Workers Without Authorization

Prohibition Against Employing Workers Without Authorization. Contractor shall not knowingly employ or contract with a worker without authorization to perform work under this contract. Contractor shall not enter into a contract with a subcontractor that fails to certify to the Contractor that the subcontractor shall not knowingly employ or contract with a worker without authorization to perform work under this contract.

Contractor will participate in either the E-verify program or the Department program, as defined in C.R.S. § § 8-17.5-101(3.3) and 8-17.5-101(3.7), respectively, in order to confirm the employment eligibility of all employees who are newly hired for employment to perform work under the public contract for services. Contractor is prohibited from using the E-verify program or the Department program procedures to undertake pre-employment screening of job applicants while this contract is being performed.

If Contractor obtains actual knowledge that a subcontractor performing work under this contract for services knowingly employs or contracts with a worker without authorization, Contractor shall:

a. Notify the subcontractor and the City within three days that the Contractor has actual knowledge that the subcontractor is employing or contracting with a worker without authorization; and

b. Terminate the subcontract with the subcontractor if within three days of receiving the notice required pursuant to this paragraph the subcontractor does not stop employing or contracting with the worker without authorization; except that the Contractor shall not terminate the contract with the subcontractor if during such three days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with a worker without authorization.

Contractor shall comply with any reasonable request by the Department of Labor and Employment made in the course of an investigation that the Department is undertaking pursuant to the authority established in C.R.S. § 8-17.5-102(5).

If Contractor violates a provision of this Contract required pursuant to C.R.S. § 8-17.5-102, City may terminate the contract for breach of contract. If the contract is so terminated, the Contractor shall be liable for actual and consequential damages to the City.

Pre-Contract Certification in Compliance with C.R.S. Section 8-17.5-102(1)

The undersigned hereby certifies as follows:

That at the time of providing this certification, the undersigned does not knowingly employ or contract with a worker without authorization; and that the undersigned will participate in the E-Verify program or the Department program, as defined in C.R.S. § § 8-17.5-101(3.3) and 8-17.5-101(3.7), respectively, in order to confirm the employment eligibility of all employees who are newly hired for employment to perform under the public contract for services.

Proposer:
_____

By_____
Title:_____

_____
Date

Small Business Development Center (SBDC)

Louisville Satellite Program

2023 End of Year Progress Report

City of Louisville

Thank you to the City of Louisville for all of your support of small businesses and the SBDC in Louisville during 2023. We look forward to continued collaboration and mutual efforts to foster the growth and success of the local business community in the coming years.

Background: The SBDC in Boulder County and Previous Work with the City of Louisville

Since its inception at the end of 1994, the Boulder Small Business Development Center (SBDC) has been a cornerstone for business assistance throughout Boulder County. Operating from its main office in Boulder, this nonprofit economic development entity is dedicated to nurturing small businesses by providing comprehensive consulting services, engaging workshops, and vital resource connections—including financing options. Over the span of 20 years, it has lent its expertise to more than 7,000 businesses within the county, showcasing its commitment to the local business ecosystem.

As a key member of Colorado's network of 15 SBDC Centers, the Boulder SBDC plays a significant role in the state's economic development strategy, directly aligning with the objectives of the Governor's Office of Economic Development & International Trade (OEDIT). This affiliation places the Boulder SBDC within a national framework of over 1,000 centers across the United States, all under the auspices of the U.S. Small Business Administration (SBA). This network not only amplifies its impact but also highlights its prestigious recognition; in 2018, the Boulder SBDC was honored with the SBA's Center of Excellence and Innovation Award, distinguishing it as the Best SBDC in the nation.

The City of Boulder serves as the host organization for this impactful countywide program, demonstrating a strong commitment to fostering an environment where small businesses can thrive. Further expanding its reach, the SBDC established a satellite office in Longmont in 2007, thanks to the support of the City of Longmont and other partners. This expansion has enabled the SBDC to offer its invaluable services more broadly, ensuring that small businesses throughout Boulder County have the support they need to succeed.

Pilot Year: 2022

In 2022, the collaborative efforts between Louisville, Lafayette, and the Boulder SBDC led to the implementation of a part-time Satellite Program aimed at addressing the business recovery needs and service gaps highlighted by the pandemic. This partnership focused on providing specialized technical assistance, consulting, and training to foster the recovery and long-term resilience of businesses in both Louisville and Lafayette. The program aimed to bridge the gap in available resources, offering professional technical support and subject matter expertise in a cost-effective manner, thus contributing to building more resilient businesses and enhancing community appeal for business development. This initiative marked a significant step towards supporting local businesses in navigating the challenges presented by the pandemic and positioning them for sustained growth.

Report on Services Performed – 2023 Contract with City of Louisville

In 2023, the Boulder SBDC delivered innovative and complementary programs that significantly bolstered the City's economic development strategies. These initiatives were meticulously crafted to not only align with but also enhance the City's ambitions, filling gaps without overlapping with existing services. Tailored to both the seasoned and budding entrepreneurs within the City, these programs offer practical support, empowering businesses contemplating making the City their home or those already established here, thereby enriching the local business landscape and fostering a vibrant economic environment.

One-on-one Business Consulting

In 2023, Boulder SBDC delivered 157 hours of one-on-one consulting to 51 businesses in Louisville, focusing on a wide array of services designed to meet the specific needs of each business. The SBDC satellite program goal for the year was 300 hours.

In the initial consultations, SBDC consultants thoroughly evaluate the specific needs and preferences of each business, ensuring a perfect match with the SBDC's wide range of expert resources. These preliminary assessments pave the way for customized follow-up sessions, where businesses receive specialized support tailored to propel them towards their objectives, fostering progress and development.

Consulting services cover a broad spectrum, including addressing startup challenges, crafting business plans for various growth stages, devising marketing strategies, understanding financial forecasts and securing funding, and honing business management practices. For those in cutting-edge sectors, SBDC offers strategic guidance, aids in technology commercialization, and facilitates access to innovation funding and capital. Latinx entrepreneurs receive bilingual support for business planning, notably for securing Boulder County PIE grants, alongside comprehensive assistance on all aforementioned topics, ensuring tailored guidance for every business's unique journey.

Outreach & Marketing

Especially as the SBDC satellite offices are new resources in the communities, significant efforts have been deployed to establish the SBDC's presence and raise awareness of the available programs and services. Program Lead Dan King, among others, engaged with business leaders and owners at various Louisville gatherings, including Chamber events, library meetings, and other business community events.

The Boulder SBDC also integrated the satellite office into its comprehensive marketing and outreach strategies, employing a variety of channels such as its website, newsletters, social media, public relations initiatives, and direct emails to targeted businesses, organizations, and community leaders.

Workshops and Training Programs

In 2023, the Boulder SBDC, in collaboration with the cities of Lafayette and Louisville, produced a series of practical and actionable workshops. These workshops were enhanced by the addition of two new sessions, specifically designed to address the unique needs of the local business communities. Presented by highly experienced subject matter experts, these workshops aimed to provide businesses with the tools and insights needed for growth and resilience, reflecting the SBDC's commitment to supporting the economic development of both cities through targeted educational programs.

- **Take Action! Marketing Series** – held at the Louisville Rec Center on September 26th, October 3rd and 10th, this 3-part peer group series was led by Catherine McHale, founder of Power and Purpose Marketing - https://powerpurposemarketing.com/about/. The participating nine attendees shared their challenges, gathered insights from the SME and other participants and helped each other to overcome hurdles to growth. The facilitator offered or provided a one-hour consulting session with each participating business to customize the group learning to each business' individual needs.

- **Financial Know How -** held in collaboration with the City of Lafayette at the Louisville Rec Center on August 1st is a in-person two-hour workshop designed to help small businesses understand the dynamics of finance as it applies to their business. The workshop discusses the interplay between personal and business finance for a small business. Founder and CEO at Pantheon Solutions Brian Ormsby worked with attendees improve the health of their financial position and aid small businesses with running and planning their business on a day-to-day basis with a guide to creating a roadmap to future success.

- **Business Basics for the Early Stage Business and New Entrepreneur –** held in collaboration with the City of Lafayette, this in-person workshop was held on December 19th at the Louisville Rec Center. For early stage or startup businesses, this workshop introduces the basic steps and some fundamental tools for evaluating the business idea, understanding its current situation and developing a plan to move forward. The workshop uses the Business Model Canvas to map out the key business components and decisions and explains how to assemble a Business Plan that meets the needs of the business and customers and of potential investors or lenders. Also covered: how to forecast a realistic expectation for your business' revenues and expenses.

- **Sales Essentials** – held in collaboration with the City of Lafayette this in-person workshop was held on June 28th, at the Lafayette Public Library. Founder of Apple & Arrow Sales, Suzi Bahnsen worked with

business to help explain how to build a sales pipeline, pricing strategies and packaging, selling with confidence and provided tips on negotiation tactics. Attendees were also given the opportunity to meet with Suzi for additional consulting.

- **Take Action! Marketing 2.0 –** held in collaboration with the City of Lafayette, this two part in-person series will be held on February 20th and 27th at the Lafayette Public Library, led by Catherine McHale, founder of Power and Purpose Marketing - https://powerpurposemarketing.com/about/. Catherine will work with previous attendees of Take Action! Marketing 1.0 to help deepen their understanding in key marketing areas and provide a platform for attendees to share progress and tackle current small business marketing challenges. Attendees are given the opportunity for a hands on approach to marketing including building Instagram reels and building a newsletter for their business.

Management & Implementation

Boulder SBDC's Team Lead and Executive Director worked directly with Economic Development representatives in Louisville to get input on business' needs and preferences, to understand other resources in place (in order to avoid duplication of services/programs and nurture collaboration), to build relationships with key business leaders and owners and to get input in order to develop the most effective programs that fill gaps in each business community. The Center's Marketing & Program Coordinator handled all logistics, marketing coordination and program implementation.

Program Metrics and Economic Impact

In 2023, the SBDC provided 157 hours of consulting during 115 sessions to 51 small businesses. The team exceeded the eight hours/month defined in the Statement of Work. The Center produced the six specialized program (in collaboration with the City of Lafayette), with a total of 25 Louisville attendees. Outside of the six specialized programs there were 59 Louisville businesses that attended SBDC workshops.

In 2023, small businesses in Louisville that the Boulder SBDC assisted with one-on-one consulting reported sales increases of $12,500 and capital formation of $1,083,000.

As envisioned, 2023 was the second year for the SBDC/City of Louisville collaboration and a continued effort for building awareness of SBDC's City-supported resources and programs.

Thank you again for your support of small businesses

Small business plays a critical role in the community in building a sustainable economy for the City of Louisville. With support from the City, the SBDC provided direct and tangible assistance to small businesses, both existing and new ventures. Thank you again for all your support of small business and of Boulder SBDC in Louisville.

City of Louisville
COLORADO • SINCE 1878

CITY COUNCIL COMMUNICATION
AGENDA ITEM 7C

SUBJECT: **APPROVAL OF PROCLAMATION – LOUISVILLE, COLORADO ITALIAN-AMERICAN HERITAGE DAY**

DATE: **AUGUST 6, 2024**

PRESENTED BY: **CHRISTOPHER M. LEH, MAYOR**

SUMMARY:
Mayor Leh brings forward the attached proclamation for Council consideration.

FISCAL IMPACT:
None

RECOMMENDATION:
Approve proclamation.

ATTACHMENT(S):
1. Proclamation

STRATEGIC PLAN IMPACT:

☐	**Financial Stewardship & Asset Management**	☐	**Reliable Core Services**
☐	**Vibrant Economic Climate**	☐	**Quality Programs & Amenities**
☒	**Engaged Community**	☐	**Healthy Workforce**
☐	**Supportive Technology**	☐	**Collaborative Regional Partner**

City of Louisville
COLORADO • SINCE 1878

Proclamation – Louisville, Colorado Italian-American Heritage Day

Whereas: On the second Sunday in August the Louisville Society of Italian Americans celebrates La Festa to honor the achievements and contributions of Italian immigrants and their descendants living in Louisville, Colorado.

Whereas: the contributions and legacy of Italians and Italian-Americans played a vital role in making Louisville the vibrant and notable city that it is; and

Whereas: it is fitting and appropriate to proclaim a day to celebrate the contributions by the Italian community to our city; and

Whereas: the goal of the day is to invite the public to the annual La Festa Italiano di Louisville to celebrate the rich culture that Italians brought to our city; and

Whereas: such a commemoration will bring people of goodwill together to gain a greater appreciation for the roles played by Italians and Italian-Americans in shaping our city; and

Whereas: such a day encouraging cultural awareness will contribute to vital understanding and mutual respect for the bonds that hold our society together; and

Whereas: Italian Heritage Day is inclusive for all members of the community and reaffirms the importance of celebrating a part of Louisville's mixture of cultural identities.

NOW, THEREFORE, IT BE ORDERED by the Louisville, Colorado City Council, do hereby proclaim August 11, 2024 as Italian-American Heritage Day in the city of Louisville, Colorado.

DATED this 6th day of August, 2024.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Genny Kline, Interim City Clerk

City of Louisville
COLORADO • SINCE 1878

CITY COUNCIL COMMUNICATION
AGENDA ITEM 7D

SUBJECT: **APPROVAL OF RESOLUTION NO. 32, SERIES 2024 – A RESOLUTION APPROVING A FINANCING OPTION IN CONNECTION WITH THE WINDY GAP FIRMING PROJECT**

DATE: **AUGUST 6, 2024**

PRESENTED BY: **KURT KOWAR, PUBLIC WORKS**

SUMMARY:
Staff is recommending approval of the attached Completion Costs and Expenses (C&E) selecting the financing option for the Windy Gap Firming Project also known as the Chimney Hollow Reservoir.

The Windy Gap Project (WGP) was first proposed in 1967 by the cities of Boulder, Estes Park, Fort Collins, Greeley, Longmont and Loveland. Completed in 1985, WGP consists of a diversion dam at the confluence of the Colorado and Fraser Rivers, a pump plant and a 6-mile pipeline to Lake Granby. The WGP is capable of diverting 48,000 acre feet (AF) of water each year. Once stored in Lake Granby, water is delivered to water users via the Colorado-Big Thompson Project's (C-BT) East Slope distribution system. However, during wet cycles Lake Granby is often full, leaving little or no space for WGP water. Conversely, the water rights associated with the WGP are relatively junior and are less likely to be in priority preventing diversions during dry cycles.

Additional storage, contemplated since the WGP's inception, was proposed to provide more reliable WGP water deliveries. These efforts culminated in the Windy Gap Firming Project with the major component being the construction of a 90,000 AF reservoir at Chimney Hollow in the foothills west of Carter Lake. The formal federal permitting process was entered in 2003 with the final permits issued in 2016 and 2017. Project design wrapped up in 2019. Construction began in 2020 and is scheduled for completion in 2025.

Over the last 4 years of construction the project has experienced several cost overruns depleting existing funding. The largest are related to additional source materials (embankment fill and grouting, etc.) as well as global supply chains and inflation issues. In a procedure outlined in the allotment contract, approved by Council at the initial of construction in 2020, Northern has provided the attached notice to incur Completion C&E assigned to all project participants. Louisville has 90 days from this notice to elect one of the two options of how to fund this obligation of either providing the full cash amount by August 30 or to participate in additional financing. If neither option is provided on time, then Louisville is automatically enrolled in the Financing option. All participants are contractually obligated to continue to financially support the project and ensure completion. Failure to make payment under either option would put Louisville in default. Default triggers a variety of serious ramifications including penalty fees, permanent loss of water supply storage within the project and possible litigation.

FISCAL IMPACT:
The City's pro rata share of the C&E is $2,068,194. If the recommended financing option is selected, annual cost increases are projected at approximately $104,000 for 2025 through 2035 and $95,000 for years 2036 to 2055 with a total finance cost of $2.94 million. Annual payments have been accounted for in the current City Rate Model and negligible impacts to water rate increases. A cash payment would impact water fund reserves and require an addition 2% to 3% increase over the next four years to compensate.

PROGRAM/SUB-PROGRAM IMPACT:
The program goal for Utilities is to ensure safe, reliable, great tasting water; properly treated wastewater; effective stormwater control; successfully managed solid waste; and competitive prices for all services. The Windy Gap Firming Project will increase the reliability of the water system and ensure adequate supplies for the future.

RECOMMENDATION:
Adopt Resolution No. 32, Series 2024 approving the selection of the financing of the Complete C&E obligation for participation in the Windy Gap Firming Project with authorization for the Mayor to execute the notice.

ATTACHMENT(S):
1. Resolution No. 32, Series 2024
2. Completion C&E Notice

STRATEGIC PLAN IMPACT:

☐	**Financial Stewardship & Asset Management**	☒	**Reliable Core Services**
☐	**Vibrant Economic Climate**	☐	**Quality Programs & Amenities**
☐	**Engaged Community**	☐	**Healthy Workforce**
☐	**Supportive Technology**	☐	**Collaborative Regional Partner**

RESOLUTION NO. 32
SERIES 2024

A RESOLUTION APPROVING A FINANCING OPTION IN CONNECTION WITH THE WINDY GAP PROJECT

WHEREAS, the City is party to an Allotment Contract concerning the Windy Gap Firming Project, which is also known as the Chimney Hollow Reservoir Project (the "Project"); and

WHEREAS, the City was notified by the Windy Gap Firming Project Water Activity Enterprise of a need to incur Completion C&E for the Project; and

WHEREAS, the City's share of such costs is $2,068,194, and the City has the option to make a full cash payment for its share or to participate in additional financing; and

WHEREAS, the City Council, by this resolution desires to choose the financing option to pay for City's share of the Completion C&E costs for the Project.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

1. The Notice to WGFP Allottees of Need to Incur Completion C&E (the "Notice") is hereby approved in essentially the same form as the copy of such Notice accompanying this Resolution, indicating the City's decision to select the financing option to fund the City's share of Completion C&E costs.

2. The Mayor is authorized to execute such Notice, and the Mayor, City Manager and City Staff are further authorized to do all things necessary on behalf of the City to perform the obligations of the City under such Notice.

PASSED AND ADOPTED this 6th day of August, 2024.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Genny Kline, Interim City Clerk

Chimney Hollow Reservoir Project

NOTICE TO WGFP ALLOTTEES OF NEED TO INCUR COMPLETION C&E

To: City of Louisville
From: Jeff Drager, P.E.
Date: May 29, 2024

Under the Windy Gap Firming Project (WGFP) Allotment Contracts, and using the definitions therein, the WGFP Enterprise has determined that the Initial C&E will be depleted, and Completion C&E must be incurred to complete construction of the WGFP. This letter serves as the WGFP Enterprise's Notice under Section 6.2.2 of the Allotment Contract of the need to incur Capital C&E Funding Obligations for Completion C&E. **The total amount of Completion C&E to be incurred is $65,000,000**. Because interest earned on Initial C&E differed for Cash Allottee funds versus Loan Allottee funds, the WGFP Allottees' Capital C&E Funding Obligations for Completion C&E accordingly differ. The original Cash Allottees' Completion C&E portion totals $32,536,281 (~$715.08/cash unit) and the Loan Allottees' Completion C&E portion is $32,463,719 (~$729.52/loan unit). The WGFP Enterprise is offering the option for all Allottees to participate in a WGFP Financing to satisfy the Completion C&E, regardless of each Allottee's method of paying its Initial C&E.

Pursuant to 6.2.2, by August 27, 2024, Allottees shall elect in writing, by returning this form to the WGFP Enterprise through mail or email to jhernandez@northernwater.org, with cc to braley@troutlaw.com, to pay its Capital C&E Funding Obligations for such Completion C&E through a Capital C&E Funding Cash Payment, participation in a WGFP Financing, or a combination thereof. **If either no such election is made by August 27, or to the extent a cash payment is not received by August 30, 2024**, then that Allottee shall be obligated to participate in a WGFP Financing under Allotment Contract Section 6.2.2.2.

Construction of Chimney Hollow Reservoir is projected for completion late Summer 2025. According to the current budgets and the project's risk register, $65,000,000 is deemed adequate for the successful completion of the project. However, considering the inherent uncertainties associated with construction, it is important to note that additional Completion C&E may be required in the future. If so, the WGFP Enterprise will provide a separate notice pursuant to Allotment Contract Section 6.2.2.

Louisville's Completion C&E Funding Obligation for its 2,835 Units = $2,068,194

Means of Completion C&E Payment:

☐ **Capital C&E Funding Cash Payment** _____ (# of units) $_____

☒ **WGFP Financing** 2,835 (# of units) $2,068,194

Total Units = 2,835 (# of units); Total Amount = $2,068,194

_____
Signature

Mayor_____ _____
Title Date

Chimney Hollow Reservoir Project

Completion C&E Allocation Summary					
Allottee	Units	Future Cost	Avail. Funds	Completion C&E	~ Per Unit
Cash Allottees					
Broomfield	26,464	$100,008,916	$81,084,957	$18,923,959	$715.08
Loveland	10,000	$37,790,552	$30,639,721	$7,150,831	$715.08
Longmont	7,500	$28,342,914	$22,979,791	$5,363,123	$715.08
Fort Lupton	1,190	$4,497,076	$3,646,127	$850,949	$715.08
CWCWD	346	$1,307,553	$1,060,134	$247,419	$715.08
	45,500	$171,947,010	$139,410,729	$32,536,281	
Pooled Finance					
PRPA	16,000	$60,464,883	$48,792,534	$11,672,347	$729.52
Greeley	9,189	$34,725,738	$28,022,162	$6,703,576	$729.52
Erie	6,000	$22,674,331	$18,297,200	$4,377,131	$729.52
Little Thompson WD	4,850	$18,328,418	$14,790,237	$3,538,181	$729.52
Superior	4,726	$17,859,815	$14,412,095	$3,447,720	$729.52
Louisville	2,835	$10,713,621	$8,645,427	$2,068,194	$729.52
Lafayette	900	$3,401,150	$2,744,580	$656,570	$729.52
	44,500	$168,167,955	$135,704,236	$32,463,719	
Totals	90,000	$340,114,965	$275,114,965	$65,000,000	

Completion C&E Loan Payment Sumary			
Allottee	Units	Year 1-10 Payment	Year 11-30 Payment
Cash Allottees			
Broomfield	26,464	$949,101	$862,819
Loveland	10,000	$358,638	$326,035
Longmont	7,500	$268,979	$244,526
Fort Lupton	1,190	$42,678	$38,798
CWCWD	346	$12,409	$11,281
	45,500	$1,631,805	$1,483,459
Pooled Finance			
PRPA	16,000	$585,408	$532,189
Greeley	9,189	$336,207	$305,643
Erie	6,000	$219,528	$199,571
Little Thompson WD	4,850	$177,452	$161,320
Superior	4,726	$172,915	$157,195
Louisville	2,835	$103,727	$94,297
Lafayette	900	$32,929	$29,936
	44,500	$1,628,166	$1,480,151
Totals	90,000	$3,259,971	$2,963,610

City of Louisville
COLORADO • SINCE 1878

CITY COUNCIL COMMUNICATION
AGENDA ITEM 7E

SUBJECT: **APPROVAL OF CITY MANAGER RECRUITER REQUEST FOR PROPOSALS**

DATE: **AUGUST 6, 20245**

PRESENTED BY: **CALEB DICKINSON, MAYOR PRO TEM**
BARBARA HAMLINGTON, CITY COUNCILMEMBER
PAULA KNAPEK, HUMAN RESOURCES MANAGER
MEREDYTH MUTH, INTERIM DEPUTY CITY MANAGER

SUMMARY:
As you are aware, Samma Fox is currently the City's interim City Manager and the City Council will need to begin the search for a new manager. City Council appointed Mayor Pro Tem Dickinson and Councilmember Hamlington to help staff write a request for proposals for a recruiter to help in this process. They have reviewed the RFP and recommended moving it forward for City Council consideration.

The attached draft Request for Proposals outlines a process to hire a recruiter to help hire a new City Manager and also outlines the basic process for recruiting candidates and selecting a new City Manager. The timeline for the RFP would likely result in a consulting partner beginning recruitment activities in September and the selection of a new City Manager in late 2024/early 2025.

All City Council members will participate in the establishment of desired attributes and experience for the City Manager candidates and in interviewing the finalists.

FISCAL IMPACT:
There will be a fiscal impact associated with the procurement of a consulting partner for the recruitment of a City Manager. Staff will bring back a request for a budget amendment along with the contract for Council approval.

PROGRAM/SUB-PROGRAM IMPACT:
This effort supports the City's program area goals for Administration & Support Services to ensure inclusive, responsive, transparent, friendly, fiscally responsible, effective and efficient governance, administration and support.

RECOMMENDATION:
Approve the RFP for City Manager Recruitment Services.

ATTACHMENT(S):
1. Draft RFP for Recruitment Services

STRATEGIC PLAN IMPACT:

☐	**Financial Stewardship & Asset Management**	☐	**Reliable Core Services**
☒	**Vibrant Economic Climate**	☒	**Quality Programs & Amenities**
☒	**Engaged Community**	☐	**Healthy Workforce**
☐	**Supportive Technology**	☐	**Collaborative Regional Partner**

REQUEST FOR PROPOSALS
TO PROVIDE
CITY MANAGER RECRUITMENT SERVICES

The City of Louisville, Colorado, is soliciting proposals from professional consulting firms with proven experience in executive recruitment to assist the City Council in the search for a new city manager. The City of Louisville intends to award a contract to a firm with the ability to facilitate a nationwide search, garner a diverse pool of applicants, identify qualified candidates, and assist with screening and interviewing candidates.

Released August 7, 2024

Proposals Due August 29, 2024

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Exhibit A Standard Professional Services Agreement

Exhibit B Disclosure Statement ***(Form to be completed and submitted with Proposal)***

Exhibit C Community Profile

I. GENERAL INFORMATION

BACKGROUND

The Miners Memorial statue in front of City Hall is a symbol of the history of the people who built Louisville - the coal miners. In August 1877, the Welch Mine opened in Louisville, the first of many coal mines to come. Louis Nawatny, a local landowner, platted his land and named it for himself. The Town of Louisville was incorporated on June 16, 1882.

The City is home to many great companies-- from sole proprietors to corporate campuses. There are approximately 14,000 employees within our community, specializing in growing and diverse industries such as advanced manufacturing, bioscience, health and wellness, aerospace, outdoor recreation, and professional services.

Louisville businesses benefit from a highly educated workforce. Over 72% of Louisville's adult population has a bachelor's degree, and of those, half have an advanced degree. The quality of life and community amenities draw people here from around the country.

A walkable and historic downtown, large Recreation/Senior Center, 32 miles of trails and approximately 2000 acres of open space make Louisville a great place to live and work.

NEED

The City Manager for Louisville has recently resigned. The Council appointed an interim city manager to serve until the Council appoints a new city manager.

A home rule municipality, Louisville has a Council-Manager form of government. The city manager is the chief executive officer of the city and is responsible for the day-to-day management of City operations, including supervision of all city departments. The City has 204 FTEs and 366 variable employees to cover all municipal services excluding a fire department.

The Council is the legislative and governing body of the city and the City's home-rule charter gives the Council the power and authority to hire a city manager and set their salary. As such, the Council is overseeing the recruitment of the city manager position, with assistance from legal counsel and city staff. The City Council needs an executive search firm to facilitate the process and assist the Council in evaluating candidates.

OBJECTIVES

Hire a qualified and experienced city manager who is approachable, a critical thinker, and has solid financial knowledge and public administration experience. The final candidate shall believe in the values and priorities of the City of Louisville and as well as experience building relationships with a variety of community stakeholders. The goal is to have the selected candidate start in the role on or before January 1, 2025

The Council is looking for a forward-thinking executive with management expertise to implement Council's goals including but not limited to economic vitality, affordable housing, climate change initiatives, and an updated Comprehensive Plan.

The City is interested in retaining services of a company, or an individual, that has executive recruitment expertise relative to City government executive positions, has considerable knowledge of how to conduct an executive recruitment (again specific to City government positions), has the ability and capacity to recruit a diverse set of qualified applicants with respect to disability, race, color, sex, sexual orientation, religion, age, national origin, ancestry, and veterans' status, and can successfully conduct an effective, timely nationwide recruitment

II. INVITATION TO SUBMIT PROPOSALS

Date of Request: August 7, 2024

Due Date for Proposals: August 29, 2024

Proposals may be submitted by email and be received by 5:00 p.m. local time ("our clock") on August 29, 2024. Submit an electronic copy of proposal via email to MeredythM@LouisvilleCO.gov with subject line City Manager Recruitment Services. If you submit by email and do not receive a confirmation email within one business day (24 hours) please contact Meredyth Muth at 303.335.4536.

No proposals received after the due date and time will be considered, and any proposals so received shall be discarded. Sole responsibility rests with the Consultant to see that its proposal is received on time at the stated location.

Proposals must meet or exceed requirements contained in this RFP. The material shall be complete, organized, easy to follow and cross-referenced to the requirements of the RFP.

This RFP will be distributed directly to select firms. Other firms will not be precluded from submitting proposals and may be considered. To obtain a copy of the RFP visit the City of Louisville website at www.LouisvilleCO.gov/BiddingOpportinities.

III. PROJECT BACKGROUND, DESCRIPTION AND MINIMUM SCOPE OF SERVICES

A. Project Description

The City of Louisville is seeking full-service consulting services to assist with the national recruitment, evaluation and selection of a qualified and experienced City Manager. The consultant will work with the community, City Council, and Executive Leadership Team to determine the characteristics that the community is seeking in a new manager. Then a working group of City Council and City staff (Working Group) will work with the consultant on developing the criteria for the position, marketing strategy, review and evaluation methodology, process for evaluation and selection of qualified, experienced finalists. The Working Group, will determine a process to evaluate the finalists, to include on-site selection steps The City Council will utilize all input leading to the selection and appointment of a new qualified and experienced City Manager. Consultant is expected to meet with the Working Group once prior to the creation of the marketing strategy and be on-site for the interviews and selection process. Consultant will work with City Council to negotiate a successful compensation package. Estimated timeframe for appointment of a new City Manager is early December 2024 with a January 2025 start date.

B. Minimum Scope of Services

The City is seeking a collaborative executive search firm to work with the Council to recruit and select a new city manager. The consultant firm will be expected to provide the following assistance:

- Prepare for recruitment: Work with Working Group to define the ideal leadership characteristics and competencies of the successful candidate and selection criteria; review, validate and/or recommend changes to the current job description; prepare an application package with requirements, submission, and timelines; design a recruitment process to attract a pool of well-qualified candidates.

- Manage the search process: Develop a detailed schedule for the recruitment and selection process; recommend and conduct advertising of job opening; conduct a national search to identify strong candidates using all appropriate sourcing methods; prescreen candidates applications to verify if they are complete and meet the minimum requirements; verify candidates credentials and education; conduct background checks and any other screening processes deemed appropriate; and work with Working Group to determine the number of candidates to advance for consideration.

- Coordinate interviews: assist with the development of interview questions and evaluation criteria; prepare City Council and Executive Leadership Team to conduct interviews; facilitate the interviews and integrate an opportunity for community members to meet the final candidates

- Provide updates to Working Group every three to four weeks regarding the process status through progress reports or meetings; be on-site for interviews and the community meeting of candidates and other activities, as appropriate. Provide guidance regarding communication to the community and Council regarding the recruitment process.

- May assist, as necessary, with other parts of the hiring process, including but not limited to, recommendations concerning the terms of an employment agreement or other tasks to facilitate a smooth and successful recruitment process.

IV. SPECIAL INSTRUCTIONS TO SUBMITTERS

The Consultant selected for this Project will be responsible for the following:

1. Working with the City Council and the Executive Leadership Team to develop characteristics and attributes of the successful candidate and selection criteria.
2. Development of recruitment strategies and timelines with Working Group to get a qualified and diverse pool of applicants.
3. Development of recruitment materials describing the City Manager position, City organization and community.
4. Conducting a national recruitment, including but not limited to development of print and other ads to be placed in ICMA Newsletter and Colorado Municipal League (CML) Job Finder; the Consultant will also use available social media, on-line job listing services, and any other recruitment strategies deemed effective and appropriate by the Consultant and City.
5. Conducting targeted recruitment of qualified and experienced individuals.
6. Acknowledging receipt of candidates' application materials, and make all application materials available to Working Group.
7. Providing initial screening of all candidates' applications through means including but not limited to written questionnaires, telephone screening and review of background and experience, and make recommendations to the Working Group.
8. Developing a list of semifinalists in conjunction with Working Group and staff.

9. Conducting preliminary telephone, video-conferencing or in-person interviews of all qualified and experienced semifinalists either with the Working Group or reviewing the results of these interviews with the Working Group.
10. Assisting the Working Group in the selection of finalists.
11. Credential verification and background referencing prior to on-site process.
12. Setting up the final on-site selection process steps which should occur over a two-day period as determined at a time designated by City Council. Exercises included during this period should include the formal interviews with City Council and the Executive Leadership Team, Open House for citizens and employees, and tours of City facilities conducted by City staff.
13. Providing guidance regarding communication to the community and organization regarding the recruitment process.
14. Working with City staff to make arrangements for the on-site portion of the process including scheduling the interviews and other activities and making travel and lodging arrangements per City specifications.
15. Conducting all background and reference checks on the final candidate(s).
16. Providing timely notification to candidates identified as potential semifinalists and potential 3-5 finalists and provide timely notification and necessary follow up and feedback to all candidates not selected for the position.
17. Working with City Council to develop and negotiate final employment agreement/compensation package.

The Consultant must provide progress reports to the Working Group. Periodic meetings are required to discuss progress and to determine the process for screening candidates (i.e. written tests, video presentations, etc.). The Working Group will monitor the Consultant's services to ensure quality work is being performed and the Project schedule is being met.

Proposals must include the following:

- Cover Letter and proposal narrative
- Detailed timeline.
- Cost for all of the services listed above.
- Outline of a process that includes engagement with staff, City Council, and the community, marketing the position, and selection.
- List of any additional activities and techniques that might be useful to incorporate into the recruitment and selection process and the cost for adding such services.
- Hourly rate at which the City would be billed for any services that the City might request outside the scope of the items listed in this RFP.
- Estimation of any additional costs the City may incur as a part of this recruitment process.

- Specific information concerning the firm's experience with recent similar recruitments, general experience and a list of references.

No extensions for submittal of an RFP will be granted on an individual basis. If the City determines, in its sole discretion, that the response time it has provided is inadequate for the preparation of complete proposals, or if amendments issued have materially changed the proposal requirements, the City may, at its option, extend the opening or response dates to all firms.

All consultants agree that their proposals are a firm offer to provide the requested services to the City. Once submitted, all offers must remain valid for 120 days from submission deadline date for proposals.

A copy of the City's Agreement for Professional Services is attached. Any questions or concerns regarding the agreement must be included with the proposal.

It is currently anticipated that finalists for the executive search consultant services will be scheduled for interviews on or around the week of September 9 and contract approval at a City Council meeting September 17.

Approximate Proposal Schedule:

- RFP Issued to Consultants: August 7, 2024
- Proposal Due Date: August 29, at 5:00 PM "our clock"
- City Review Period: September 3 - 6
- Interview selected Firms: Week of September 9
- Selection and Approval of Contract: September 17
- Project Initiation: September 18

PART 1 – STANDARD TERMS AND CONDITIONS

When preparing a proposal for submission to the City in response to this RFP, Consultants are advised of the following terms and conditions which have been established by the City:

1.01 The RFP is a solicitation and not an offer of contract and thus the City reserves the right to reject any and all proposals, to consider alternatives, to waive any informalities and irregularities, to re-solicit proposals and terminate or abandon the RFP process at any time in its discretion.

1.02 The City reserves the right to conduct such investigations of and discussions with those who have submitted proposals or other entities as it deems necessary or

appropriate to assist in the evaluation of any proposal or to secure maximum clarification and completeness of any proposal.

1.03 All proposals submitted must be valid for a period of 120 days after the date of the proposal deadline.

1.04 The City reserves the right to select the proposal that it determines best meets the City's interests, needs and desires.

1.05 The City assumes no responsibility for payment of any expenses incurred by any consultant as part of the RFP process.

1.06 The Agreement to be entered into between the City and the Successful Consultant will obligate the Consultant to indemnify and hold harmless the City, and will require the Consultant maintain the following insurance coverages throughout the term of the contract: (i) workers' compensation insurance to cover obligations imposed by applicable laws for any employee of consultant engaged in the performance of work under this Agreement; (ii) employers' liability insurance with limits of liability of not less than One Hundred Thousand Dollars ($100,000) each accident, Five Hundred Thousand Dollars ($500,000) for disease (policy limit), and One Hundred Thousand Dollars ($100,000) for disease (each employee); (iii) comprehensive general liability insurance with limits of liability of not less than One Million Dollars ($1,000,000) per occurrence and Two Million Dollars ($2,000,000) aggregate; and (iv) automobile liability insurance with combined single limits of not less than One Hundred Fifty Thousand Dollars ($150,000) for bodily injury and property damage per person, Six Hundred Thousand Dollars ($600,000) for bodily injury and property damage for two or more persons in any one occurrence, and Fifty Thousand Dollars ($50,000) for auto physical damage. The City shall be named as an additional insured on the specified liability insurance policies and certificates of insurance. Insurance certificates required for this Project shall be sent or delivered to Interim Deputy City Manager Meredyth Muth.

1.07 The final form of Agreement to be entered into between the City and the Successful Consultant shall be subject to the final review and approval of the City Attorney.

PART 2 - DEFINED TERMS

When used in this RFP, the following terms shall have the following meaning:

2.01 "Agreement" means the Agreement for Professional Services, which is included as **Exhibit A** to this request for proposal.

2.02 "Consultant" or "Consultants" means entities responding to this RFP.

2.03 "Project" means comprehensive recruitment and selection consulting services of the City Manager position for the City of Louisville as more specifically described in Section II of this RFP.

2.04 "RFP" means this request for proposal, dated August 7, 2024 the City Manager Recruitment Services Project.

2.05 "Successful Consultant" means the best qualified, responsible Consultant whom the City in its discretion selects and enters an Agreement for the Project on the basis of the City's evaluations as hereinafter provided.

PART 3 - CONTRACT DOCUMENTS

3.01 Project Background, Description and Minimum Scope of Services are included in Section II of this RFP. Please specifically note any proposed deviations or exceptions from these requirements. If no deviations or exceptions are noted, Consultants will be expected to provide the Project requirements set forth therein.

3.02 **The Consultant will be expected to sign the Agreement in the same form as presented in Exhibit A of this RFP packet**, except that the Agreement will be modified to reflect the actual scope of services being provided. **A request for changes or modifications to the Agreement may result in a disqualification of the Consultant.** The submission of a proposal constitutes Consultant's indication that it will execute an Agreement with all of the terms and conditions of the City's form of Agreement that is included with this RFP. The City reserves the right to negotiate optional scope of work items with the Successful Consultant.

3.03 Payment shall be according to the terms of the Agreement. The City will not reimburse the Successful Consultant or other Consultants for any expenses incurred in preparing proposals in response to this RFP.

3.04 The City, in making the Agreement available on the above terms, does so only for the purpose of obtaining proposals on the Project and does not confer a license or grant for any other use.

PART 4 - QUALIFICATIONS OF CONSULTANTS

4.01 Provide the name and home office address of your organization. Describe what type of a business entity your organization is (corporation, general partnership, limited liability company, etc.). Indicate in what state your business entity was incorporated or formed.

4.02 Provide a brief history of your business including years of operation, general business description, number of clients serviced, types of services generally offered, size of firm, and a statement of philosophy of customer service levels provided to clients.

4.03 Detail qualifications and previous executive search experiences, especially for local governmental entities, and especially for the position of chief executive of the organization.

4.04 Identify the key personnel of the business who will be assigned to perform services for the City, and who will provide continuing support throughout the term of the Agreement. Provide resumes stating qualifications for key personnel and provide a statement as to the availability, continuity, and accessibility of the individuals who would be assigned to the Project.

4.05 Provide your recruitment work plan.

4.06 List three clients (municipal/government/Colorado communities preferred) for whom you provided executive search services for in the last 36 months. For each client, the list must specify the type of work performed by your company, the size of the client's organization and period of time retained as a client. Provide email addresses, telephone numbers, and contact names for references.

4.07 Provide fee structure including specific costs per services, fee payment schedule and cost guarantees, including proposed maximum price. Include an hourly rate for services performed beyond the normal scope of services that would be included in an Agreement. All reasonable and necessary airline and hotel expenses for candidates will be paid directly by the City of Louisville. Any additional reimbursable expenses including but not limited to advertising, recruitment brochures, postage, and estimated additional travel expenses should be listed in the proposal.

4.08 Complete the attached Disclosure Statement (Exhibit B) and return with your proposal.

4.09 If an entity, provide certificate of good standing or similar evidence of Consultant's qualification to do business in the State of Colorado.

4.10 Consultants will be required to establish to the satisfaction of the City the reliability and responsibility of all proposed subcontractors and suppliers pursuant to the criteria set forth in these Instructions and Proposal Requirements. Prior to completion of the Contract, the City will notify Consultant in writing if the City has reasonable objection to any proposed subcontractor. In such event, Consultant may, at its option, (1) withdraw its proposal, or (2) submit a substitute sub-consultant acceptable to the City with an adjustment in the proposal to cover any difference in cost. The City may, at its discretion, accept the adjusted proposal.

PART 5 - INTERPRETATIONS AND GOVERNING LAW

5.01 All questions regarding the meaning or intent of this RFP must be submitted **IN WRITING ONLY VIA EMAIL** to the Interim Deputy City Manager. Only questions answered by formal written Addenda to this RFP will be binding. Oral and other interpretations or clarifications will be without legal effect and will NOT be considered. Addenda will be mailed or delivered to all parties recorded by the City as having received the RFP. It shall be each Consultant's responsibility to make inquiry as to Addenda that have been issued. All Addenda shall become part of this RFP, and all Consultants shall be bound by such Addenda, whether or not received by the Consultant.

5.02 All applicable State of Colorado and Federal laws, City ordinances, and licenses and regulations of all agencies having jurisdiction shall apply to the Consultant and Project throughout the Project and are incorporated herein by reference. The Agreement with the selected Consultant, and all questions concerning the execution, validity or invalidity, capacity of the parties, and the performance of the Agreement, shall be interpreted in all respects in accordance with the Home Rule Charter and Code of the City of Louisville and the laws of the State of Colorado.

PART 6 - BASIS FOR EVALUATION OF PROPOSALS

The City does not discriminate on the grounds of race, religion, color, age, sex, gender, sexual orientation, disability, or national origin or other status protected by federal or state law. Disadvantaged business enterprises are afforded a full opportunity to submit proposals. Proposals will be evaluated on the Consultant's qualifications, experience, Project understanding and approach.

Based on the preliminary review of the proposals, Consultants may then be interviewed prior to selection.

The City will select for the Project the Consultant who City Council determines best meets the City's interests, needs and desires. In making such determination, City Council shall consider but not be limited to the following factors:

1. The Consultant's skill, ability, and capacity to perform the services required;
2. The Consultant's interest in the services which are the subject of this RFP, as well as their understanding of the scope of such services and the specific requirements of the City;
3. Whether the Consultant can perform the services within the time period specified, without delay or interference;
4. The Consultant's character, integrity, reputation, judgment, experience and efficiency;
5. The Consultant's previous and current compliance with statutes, ordinances and rules relating to the Project;
6. The sufficiency of the Consultant's financial resources necessary for the performance of the Project;
7. The number and nature of any conditions attached to the proposal;
8. The general organization of the proposal: Special consideration will be given to submittals which appropriately address the goals; and provide in a clear and concise format the requested information;
9. The scope, responsiveness, efficiency and quality of the Consultant's administrative services.
10. Other selection factors within this RFP or the City's Purchasing Policies that City determines are relevant to consideration of the best interests of the City.

The City makes no commitments to any Consultant until such time as the City approves the negotiated Contract. The City Council may reject all proposals when it determines that such action is in the public interest.

PART 7 - CONTRACT TIME

7.01 The number of days within which the Project is to be completed shall be negotiated prior to execution of the Agreement and made part thereof. The City anticipates the Agreement to require completion of services by no later than March 1, 2025.

PART 8 - SUBMISSION OF PROPOSAL

8.01 Proposals shall be submitted prior to the time and date set for receipt of proposals as indicated in these Instructions and Proposal Requirements, or the modified time and date as indicated by any Addendum. Proposals received after the time and date set for receipt of proposals will not be considered. Consultant shall assume full responsibility for timely delivery at the location designated for receipt of proposals; Consultants must allow adequate time for delivery of their proposal either by hand delivery, postal service, or other delivery service.

8.02 No Consultant may submit more than one proposal. Multiple proposals under different names will not be accepted from one firm or association. Evidence of collusion among Consultants shall be grounds for exclusion of any Consultant who is a participant in any such collusion.

8.03 All information submitted to the City by the Consultant is a public record, and may be subject to disclosure under the Colorado Open Records Act, Colorado Revised Statutes § 24-72-201, et seq. **The Consultant shall clearly identify any portion(s) of its proposal that it believes constitutes trade secrets, privileged information, and/or confidential commercial, financial, geological or geophysical data which shall not be subject to disclosure under the Colorado Open Records Act**.

PART 9 CONFIDENTIALITY

9.01 The Consultant may be provided confidential information by the City. Complete confidentiality must be maintained regarding confidential City information and data. Signing of a confidentiality agreement may be required by the Successful Consultant.

The information included in this RFP is for Consultant's exclusive use in preparing a proposal and must not be shared, whether written or oral, with any other person or entity or used for any other purpose. The use of the City's name in any way as a potential client is strictly prohibited.

PART 10 - MODIFICATION AND WITHDRAWAL OF PROPOSAL

10.01 Proposals submitted early may be modified or withdrawn, subject to the Project Manager's discretion. Withdrawn proposals may be resubmitted until the deadline for submission of proposals.

PART 11 - SIGNING OF AGREEMENT

11.01 When the City gives a notice of selection, it will be accompanied by unsigned counterparts of the Agreement and this RFP. The selected Consultant shall execute the Agreement and deliver it, together with evidence of insurance to the City within ten (10) calendar days from the date of the notice of selection, unless the City designates a later time. Failure to execute an agreement within the time required by the City will be adequate and just cause for cessation of negotiations.

PART 12 - PROPOSAL BECOMES CITY PROPERTY

12.01 Once submitted, a proposal becomes City property. The City reserves the right to retain all proposals submitted and to use any ideas in a proposal regardless of whether that proposal is selected. Submission of a proposal indicates acceptance by the Consultant of the conditions contained in this RFP.

EXHIBIT A TO REQUEST FOR PROPOSAL

PROFESSIONAL SERVICES CONTRACT

AN AGREEMENT BY AND BETWEEN THE CITY OF LOUISVILLE AND _____ FOR CONSULTING SERVICES

1).0 PARTIES

This AGREEMENT FOR CONSULTING SERVICES (this "Agreement") is made and entered into this ____ day of _____, 20___ (the "Effective Date"), by and between the **City of Louisville**, a Colorado home rule municipal corporation, hereinafter referred to as the "City", and _____ [Name of Contractor], a _____ [State of Formation and Type of Entity] hereinafter referred to as the "Consultant".

2).0 RECITALS AND PURPOSE

a) The City desires to engage the Consultant for the purpose of providing _____ services as further set forth in the Consultant's Scope of Services (which services are hereinafter referred to as the "Services").

b) The Consultant represents that it has the special expertise, qualifications and background necessary to complete the Services.

3).0 SCOPE OF SERVICES

The Consultant agrees to provide the City with the specific Services and to perform the specific tasks, duties and responsibilities set forth in Scope of Services attached hereto as Exhibit "A" and incorporated herein by reference.

4).0 COMPENSATION

a) The City shall pay the Consultant for services under this agreement a total not to exceed the amounts set forth in Exhibit "B" attached hereto and incorporated herein by this reference. [Further revise as needed to reflect whether contract is hourly of flat amount]. The City shall not pay mileage and other reimbursable expenses (such as meals, parking, travel expenses, necessary memberships, etc.), unless such expenses are (1) clearly set forth in the Scope of Services, and (2) necessary for performance of the Services ("Pre-Approved Expenses"). The foregoing amounts of compensation shall be inclusive of all costs of whatsoever nature associated with the Consultant's efforts, including but not limited to salaries, benefits, overhead, administration, profits, expenses, and outside consultant fees. The Scope of Services and payment therefor shall only be changed by a properly authorized amendment to this Agreement. No City employee has the authority to bind the City with regard to any payment for any services which exceeds the amount payable under the terms of this Agreement.

b) The Consultant shall submit monthly an invoice to the City for Services rendered and a detailed expense report for Pre-Approved Expenses incurred during the previous month. The invoice shall document the Services provided during the preceding month, identifying by work category and subcategory the work and tasks performed and such other information as may be required by the City. The Consultant shall provide such additional backup documentation as may be required by the City. The City shall pay the invoice within thirty (30) days of receipt unless the Services or the documentation therefor are unsatisfactory. Payments made after thirty (30) days may be assessed an interest charge of one percent (1%) per month unless the delay in payment resulted from unsatisfactory work or documentation therefor.

5).0 PROJECT REPRESENTATION

a) The City designates _____ as the responsible City staff to provide direction to the Consultant during the conduct of the Services. The Consultant shall comply with the directions given by _____ and such person's designees.

b) The Consultant designates _____ as its project manager and as the principal in charge who shall be providing the Services under this Agreement. [The Services shall not be provided by persons other than _____.] [or] [Should any of the representatives be replaced, particularly _____, and such replacement require the City or the Consultant to undertake additional reevaluations, coordination, orientations, etc., the Consultant shall be fully responsible for all such additional costs and services.]

6).0 TERM

6.1 The term of this Agreement shall be from the Effective Date to _____, 20___, unless sooner terminated pursuant to Section 13, below. The Consultant's Services under this Agreement shall commence on [(the Effective Date) or (on another date desired by the City, after the Effective Date)] and Consultant shall proceed with diligence and promptness so that the Services are completed in a timely fashion consistent with the City's requirements.

6.2 Nothing in this Agreement is intended or shall be deemed or construed as creating any multiple-fiscal year direct or indirect debt or financial obligation on the part of the City within the meaning of Colorado Constitution Article X, Section 20 or any other constitutional or statutory provision. All financial obligations of the City under this Agreement are subject to annual budgeting and appropriation by the Louisville City Council, in its sole discretion. Notwithstanding anything in this Agreement to the contrary, in the event of non-appropriation, this Agreement shall terminate effective December 31 of the then-current fiscal year.

7).0 INSURANCE

a) The Consultant agrees to procure and maintain, at its own cost, the policies of insurance set forth in Subsections 7.1.1 through 7.1.4. The Consultant shall not be relieved of any liability, claims, demands, or other obligations assumed pursuant to this Agreement by reason of its failure to procure or maintain insurance, or by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types. The coverages required below shall be procured and maintained with forms and insurers acceptable to the City. All coverages shall be continuously maintained from the date of commencement of services hereunder. The required coverages are:

7.1.1 Workers' Compensation insurance as required by the Labor Code of the State of Colorado and Employers Liability Insurance. Evidence of qualified self-insured status may be substituted.

7.1.2 General Liability insurance with minimum combined single limits of ONE MILLION DOLLARS ($1,000,000) each occurrence and TWO MILLION DOLLARS ($2,000,000) aggregate. The policy shall include the City of Louisville, its officers and its employees, as additional insureds, with primary coverage as respects the City of Louisville, its officers and its employees, and shall contain a severability of interests provision.

7.1.3 Comprehensive Automobile Liability insurance with minimum combined single limits for bodily injury and property damage of not less than FOUR HUNDRED THOUSAND DOLLARS ($400,000) per person in any one occurrence and ONE MILLION DOLLARS ($1,000,000) for two or more persons in any one occurrence, and auto property damage insurance of at least FIFTY THOUSAND DOLLARS ($50,000) per occurrence, with respect to each of Consultant's owned, hired or non-owned vehicles assigned to or used in performance of the services. The policy shall contain a severability of interests provision. If the Consultant has no owned automobiles, the requirements of this paragraph shall be met by each employee of the Consultant providing services to the City of Louisville under this Agreement.

7.1.4 Professional Liability coverage with minimum combined single limits of ONE MILLION DOLLARS ($1,000,000) each occurrence and ONE MILLION DOLLARS ($1,000,000) aggregate.

7.2 The Consultant's general liability insurance, automobile liability and physical damage insurance, and professional liability insurance shall be endorsed to include the City, and its elected and appointed officers and employees, as additional insureds, unless the City in its sole discretion waives such requirement. Every policy required above shall be primary insurance, and any insurance carried by the City, its officers, or its employees, shall be excess and not contributory insurance to that provided by the Consultant. Such policies shall contain a severability of interests provision. The Consultant shall be solely responsible for any deductible losses under each of the policies required above.

7.3 Certificates of insurance shall be provided by the Consultant as evidence that policies providing the required coverages, conditions, and minimum limits are in

full force and effect, and shall be subject to review and approval by the City. No required coverage shall be cancelled, terminated or materially changed until at least 30 days' prior written notice has been given to the City. The City reserves the right to request and receive a certified copy of any policy and any endorsement thereto.

7.4 Failure on the part of the Consultant to procure or maintain policies providing the required coverages, conditions, and minimum limits shall constitute a material breach of contract upon which the City may immediately terminate this Agreement, or at its discretion may procure or renew any such policy or any extended reporting period thereto and may pay any and all premiums in connection therewith, and all monies so paid by the City shall be repaid by Consultant to the City upon demand, or the City may offset the cost of the premiums against any monies due to Consultant from the City.

7.5 The parties understand and agree that the City is relying on, and does not waive or intend to waive by any provision of this Agreement, the monetary limitations or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, § 24-10-101 et seq., C.R.S., as from time to time amended, or otherwise available to the City, its officers, or its employees.

8).0 INDEMNIFICATION

To the fullest extent permitted by law, the Consultant agrees to indemnify and hold harmless the City, and its elected and appointed officers and its employees, from and against all liability, claims, and demands, on account of any injury, loss, or damage, which arise out of or are connected with the services hereunder, if and to the extent such injury, loss, or damage is caused by the negligent act, omission, or other fault of the Consultant or any subcontractor of the Consultant, or any officer, employee, or agent of the Consultant or any subcontractor, or any other person for whom Consultant is responsible. The Consultant shall investigate, handle, respond to, and provide defense for and defend against any such liability, claims, and demands. The Consultant shall further bear all other costs and expenses incurred by the City or Consultant and related to any such liability, claims and demands, including but not limited to court costs, expert witness fees and attorneys' fees if the court determines that these incurred costs and expenses are related to such negligent acts, errors, and omissions or other fault of the Consultant. The City shall be entitled to its costs and attorneys' fees incurred in any action to enforce the provisions of this Section 8.0. The Consultant's indemnification obligation shall not be construed to extend to any injury, loss, or damage which is caused by the act, omission, or other fault of the City.

9).0 QUALITY OF WORK

Consultant's professional services shall be in accordance with the prevailing standard of practice normally exercised in the performance of services of a similar nature in the Denver metropolitan area.

10).0 INDEPENDENT CONTRACTOR

It is the expressed intent of the parties that the Consultant is an independent contractor and not the agent, employee or servant of the City, and that:

10.1. Consultant shall satisfy all tax and other governmentally imposed responsibilities including but not limited to, payment of state, federal, and social security taxes, unemployment taxes, worker's compensation and self-employment taxes. No state, federal or local taxes of any kind shall be withheld or paid by the City.

10.2. **Consultant is not entitled to worker's compensation benefits except as may be provided by the Consultant nor to unemployment insurance benefits unless unemployment compensation coverage is provided by the Consultant or some entity other than the City.**

10.3. Consultant does not have the authority to act for the City, or to bind the City in any respect whatsoever, or to incur any debts or liabilities in the name of or on behalf of the City.

10.4. Consultant has and retains control of and supervision over the performance of Consultant's obligations hereunder and control over any persons employed by Consultant for performing the Services hereunder.

10.5. The City will not provide training or instruction to Consultant or any of its employees regarding the performance of the Services hereunder.

10.6. Neither the Consultant nor any of its officers or employees will receive benefits of any type from the City.

10.7. Consultant represents that it is engaged in providing similar services to other clients and/or the general public and is not required to work exclusively for the City.

10.8. All Services are to be performed solely at the risk of Consultant and Consultant shall take all precautions necessary for the proper and sole performance thereof.

10.9. Consultant will not combine its business operations in any way with the City's business operations and each party shall maintain their operations as separate and distinct.

11).0 ASSIGNMENT

Except as provided in section 22.0 hereof, Consultant shall not assign or delegate this Agreement or any portion thereof, or any monies due or to become due hereunder without the City's prior written consent.

12).0 DEFAULT

Each and every term and condition hereof shall be deemed to be a material element of this Agreement. In the event either party should fail or refuse to perform according to the terms of this Agreement, such party may be declared in default.

13).0 TERMINATION

a) This Agreement may be terminated by either party for material breach or default of this Agreement by the other party not caused by any action or omission of the other party by giving the other party written notice at least thirty (30) days in advance of the termination date. Termination pursuant to this subsection shall not prevent either party from exercising any other legal remedies which may be available to it.

b) In addition to the foregoing, this Agreement may be terminated by the City for its convenience and without cause of any nature by giving written notice at least fifteen (15) days in advance of the termination date. In the event of such termination, the Consultant will be paid for the reasonable value of the services rendered to the date of termination, not to exceed a pro-rated daily rate, for the services rendered to the date of termination, and upon such payment, all obligations of the City to the Consultant under this Agreement will cease. Termination pursuant to this subsection shall not prevent either party from exercising any other legal remedies which may be available to it.

14).0 INSPECTION AND AUDIT

The City and its duly authorized representatives shall have access to any books, documents, papers, and records of the Consultant that are related to this Agreement for the purpose of making audits, examinations, excerpts, and transcriptions.

15).0 DOCUMENTS

All computer input and output, analyses, plans, documents photographic images, tests, maps, surveys, electronic files and written material of any kind generated in the performance of this Agreement or developed for the City in performance of the Services are and shall remain the sole and exclusive property of the City. All such materials shall be promptly provided to the City upon request therefor and at the time of termination of this Agreement, without further charge or expense to the City. Consultant shall not provide copies of any such material to any other party without the prior written consent of the City.

16).0 ENFORCEMENT

a) In the event that suit is brought upon this Agreement to enforce its terms, the prevailing party shall be entitled to its reasonable attorneys' fees and related court costs.

b) This Agreement shall be deemed entered into in Boulder County, Colorado, and shall be governed by and interpreted under the laws of the State of Colorado. Any action arising out of, in connection with, or relating to this Agreement shall be filed in the District Court of Boulder County of the State of Colorado, and in no other

court. Consultant hereby waives its right to challenge the personal jurisdiction of the District Court of Boulder County of the State of Colorado over it.

17).0 COMPLIANCE WITH LAWS

17.1 Consultant shall be solely responsible for compliance with all applicable federal, state, and local laws, including the ordinances, resolutions, rules, and regulations of the City; for payment of all applicable taxes; and obtaining and keeping in force all applicable permits and approvals.

17.2 Consultant acknowledges that the City of Louisville Code of Ethics provides that independent contractors who perform official actions on behalf of the City which involve the use of discretionary authority shall not receive any gifts seeking to influence their official actions on behalf of the City, and that City officers and employees similarly shall not receive such gifts. Consultant agrees to abide by the gift restrictions of the City's Code of Ethics.

18).0 INTEGRATION AND AMENDMENT

This Agreement represents the entire Agreement between the parties and there are no oral or collateral agreements or understandings. This Agreement may be amended only by an instrument in writing signed by the parties.

19).0 NOTICES

All notices required or permitted under this Agreement shall be in writing and shall be given by hand delivery, by United States first class mail, postage prepaid, registered or certified, return receipt requested, by national overnight carrier, or by facsimile transmission, addressed to the party for whom it is intended at the following address:

If to the City:

City of Louisville
Attn: City Manager
749 Main Street
Louisville, Colorado 80027
Telephone: (303) 335-4533
Fax: (303) 335-4550

If to the Consultant:

_____
_____
_____
_____

Any such notice or other communication shall be effective when received as indicated on the delivery receipt, if by hand delivery or overnight carrier; on the United States mail

return receipt, if by United States mail; or on facsimile transmission receipt. Either party may by similar notice given, change the address to which future notices or other communications shall be sent.

20).0 EQUAL OPPORTUNITY EMPLOYER

a) Consultant will not discriminate against any employee or applicant for employment because of race, color, religion, age, sex, disability or national origin. Consultant will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, color, religion, age, sex, disability, or national origin. Such action shall include but not be limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Consultant agrees to post in conspicuous places, available to employees and applicants for employment, notice to be provided by an agency of the federal government, setting forth the provisions of the Equal Opportunity Laws.

b) Consultant shall be in compliance with the applicable provisions of the American with Disabilities Act of 1990 as enacted and from time to time amended and any other applicable federal, state, or local laws and regulations. A signed, written certificate stating compliance with the Americans with Disabilities Act may be requested at any time during the life of this Agreement or any renewal thereof.

21.0 NO THIRD PARTY BENEFICIARIES

It is expressly understood and agreed that enforcement of the terms and conditions of this Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to City and Consultant, and nothing contained in this Agreement shall give or allow any such claim or right of action by any other third party on such Agreement. It is the express intention of the parties that any person other than City or Consultant receiving services or benefits under this Agreement shall be deemed to be an incidental beneficiary only.

22.0 SUBCONTRACTORS

Consultant may utilize subcontractors identified in its qualifications submittal to assist with non-specialized works as necessary to complete projects. Consultant will submit any proposed subcontractor and the description of its services to the City for approval. The City will not work directly with subcontractors.

23.0 AUTHORITY TO BIND

Each of the persons signing below on behalf of any party hereby represents and warrants that such person is signing with full and complete authority to bind the party on whose behalf of whom such person is signing, to each and every term of this Agreement.

In witness whereof, the parties have executed this Agreement to be effective on the date first above written.

CITY OF LOUISVILLE,
a Colorado Municipal Corporation

By:_____
Mayor

Attest:_____
Meredyth Muth, City Clerk

CONSULTANT:
_____

By:_____
Title:_____

Exhibit A – Scope of Services

[Insert Scope of Service(s)]

EXHIBIT B

{Insert Consultant Service Pricing}

EXHIBIT B TO REQUEST FOR PROPOSAL

DISCLOSURE STATEMENT

As a condition for consideration Consultant must disclose any conflict of interest with the City of Louisville, including, but not limited to, any relationship with any City of Louisville elected official or employee. Your response must disclose if a known relationship exists between any principal of your firm and any City of Louisville elected official or employee. If, to your knowledge, no relationship exists, this should also be stated in your response. Failure to disclose a conflict may result in disqualification. This form must be completed and returned in order for your proposal to be eligible for consideration.

NO KNOWN RELATIONSHIP EXISTS _____

RELATIONSHIP EXISTS (Please explain relationship)

_____

_____

I CERTIFY THAT:

1. I, as an officer of this organization, or per the attached letter of authorization, am duly authorized to certify the information provided herein is accurate and true as of the date; and

2. My organization shall comply with all State and Federal Equal Opportunity and Non-Discrimination requirements and conditions of employment.

_____ _____

Printed or Typed Name Title

_____

Signature

City of Louisville
COLORADO • SINCE 1878

Louisville, Colorado

COMMUNITY PROFILE

About Our Community

Established in 1878, Louisville's history is rooted in mining and agriculture. Over the years, the city has grown into a vibrant, thriving, and innovative community with a high standard of living. Nestled along Colorado's Front Range, Louisville is located in Boulder County, just nine miles east of Boulder and about 22 miles northeast of Denver.

Nearly 70% of Louisville residents possess a college degree, and the community is continuously ranked amongst the best places in the country to live and raise a family. With approximately 1,900 acres of open space, 28 parks, and more than 32 miles of interconnecting trails for biking and hiking, Louisville residents enjoy a myriad of opportunities to enjoy the natural beauty of Northern Colorado.

In addition to abundant recreational opportunities, Louisville residents also have convenient access to arts and culture amenities, excellent dining and shopping destinations, and the state's third-highest ranked school district. In the City's 2020 Citizen Survey, 99% of survey respondents rated Louisville as a place to live as excellent or good, and 98% rated its quality of life as excellent or good.

Louisville's authentic Main Street contributes to the city's small-town feel and hosts outdoor dining, craft breweries, galleries, boutiques, a state-of-the-art library, and more. World-class medical care includes the Avista Adventist Hospital in Louisville, the Boulder Medical Center, and several hospitals in Denver, including Children's Hospital Colorado and the Anschutz Medical Campus. A robust transit system, the Regional Transportation District (RTD), connects the city to the region.

The city's proximity to the University of Colorado and the Colorado School of Mines, as well as several national laboratories including NOAA, NIST, and NCAR, has helped foster a robust high-tech business and manufacturing presence in Louisville's Colorado Tech Center, a master-planned business park.

As Money magazine noted, "Add in dry, clear weather, little crime, good health care, low taxes, and Louisville is pretty tough to beat."

POPULATION

20,975

MEDIAN AGE

41.1

MEDIAN HOME VALUE

$677,000

MEDIAN HOUSEHOLD INCOME

$125,124

Our City Government

The City of Louisville is a home rule municipality operating under the council-manager form of government. The seven-member city council consists of the mayor, elected at large, and six councilmembers elected from three wards, all of whom are elected on a nonpartisan basis. The mayor and councilmembers serve four year terms and are limited to two consecutive terms. Ward representative elections are staggered, with elections happening in odd-numbered years.

The city council sets policy, enacts ordinances, adopts the biennial budget, and hires the city manager, who oversees day-to-day operations, as well as the city attorney, municipal judge, and prosecuting attorney.

VISION

The City of Louisville is dedicated to providing a vibrant, healthy community with the best small town atmosphere.

MISSION

Our commitment is to protect, preserve, and enhance the quality of life in our community.

VALUES

Innovation
Collaboration
Accountability
Respect
Excellence

The City's structure and operations have been designed to ensure an open and responsive government that integrates a highly dedicated staff, thoughtful elected officials, an involved citizenry, diverse businesses, and regional cooperation to provide high-quality and cost-effective services.

Louisville provides a wide range of services to residents and businesses, including water and sewer; police protection; planning, zoning, and building safety; street and road maintenance; parks, open space, and recreation; a library; a historical museum; and a golf course.

ANNUAL BUDGET
$29.6M GENERAL
$87.6M TOTAL

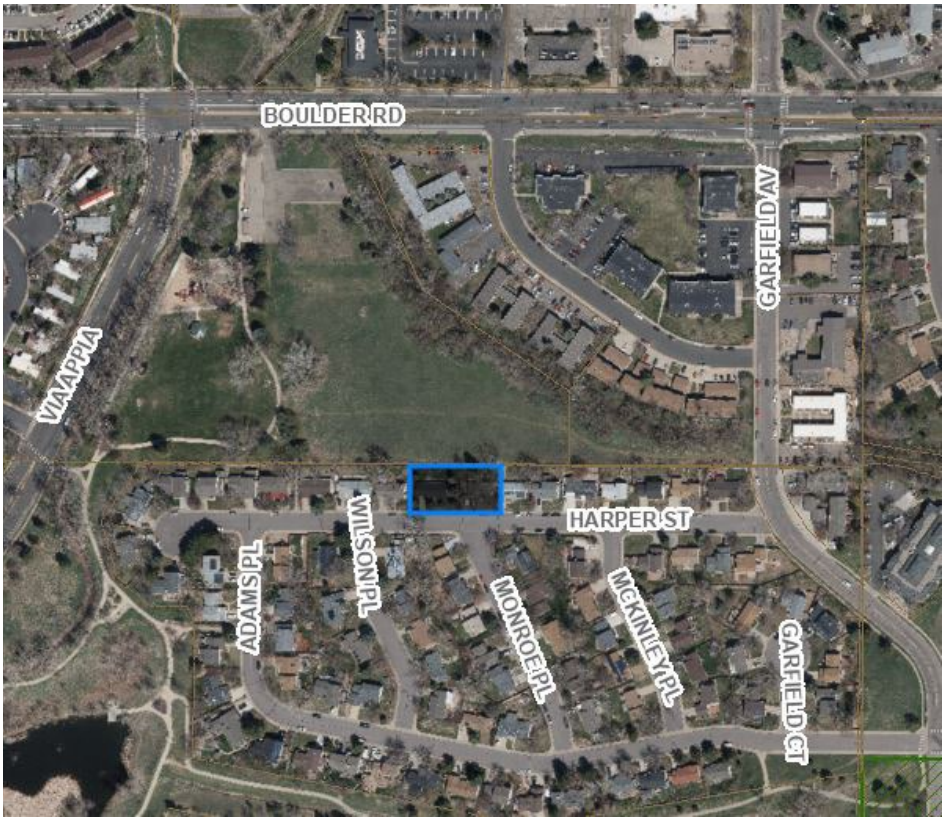
CITY STAFF
200 FULL-TIME
225 PART-TIME & SEASONAL

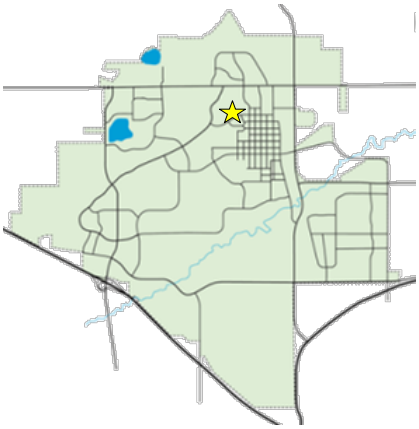
SUBJECT: **ORDINANCE NO. 1881, SERIES 2024 – AN ORDINANCE APPROVING THE VACATION OF EXISTING DRAINAGE EASEMENT LOCATED ON LOTS 8 AND 9 OF THE AMENDED PLAT OF PARKWOOD FILING NO. 2 – 1ST READING – SET PUBLIC HEARING 8/20/24**

DATE: **AUGUST 6, 2024**

PRESENTED BY: **AMELIA BRACKETT, SENIOR PLANNER**

VICINITY MAP:





SUMMARY:
Attached for consideration on first reading, and to set the public hearing for August 20, 2024, is a draft ordinance to vacate a utility easement across Lots 8 and 9 of the Amended Plat of Parkwood Filing No. 2. New easements will be dedicated by the First Replat of the Amended Plat of Parkwood Filing No. 2, which will be reviewed as a Minor Subdivision by City Council concurrent with the second reading of this Easement Vacation on August 20.

REQUEST:
The applicants, Joel Hayes, Susan Johnson, Debora Langer, and Thomas Langer,

request approval of a Minor Subdivision and Easement Vacation to adjust the lot line and associated easements between 187 and 171 Harper Street.

A full staff report on the application will be provided to City Council ahead of the August 20, 2024 hearing, which will include an analysis of the concurrent application for a Minor Subdivision that accompanies this Easement Vacation. Of the two concurrent applications, only the Easement Vacation requires an ordinance, hence the first reading as standalone item on August 6 from the Minor Subdivision.

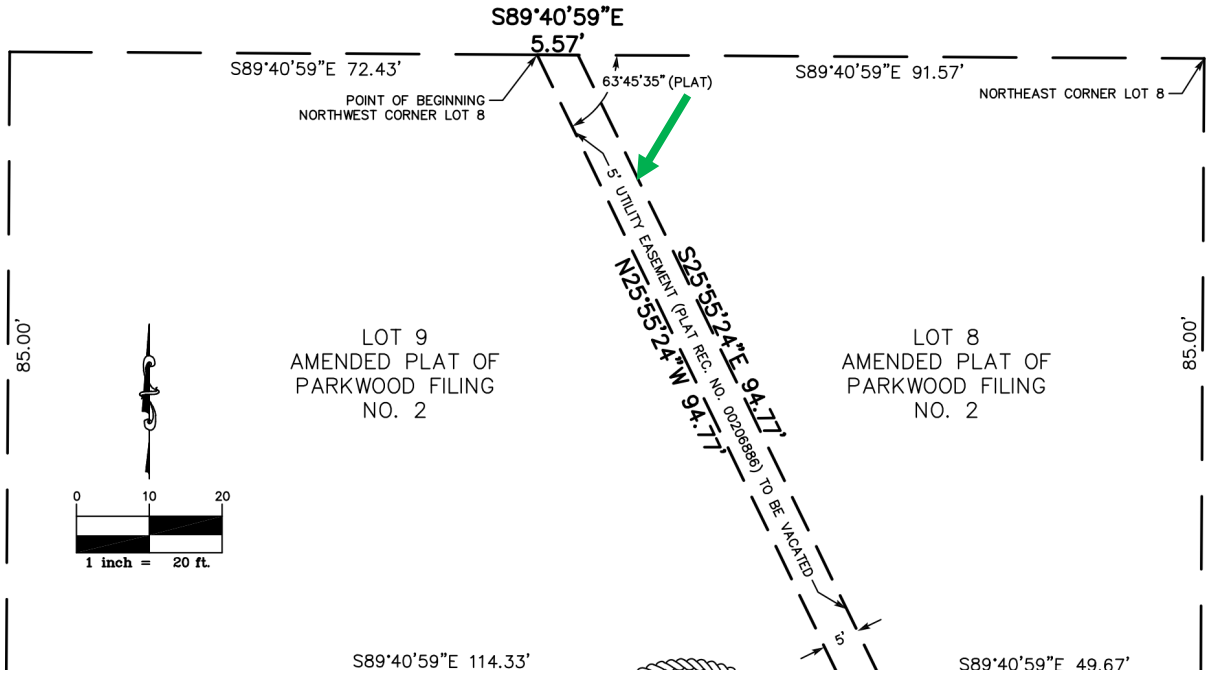


Figure 1. Exhibits showing easement to be vacated.

ANALYSIS:
Louisville Public Works and utility providers have reviewed the proposed easement vacations and have no objections as part of the development application. New easements are proposed as part of the replat (Minor Subdivision) concurrent with the easement vacation.

FISCAL IMPACT:
There is no anticipated fiscal impact to the City resulting from the requested easement vacation.

STAFF RECOMMENDATION:
Staff recommends approval of Ordinance 1881, Series 2024 on first reading, and setting second reading and the public hearing for August 20, 2024.

ATTACHMENTS:
1. Ordinance 1881, Series 2024

ORDINANCE NO. 1881
SERIES 2024

AN ORDINANCE APPROVING THE VACATION OF EXISTING DRAINAGE EASEMENT LOCATED ON LOTS 8 AND 9 OF THE AMENDED PLAT OF PARKWOOD FILING NO. 2

WHEREAS, by the Amended Plat of Parkwood Filing No. 2, recorded in the Office of the Boulder County Clerk and Recorder on January 12, 1976 at Reception No. 00206886, there was a utility easement across Lots 8 and 9 ("the easement"); and

WHEREAS, a replat application has been approved by the City dedicating new easements under the name the First Replat of the Amended Plat of Parkwood Filing No. 2; and

WHEREAS, the City Council finds and determines that the easement for which vacation is requested is not and will not be needed for any public, governmental, or utility purposes; and

WHEREAS, the City Council desires to approve the application and vacate the City's interests in the easement for which vacation is requested;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

Section 1. The City hereby approves the vacation of the easement across Lots 8 and 9 which easement herein vacated is in the location further described in Exhibit A attached hereto and incorporated herein by this reference ("the easement").

Section 2. All other ordinances or portions thereof inconsistent or in conflict with this ordinance or any portion hereof are repealed to the extent of such inconsistency or conflict.

Section 3. The Mayor and City Manager, or either of them, is authorized to execute such additional documents as may be necessary to evidence the vacation of the easement herein vacated, including but not limited to execution of quit claim deeds.

INTRODUCED, READ, PASSED ON FIRST READING, AND ORDERED PUBLISHED this 6th day of August, 2024.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Genny Kline, Interim City Clerk

APPROVED AS TO FORM:

_____
Kelly, P.C.
City Attorney

PASSED AND ADOPTED ON SECOND AND FINAL READING, this ____ day of _____, 2024.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Genny Kline, Interim City Clerk

EXHIBIT "A"

LOCATED IN THE SOUTHEAST QUARTER OF SECTION 12 AND THE SOUTHWEST QUARTER OF SECTION 7, TOWNSHIP 1 SOUTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF LOUISVILLE, COUNTY OF BOULDER, STATE OF COLORADO

VACATION OF A FIVE FOOT (5') WIDE EASEMENT FOR DRAINAGE PURPOSES UPON, OVER AND ACROSS LOTS 2 AND 3, BLOCK 1, AS SHOWN ON THE PLAT OF A REPLAT OF THE ENCLAVE AS DESCRIBED IN THE RECORDS OF BOULDER COUNTY AT REC. NO. 00898171, DATED JANUARY 14, 1988 BEING A PORTION OF THE SOUTHEAST QUARTER OF SECTION 12 AND THE SOUTHWEST QUARTER OF SECTION 7, TOWNSHIP 1 SOUTH, RANGE 70 WEST OF THE 6TH P.M., CITY OF LOUISVILLE, COUNTY OF BOULDER, STATE OF COLORADO, LYING TWO AND ONE HALF FEET (2.5') ON BOTH SIDES OF THE FOLLOWING DESCRIBED CENTERLINE:

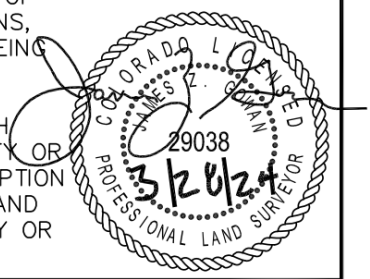
THE COMMON LINE OF LOTS 2 & 3, AS DESCRIBED ON SAID PLAT.

SAID SIDELINES BEING SHORTENED AND LENGTHENED SO AS TO PREVENT GAPS OR OVERLAPS WITH THE PERIMETER BOUNDARY LINES OF SAID LOTS.

THE TOTAL AREA OF VACATED EASEMENT CONTAINS 1,057 SQUARE FEET, MORE OR LESS.

James Z. Gowan

Digitally signed by James Z. Gowan
DN: cn=James Z. Gowan, o=Flatirons, Inc., ou, email=zgowan@flatironsinc.com, c=US
Date: 2024.03.28 10:18:11 -06'00'



I, JAMES Z. GOWAN, A LAND SURVEYOR LICENSED IN THE STATE OF COLORADO, DO HEREBY STATE FOR AND ON BEHALF OF FLATIRONS, INC., THAT THIS PARCEL DESCRIPTION AND ATTACHED EXHIBIT, BEING MADE A PART THEREOF, WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, ARE ACCURATE TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, ARE IN ACCORDANCE WITH APPLICABLE STANDARDS OF PRACTICE AND ARE NOT A GUARANTY OR WARRANTY, EITHER EXPRESSED OR IMPLIED. SAID PARCEL DESCRIPTION AND EXHIBIT WERE PREPARED AT THE REQUEST OF THE CLIENT AND ARE NOT INTENDED TO REPRESENT A MONUMENTED LAND SURVEY OR SUBDIVIDE LAND IN VIOLATION OF STATE STATUTE.

JAMES Z. GOWAN
COLORADO P.L.S. #29038
VICE PRESIDENT, FLATIRONS, INC.

JOB NUMBER: 24-80548
DRAWN BY: W. BECKETT
DATE: MARCH 28, 2024

THIS IS NOT A "LAND SURVEY PLAT" OR "IMPROVEMENT SURVEY PLAT" AND THIS EXHIBIT IS NOT INTENDED FOR PURPOSES OF TRANSFER OF TITLE OR SUBDIVISIONS OF LAND. RECORD INFORMATION SHOWN HEREON IS BASED ON INFORMATION PROVIDED BY CLIENT.

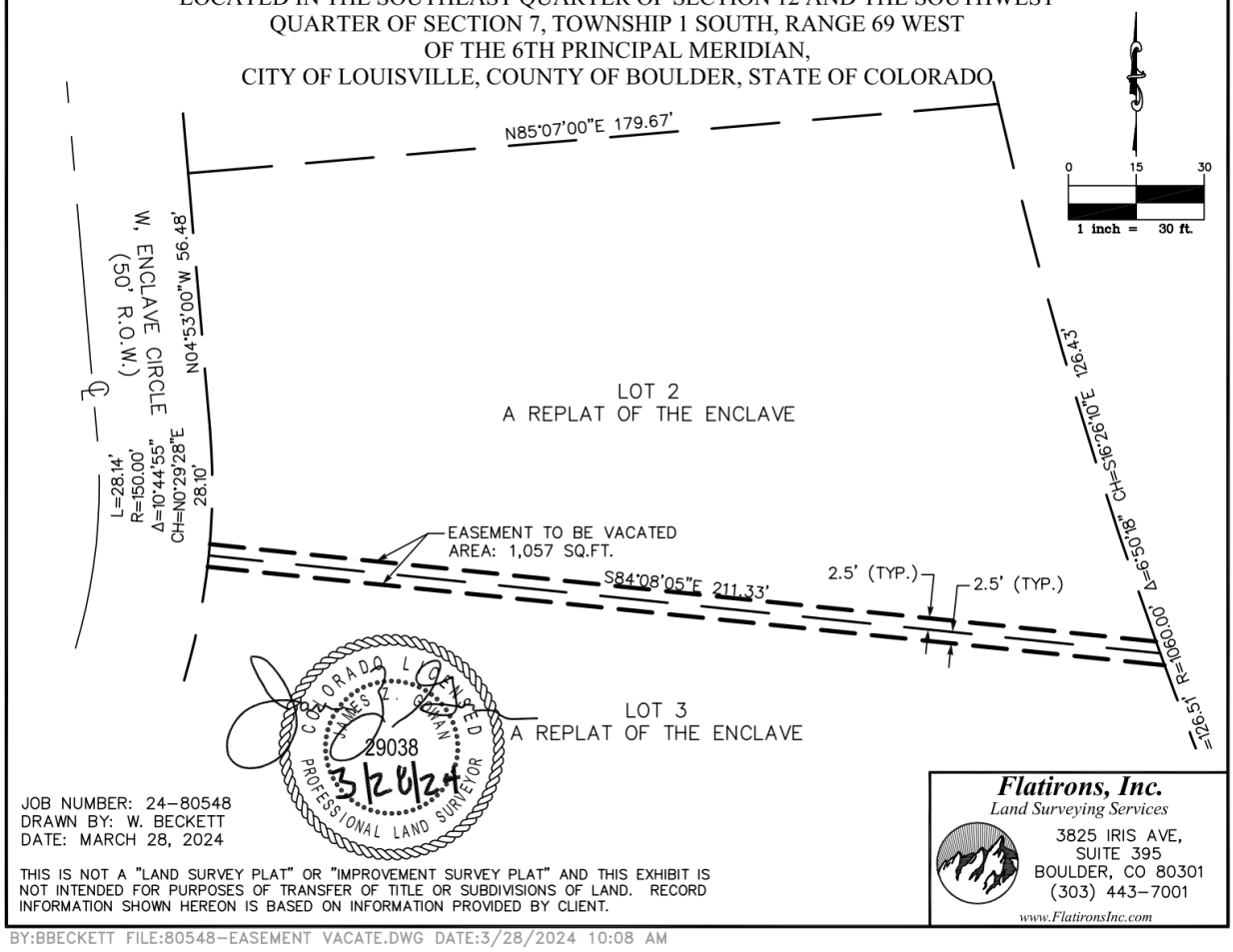
Flatirons, Inc.
Land Surveying Services
3825 IRIS AVE,
SUITE 395
BOULDER, CO 80301
(303) 443-7001
www.FlatironsInc.com

BY:BBECKETT FILE:80548-EASEMENT VACATE.DWG DATE:3/28/2024 8:50 AM

SHEET 2 OF 2

EXHIBIT "A"

LOCATED IN THE SOUTHEAST QUARTER OF SECTION 12 AND THE SOUTHWEST QUARTER OF SECTION 7, TOWNSHIP 1 SOUTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF LOUISVILLE, COUNTY OF BOULDER, STATE OF COLORADO



COLORADO LICENSED
ROBERT C. HOWARD JR.
29038
PROFESSIONAL LAND SURVEYOR
3/28/24

JOB NUMBER: 24-80548
DRAWN BY: W. BECKETT
DATE: MARCH 28, 2024

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BY:BBECKETT FILE:80548-EASEMENT VACATE.DWG DATE:3/28/2024 10:08 AM

SUBJECT: **RESOLUTION NO. 33, SERIES 2024 – A RESOLUTION PROVIDING FOR THE CONTINUATION OF THE AMENDED DECLARATION OF STAGE 2 FIRE RESTRICTIONS FOR THE CITY OF LOUISVILLE**

DATE: **AUGUST 6, 2024**

PRESENTED BY: **KURT KOWAR, ACTING CITY MANAGER**

SUMMARY:
Staff is recommending approval of Stage 2 Fire Restrictions for the City of Louisville in alignment with issuance of similar restrictions by Boulder County and surrounding communities such as Superior.

Colorado and the Front Range are currently experiencing high fire danger under moderate to extreme drought conditions. In the past week, the Stone Canyon Fire and the Lake Shore Fire started burning in Boulder County and other fires began burning and remain active in surrounding counties, depleting the regional resources available to emergency response, evacuation, and firefighting.

The Board of County Commissioners of Boulder County and Boulder County Sheriff on, August 1, 2024, issued an order Declaring Stage 2 Fire Restrictions for all Unincorporated Areas in Boulder County, finding such measure necessary to reduce the danger of wildfire, forest or grass fires in unincorporated Boulder County.

On August 1, 2024, the Mayor of the City of Louisville, as principal executive officer of the City of Louisville, unilaterally declared a local disaster pursuant to § 24-33.5-709, C.R.S. and Section 2.32.010 of the Louisville Municipal Code and imposed certain measures to protect the health, safety and welfare of the City and its residents (the “Declaration”).

The Declaration was further amended (the “Amended Declaration”) on August 2, 2024, to provide for:

- exceptions and conditions pursuant to outdoor welding to support ongoing Marshall Fire rebuild and commercial construction;
- an exceptions and waiver clause for consideration of unintended restrictions on activities that may be approved by the City under consultation with the Louisville Fire Department.

The Amended Declaration is effective for a period of not more than seven days unless rescinded or extended by the Louisville City Council prior to expiration. Staff is recommending approval of The Amended Declaration as a Resolution to extend the

Boulder County Stage 2 Fire Restrictions and associated Louisville modified language until such time it is terminated by Resolution of the City Council.

FISCAL IMPACT:
The City does not currently anticipate a fiscal impact from this approval.

PROGRAM/SUB-PROGRAM IMPACT:
Adoption of this Resolution protects the public health and safety of the community across all programs and sub-programs.

RECOMMENDATION:
Adopt Resolution No. 33, Series 2024, A Resolution Provided for the Continuation of the Amended Declaration of Stage 2 Fire Restrictions for the City of Louisville.

ATTACHMENT(S):
1. Resolution No. 33, Series 2024

STRATEGIC PLAN IMPACT:

☐	**Financial Stewardship & Asset Management**	☒	**Reliable Core Services**
☐	**Vibrant Economic Climate**	☐	**Quality Programs & Amenities**
☒	**Engaged Community**	☐	**Healthy Workforce**
☐	**Supportive Technology**	☒	**Collaborative Regional Partner**

RESOLUTION NO. 33
SERIES 2024

A RESOLUTION PROVIDING FOR THE CONTINUATION OF THE AMENDED DECLARATION OF STAGE 2 FIRE RESTRICTIONS FOR THE CITY OF LOUISVILLE

WHEREAS, Chapter 2.32 of the Louisville Municipal Code and C.R.S. § 24-33.5-801, *et seq.* authorizes the Mayor of the City of Louisville to declare that a disaster emergency has occurred or the threat of such event is imminent; and

WHEREAS, Chapter 2.32 of the Louisville Municipal Code and C.R.S. § 24-33.5-801, *et seq.* authorizes the Mayor of the City of Louisville to declare that a disaster emergency has occurred or the threat of such event is imminent from any natural cause or cause of human origin, including but not limited to fire; and

WHEREAS, on July 1, 2024, based on competent evidence of high fire danger including quantitative data produced by the National Weather Service of the United States Forest Service as follows: 1000 hr fuel moisture at 7%, an Energy Release Component above the 80th percentile, a seasonal shift toward moderate to severe drought conditions, and the existence of a D0 abnormally dry drought conditions in Western Boulder County; and

WHEREAS, in the past few weeks, the Stone Canyon Fire and the Lake Shore Fire started burning in Boulder County and other fires began burning and remain active in surrounding counties, depleting the regional resources available to emergency response, evacuation, and firefighting; and

WHEREAS, competent evidence including quantitative data produced by the National Weather Service and the United States Forest Service, exists, which necessitates implementing Stage 2 Fire Restrictions in the City and includes:

a. 1000 hr fuels: <8%
b. Energy Release Component (ERC): >90th percentile
c. Above average warm and dry conditions anticipated for the extended forecast
d. Portions of Boulder County are currently in a D2 Abnormally dry drought condition, forecasted to increase over the next few weeks
e. Exceptional draw-down of firefighting resources and extreme competition for assets due to national, regional, and state-wide fire activity; and

WHEREAS, on August 1, 2024, the Board of County Commissioners of Boulder County and Boulder County Sheriff issued an order Declaring Stage 2 Fire Restrictions for all Unincorporated Areas in Boulder County, finding such measure necessary to reduce the danger of wildfire, forest or grass fires in unincorporated Boulder County; and

WHEREAS, as a municipality wholly contained within Boulder County, there exists a threat of the spread of wildfire to properties within the City; and

WHEREAS, declaration of a local disaster emergency pursuant to Chapter 2.32 of the Louisville Municipal Code authorizes the enactment of the measures set forth herein, in order to protect the health and safety of the public by in the City of Louisville; and

WHEREAS, on August 1, 2024 at 8:30 p.m., the Mayor of the City of Louisville, as principal executive officer of the City of Louisville, unilaterally declared a local disaster pursuant to § 24-33.5-709, C.R.S. and Section 2.32.010 of the Louisville Municipal Code and imposed certain measures to protect the health, safety and welfare of the City and its residents (the "Declaration"), and which Declaration was amended on August 2, 2024 at 1:07 p.m. to include an exception regarding welding and to provide for the opportunity of written waivers to be issued by the City upon consultation with the Louisville Fire Protection District ("Amended Declaration"); and

WHEREAS, Section 2.32.010.D of the Louisville Municipal Code provides the Mayor's Declaration shall not be continued or renewed for a period in excess of seven (7) days unless the City Council approves a longer duration; and

WHEREAS, the City Council finds the continuation of the Mayor's Amended Declaration is in the best interest of the public's health and welfare; and

WHEREAS, it is therefore appropriate and in the interests of the public health and safety of the City and its residents to continue in effect Stage 2 Fire Restrictions, and to further protect the health and safety of the public by declaring an emergency in the City of Louisville by the City Council continuing the Mayor's Amended Declaration as set forth herein.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

Section 1. The City Council hereby finds and declares there to be a local disaster emergency in the City of Louisville, to wit, the occurrence of imminent threat of widespread or severe damage, injury or loss of life or property, that may result from the potential spread of the Boulder County Fires to property located within the City of Louisville, requiring emergency action to avert danger or damage, and that the Amended Declaration of Stage 2 Fire Restrictions for the City of Louisville executed by the Mayor

of the City of Louisville on August 2, 2024 shall be continued in effect until terminated by resolution of the City Council.

Section 2. The effect of this Resolution shall be to continue in effect the measures set forth in the Amended Declaration, the activation, as may be required, of the response and recovery aspects of any and all applicable local and inter-jurisdictional disaster emergency plans and to further authorize the furnishing of aid and assistance under such plans, and for the Mayor, City Manager, and other appropriate City staff to exercise those functions and be vested with such authority as set forth in Section 2.32.010 of the Louisville Municipal Code and C.R.S. § 24-33.5-709.

Section 3. The City Manager shall forthwith:

A. Publish and disseminate information to the public regarding this Resolution and the continuation of the Amended Declaration of Stage 2 Fire Restrictions for the City of Louisville authorized hereby, including but not limited to on the City's website and social media accounts maintained by the City;

B. File a copy of this Resolution with the City Clerk;

C. File a copy of this Resolution with the Colorado Division of Emergency Management; and

C. Distribute a copy of this Resolution to the appropriate representatives of the news media.

PASSED AND ADOPTED this 6th day of August, 2024.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Genny Kline, Interim City Clerk

SUBJECT: **RESOLUTION NO. 34, SERIES 2024 – A RESOLUTION APPROVING A BUSINESS ASSISTANCE AGREEMENT WITH DILLON COMPANIES, LLC FOR AN ECONOMIC DEVELOPMENT PROJECT IN THE CITY OF LOUISVILLE**

DATE: **AUGUST 6, 2024**

PRESENTED BY: **VANESSA ZARATE, CECD, ECONOMIC VITALITY MANAGER**

SUMMARY:

Kroger started in Cincinnati, Ohio in 1883 and is now the nation's largest grocer with nearly 2,800 stores across 35 states. King Soopers is the flag of Kroger in Colorado, with nearly 120 locations across the state.

King Soopers is proposing a new King Soopers Marketplace location at 1171 Dillon Road, the vacant former Lowe's site. This marketplace concept would rehabilitate the existing building, opening a new 118,000 square foot grocery store. In addition, King Soopers will construct a new fueling station on the property to supplement the grocery store operations. This marketplace location will offer full-service grocery, pharmacy and expanded general merchandise to include outdoor living products, electronics, home goods and toys.

The proposed project would invest $10 million dollars to rehabilitate the currently vacant building, an additional $2.5 million in tenant finish improvements, $3.2 million for the construction of the fueling station and an additional nearly $10 million in expected equipment and fixtures. The proposed project would invest $15.7 million dollars in infrastructure on the site to rehabilitate the building for the new use. This is $15.7 million in permanent investment that will stay in Louisville. If approved, the project anticipates starting construction in 2025 and opening Q2 2026.

The proposed location anticipates hiring 75 full time employees and 175 part-time employees, with an annual payroll of over $6.75 million. The employment hiring for the store is in addition to the construction jobs that would be created to complete the buildout of the new marketplace store.

King Soopers Marketplace would be a new anchor establishment on the McCaslin Corridor and for the west side of Louisville. This location will serve new residents at the CU Boulder site, in Superior and surrounding communities and residents moving back into the area. In many instances King Soopers can act as a catalyst for corridors, supporting existing and new retail. King Soopers also works with the community and in the community, to support visitors, residents and community partners. They have programs such as the Colorado Healing Fund, Honoring Our Heroes Program and sustainability goals such as reducing food waste, emission reductions and climate

resiliency. King Soopers also partners with local organizations through the King Soopers Community Rewards program, making fundraising easy by donating to local organizations based on customer's everyday shopping. Kroger has an Environmental, Social and Governance Strategy (ESG)- Thriving Together, that works to "create a better future for people, our planet and the interconnected systems on which we all depend on for food and other essentials". Kroger, the parent company of King Soopers, also has a Zero Hunger Zero Waste campaign that is commitment to ending hunger in communities and eliminate waste by 2025. Kroger scored an 85 out of 100, on the Human Rights Campaign's Corporate Equity Index based on their workforce protections, inclusive benefits, internal training and inclusive culture, corporate social responsibility and responsible citizenship.

Proposed Incentive

To close the gap needed for Kroger to bring a new King Soopers Marketplace to Louisville, staff is proposing a maximum sales tax rebate incentive of $15 million over 12 years and a rebate on eligible components of their building permit fees and construction use tax for a total incentive of $15,280,000.

This would be achieved through a rebate of 75% of the new sales tax generated from the project. The agreement will term at whichever component comes first, the $15 million total rebate or the end of the 12-year time period. The City would rebate 75% of new sales tax revenue generated by the project. The total sales tax rate for the City is 3.775% but the project is only eligible to receive a rebate of the City's 3% general sales tax. The City will keep the entirety of the 0.775% sales tax generated for Parks and Open Space, Historic Preservation and the Recreation and Senior Center. Their rebate will be based on actual sales and new sales tax generated by the project.

In addition, Staff is proposing a 50% rebate on building permit fees, sign permit fees and construction use tax not to exceed a combined total of $180.000. This rebate would be 50% of 3% of the sales tax, not the full 3.775% sales tax. This rebate would be awarded after inspections and certificates of occupancy for each component have been completed. These rebates will be calculated based on the actual fees and taxes paid on the project and are capped at $180,000 total.

This site has been vacant for over two years, when Lowe's relocated their store to a new location. As 1171 Dillon Road has been vacant for over a year, the project is eligible for a vacancy bonus, at $1 per square foot. This vacancy bonus will provide an incentive of $100,000 to the project, to be paid after the project receives a certificate of occupancy.

Anticipated Cost Sharing

	Applicant Rebate	City Retained
Building Permit and Fees	$ 53,460.00	$ 53,460.00
Construction Use Tax	$ 117,750.00	$ 178,587.50
Sign Permit	$ 3,907.50	$ 5,457.50
Vacancy Bonus	$ 100,000.00	
Sales Tax Rebate	$ 15,000,000.00	$ 22,638,801.90
TOTAL	**$ 15,275,117.50**	**$ 22,876,306.90**

Projected Sales and Sales Tax Generation

Year	Gross Retail Sales Projections	Sales Tax (3%)	Open Space (0.5%)	Historic Preservation (0.125%)	Recreation Center (0.150%)	Sales Tax Rebate	City Share Kept
1	$62,661,248.00	$1,879,837.44	$313,306.24	$78,326.56	$93,991.87	$1,409,878.08	$955,584.03
2	$68,304,496.00	$2,049,134.88	$341,522.48	$85,380.62	$102,456.74	$1,536,851.16	$1,041,643.56
3	$72,936,188.00	$2,188,085.64	$364,680.94	$91,170.24	$109,404.28	$1,641,064.23	$1,112,276.87
4	$77,354,940.00	$2,320,648.20	$386,774.70	$96,693.68	$116,032.41	$1,740,486.15	$1,179,662.84
5	$80,496,000.00	$2,414,880.00	$402,480.00	$100,620.00	$120,744.00	$1,811,160.00	$1,227,564.00
6	$82,910,880.00	$2,487,326.40	$414,554.40	$103,638.60	$124,366.32	$1,865,494.80	$1,264,390.92
7	$85,398,206.00	$2,561,946.18	$426,991.03	$106,747.76	$128,097.31	$1,921,459.64	$1,302,322.64
8	$87,960,153.00	$2,638,804.59	$439,800.77	$109,950.19	$131,940.23	$1,979,103.44	$1,341,392.33
9	$90,598,957.00	$2,717,968.71	$452,994.79	$113,248.70	$135,898.44	$1,094,496.10	$2,325,614.52
10	$93,316,926.00	$2,799,507.78	$466,584.63	$116,646.16	$139,975.39	$	$3,522,713.96
11	$96,116,434.00	$2,883,493.02	$480,582.17	$120,145.54	$144,174.65	$	$3,628,395.38
12	$98,999,927.00	$2,969,997.81	$494,999.64	$123,749.91	$148,499.89	$	$3,737,247.24
Total ($)	**$997,054,355.00**	**$29,911,630.65**	**$4,985,271.78**	**$1,246,317.94**	**$1,495,581.53**	**$15,000,000**	**$22,638,801.90**

King Soopers is not planning to close the South Boulder Road location; they intend to operate both locations in Louisville. There is a thought that this new location could relieve some of the burden on the South Boulder Road location, allowing that location to perform better for the community.

FISCAL IMPACT:
Staff anticipates this new King Soopers Marketplace being one of the top sales tax generating entities in the City. According to the current projections, the City would receive nearly one million dollars per year during the first year of operation. This number would continue to increase to more than three million dollars per year once the agreement is complete.

All components of this agreement are performance based, there are no up-front costs provided to the project. The building and signage components are reimbursements based on true costs paid. The vacancy bonus will be provided at the time the project receives a Certificate of Occupancy. All sales tax revenues are rebates based on actual sales and will be paid to the business after the tax year ends. All rebates will be capped and the total value of incentives paid to the company shall not exceed $15,280,000.

This will be a new store in the McCaslin Corridor and a new sales tax generator in the City of Louisville. All rebates included in this agreement will be paid from permitting fees and new City revenue generated by the project. The fiscal impact could be significant with the City retaining nearly $1 million a year to start and upwards of $4 million into perpetuity once the incentive agreement terminates.

The City will also receive $15 cents from every bag sold at this new location as part of the $25 cent bag tax. This bag tax funding is used by the City's Sustainability division to implement programming.

RECOMMENDATION:
Staff recommends approval of the proposed Business Assistance Package Incentive for Kroger.

ATTACHMENT(S):
1. Resolution No. 34, Series 2024
2. Proposed Business Assistance Package for New King Soopers Marketplace
3. Sales Tax Sharing Breakdown
4. Cost Summary
5. Presentation

STRATEGIC PLAN IMPACT:

☐	**Financial Stewardship & Asset Management**	☐	**Reliable Core Services**
☒	**Vibrant Economic Climate**	☐	**Quality Programs & Amenities**

☐	**Engaged Community**	☐	**Healthy Workforce**
☐	**Supportive Technology**	☐	**Collaborative Regional Partner**

RESOLUTION NO. 34
SERIES 2024

A RESOLUTION APPROVING A BUSINESS ASSISTANCE AGREEMENT WITH DILLON COMPANIES, LLC DBA KING SOOPERS FOR AN ECONOMIC DEVELOPMENT PROJECT IN THE CITY OF LOUISVILLE

WHEREAS, the successful attraction of quality development to the City of Louisville provides employment opportunities and increased revenue for citizen services and is therefore an important public purpose; and

WHEREAS, it is important for the City of Louisville to create and retain quality jobs and remain competitive with other local governments in creating assistance for occupancy of commercial space in the City; and

WHEREAS, Dillon Companies, LLC is seeking to occupy 118,000 square feet of vacant retail space at 1171 Dillon Road and construct a new fueling center, which will result in new jobs and tax revenue to the City; and

WHEREAS, the Business Assistance Agreement between the City and Dillon Companies, LLC is attached hereto as Exhibit "A" and incorporated herein by this reference; and

WHEREAS, pursuant the Constitution of the State of Colorado, and the Home Rule Charter and ordinances of the City of Louisville, the City has authority to enter into the proposed Business Assistance Agreement; and

WHEREAS, the City Council finds that the proposed Business Assistance Agreement is consistent with and in furtherance of the business assistance policies of the City, and desires to approve the Agreement and authorize its execution and implementation.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO THAT:

1. The proposed Business Assistance Agreement between the City of Louisville and Dillon Companies, LLC (the “Agreement”) is hereby approved in essentially the same form as the copy of such Agreement accompanying this Resolution.

2. The Mayor is hereby authorized to execute the Agreement on behalf of the City Council of the City of Louisville, and the Mayor is further granted the authority to negotiate and approve such revisions to said Agreement as the Mayor determines are necessary or desirable for the protection of the City, so long as the essential terms and conditions of the Agreement are not altered.

3. City staff is hereby authorized to do all things necessary on behalf of the City to perform the obligations of the City under the Agreement, including but not limited to funding and implementation of the Agreement in accordance with and upon performance of the terms thereof.

PASSED AND ADOPTED this 6th day of August, 2024.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Genny Kline, Interim City Clerk

EXHIBIT A

Copy of Business Assistance Agreement

BUSINESS ASSISTANCE AGREEMENT FOR
DILLON COMPANIES, LLC IN THE CITY OF LOUISVILLE

THIS AGREEMENT ("Agreement") is made and entered into as of the _____ day of _____, 2024, between the CITY OF LOUISVILLE, a Colorado home rule municipal corporation (the "City"), and DILLON COMPANIES, LLC, a Kansas limited liability company d/b/a King Soopers (the "Company").

WHEREAS, the City wishes to provide certain business assistance in connection with the Company's desire to open a new business in Louisville (the "Project"); and

WHEREAS, the Company seeks to occupy an estimated 118,000 square feet of existing retail space at 1171 Dillon Road; and

WHEREAS, the Company will bring new basic jobs to the City, as well as generate new fee and tax revenues; and

WHEREAS, the City Council finds the execution of this Agreement will serve to provide a benefit and advance the public interest and welfare of the City and its citizens by securing this economic development project within the City; and

WHEREAS, pursuant to Chapter 3.24 of the Louisville Municipal Code, sales tax rebates must be limited to the amount of sales tax collected by the City over and above a base amount negotiated by, and agreed upon by, the applicant and the City, and which base amount shall never be lower than the amount of sales taxes collected by the City at the property in question in the previous 12 months; and

WHEREAS, no sales tax has been generated at the Project location in the previous 12 months, and thus the City and the Company desire, for purpose of this Agreement, to set the sales tax base at zero dollars ($0), and that the sales tax rebate under this Agreement shall be limited to seventy-five percent (75%) of sales tax actually collected by the City and attributable solely to new retail sales generated by operation of the Project and occurring at the Project location for the period described, and subject to the exceptions, restrictions, and limitations set forth, in this Agreement; and

WHEREAS, for the reasons set forth above, the City desires to provide certain other rebates to Company as further described, and subject to the exceptions, restrictions, and limitations as set forth, in this Agreement.

NOW THEREFORE, in consideration of the mutual promises set forth below, the City and Company agree as follows:

1. Building Permit Fee Rebates. The City shall rebate to the Company 50% of the building related permit fees for the Project, required under section 15.04.050 of the Louisville Municipal Code (the "City Code") and section 108.2 of the International Building Code as adopted by the City, for the period from execution of this Agreement and ending March 1, 2026.

2. Use Tax Rebate-Construction. The City shall rebate to the Company 50% of the Construction Use Tax on the construction materials for the Project, required under section 3.20.300 of the City Code, excluding all revenues from the Open Space Tax, Historic Preservation Tax, and Recreation Center Tax for the Project, for the period from execution of this Agreement and ending March 1, 2026.

3. Sign Permit Fee Rebates. The City shall rebate to the Company 50% of the sign related permit fees for the Project, required under the City of Louisville Sign Code, adopted by Ordinance 1779, Series 2019, and codified as Appendix B to Chapter 17 of the City Code, and as may be amended from time to time, for the period from execution of this Agreement and ending March 1, 2026. For purposes of this Section, "sign related permit fees" include sign permit fees, in-house sign plan review, and the use tax assessed on the valuation of signs installed as part of the Project.

4. Enhanced Sales Tax Rebates. The City shall rebate to the Company 75% of the Sales Tax revenues derived from the imposition of the City's 3.0% General Sales Tax (excluding all revenues derived from the City's .375% Open Space Tax, the .125% Historic Preservation Tax, the .15% Recreation Center Tax, and any new sales taxes) that is actually collected by the City and attributable solely to new retail sales generated by operation of the Project and occurring at the Project location, for a twelve (12) year period commencing on the first day of the month following the day the Company begins retail sales to the public from the Project location ("the Commencement Date"). The twelve (12)-year rebate period shall commence upon and run continuously from the Commencement Date.

5. Vacancy Bonus Incentive. The City shall provide to the Company a vacancy bonus incentive consisting of a one-time payment of one hundred thousand and 00/100 dollars ($100,000.00), to be paid by the City to Company within one hundred twenty (120) days following issuance of the certificate of occupancy or final inspection for the applicable portion of the Project work as reasonably determined by the City subject to Sections 7, 8, and 9 below.

6. Payment of Rebates; Cap; Inspection.
    a. The maximum amount of the rebates payable pursuant to Sections 1, 2 and 3 above shall in no event exceed the lesser of (i) the calculation of 50% of the fees or taxes described in Sections 1, 2 and 3 paid to the City, or (ii) one hundred eighty thousand and 00/100 dollars ($180,000.00).

b. The maximum amount of the rebates payable pursuant to Section 4 above shall in no event exceed the calculation of 75% of the taxes described in Section 4 above; provided, further that the total maximum amount of rebates payable pursuant to Section 4 shall in no event exceed fifteen million and 00/100 dollars ($15,000,000.00). Sales Tax rebates pursuant to Section 4 shall terminate when (a) the Company has received from the City the last rebate payment under this Agreement for the twelve (12)-year rebate period, or (b) the Company has received fifteen million and 00/100 dollars ($15,000,000.00) in rebate payments, whichever occurs first, whichever first occurs.

c. The building permit fee, sign permit fee and construction use tax rebates in Sections 1, 2 and 3 pertaining to each phase of the Project shall be paid by the City to Company within one hundred twenty (120) days following issuance of the certificate of occupancy or final inspection for the applicable portion of the Project work, as reasonably determined by the City, subject to Sections 7, 8 and 9 below. The Sales Tax rebate provided for in Section 4 above shall be paid by the City to Company in annual installments, on or before March 31 of the following year, subject to Sections 7, 8, and 9 below. All rebate payments will be remitted by the City to the Company at the address set forth in Section 10. At the end of each month, on or before the 20th of the following month, the Company shall submit the appropriate Sales/Use Tax return form and remit to the City its total monthly Sales/Use Tax payment due for the previous month.

7. No Interest; Inspection and Disclosure of Records. No interest shall be paid on any amounts subject to rebate under this Agreement. Each party and its agents shall have the right to inspect and audit the applicable records of the other party, on reasonable notice during normal business hours, to verify the amount of any payment under this Agreement, and each party shall cooperate and take such actions as may be necessary to allow such inspections and audits. The Company acknowledges that implementation of this Agreement requires calculations based on the amount of taxes collected and paid by the Company with respect to the term of this Agreement and issuance of rebate payment checks in amounts determined pursuant to this Agreement, and that the amounts of the rebate payment checks will be public information. The Company, for itself, its successors, assigns, and affiliated entities, hereby releases and agrees to hold harmless the City and its officers and employees from any and all liability, claims, demands, and expenses in any manner connected with any dissemination of information necessary for or generated in connection with the implementation of rebate provisions of this Agreement.

8. Use of Funds; Future Fees. Funds rebated to the Company pursuant to this Agreement shall be used by the Company solely for obligations and/or

improvements permitted under Louisville Municipal Code section 3.24.060 (as enacted by Ordinance No. 1507, Series 2007), which includes, but is not limited to, creation of new tax revenue and new jobs in the City. The Building Permit Fee, Sign Permit Fee and Construction Use Tax rebates provided for under this Agreement are solely for construction activities and purchases for this Project during the periods stated in Sections 1-3, above. Any previous or subsequent purchases and construction activities shall be subject to payment without rebate of all applicable building permit fees, sign permit fees and construction use taxes.

9. Effect of Change in Tax Rate. Any increase or decrease in the City General Sales, Construction Use, or Use Tax-Tangible Goods rate above or below the applicable tax rate on the date of execution of this Agreement shall not affect the rebate payments to be made pursuant to this Agreement; rather, the amount of the rebate payments will continue to be based upon the General Sales, Construction Use, or Consumer Use Tax rates applicable on the date of execution of this Agreement (excluding the City's 0.375% Open Space Tax, 0.125% Historic Preservation Tax, and 0.150% Recreation Center Tax). Any decrease in the City General Sales, Construction Use, or Use Tax- Tangible Goods rates shall cause the amount of the rebate payments made pursuant to this Agreement to be based on the applicable percentage of revenues actually received by the City from application of the tax rate affected (excluding said Open Space, Historic Preservation, Recreation Center, or future special Sales or Use taxes).

10. Entire Agreement; Notices. This instrument shall constitute the entire agreement between the City and the Company and supersedes any prior agreements between the parties and their agents or representatives, all of which are merged into and revoked by this Agreement with respect to its subject matter. Contact information is as follows:

    If to Company:
    Dillon Companies, LLC
    c/o The Kroger Co.
    Attn: Director, Economic Development
    1014 Vine Street
    Cincinnati, OH 45202

    If to City:
    Louisville City Hall
    Attn: Economic Vitality
    749 Main Street
    Louisville, CO 80027

11. Termination. This Agreement shall terminate and become void and of no force or effect upon the City if, by March 1, 2026, the Company has not completed the Project as described in the Company's application for

business assistance (as evidenced by a successful final inspection for the Project); or should the Project fail to comply with any City code.

12. Business Termination. In the event the Company, and/or its successors and assigns, ceases business operations in the City within ten (10) years after the Certificate of Occupancy has been received for the Project, then in such event the Company shall pay to the City a portion of the total amount of Building Permit Fees, Sign Permit Fees, Construction Use Taxes, and Sales Taxes which were due and payable by the Company to the City but were rebated by the City. For each full year that the Company, and/or its successors and assigns, cease operations at the Project Location, the City shall receive back ten percent (10%) of the foregoing amounts.

13. Subordination. Notwithstanding anything in this Agreement to the contrary, the City's obligations pursuant to this Agreement are subordinate to the City's obligations for the repayment of any current or future bonded indebtedness and are contingent upon the existence of a surplus in sales and use tax revenues in excess of the sales and use tax revenues necessary to meet such existing or future bond indebtedness. The City shall meet its obligations under this Agreement only after the City has satisfied all other obligations with respect to the use of sales tax revenues for bond repayment purposes. For the purposes of this Agreement, the terms "bonded indebtedness," "bonds," and similar terms describing the possible forms of indebtedness include all forms of indebtedness that may be incurred by the City, including, but not limited to, general obligation bonds, revenue bonds, revenue anticipation notes, tax increment notes, tax increment bonds, and all other forms of contractual indebtedness of whatsoever nature that is in any way secured or collateralized by sales and use tax revenues of the City.

14. Annual Appropriation. Nothing in this Agreement shall be deemed or construed as creating a multiple fiscal year obligation on the part of the City within the meaning of Colorado Constitution Article X, Section 20 or any other constitutional or statutory provision, and the City's obligations hereunder are expressly conditional upon annual appropriation by the City Council, in its sole discretion. Company understands and agrees that any decision of City Council to not appropriate funds for payment shall be without penalty or liability to the City and, further, shall not affect, impair, or invalidate any of the remaining terms or provisions of this Agreement.

15. Governing Law: Venue; Dispute Resolution. This Agreement shall be governed and construed in accordance with the laws of the State of Colorado. This Agreement shall be subject to, and construed in strict accordance with, the Louisville City Charter and the Louisville Municipal Code. Any action arising out of, in connection with, or relating to this Agreement shall be filed in the District Court of Boulder County of the State of Colorado and in no other court or jurisdiction. In the event of a dispute concerning any provision of this Agreement, the parties agree that prior to

commencing any litigation, they shall first engage in good faith the services of a mutually acceptable, qualified, and experienced mediator, or panel of mediators for the purpose of resolving such dispute; except that, either party may seek injunctive or other equitable relief in the District Court of Boulder County without first submitting the dispute to mediation. The costs of any mediation shall be split equally between the parties. The prevailing party in any proceeding in District Court (or appeals thereof) shall be entitled to reimbursement of its reasonable attorney's fees related to such proceeding.

16. Legal Challenge; Escrow. The City shall have no obligation to make any rebate payment hereunder during the pendency of any legal challenge to this Agreement actually filed in a court of competent jurisdiction. The parties covenant that neither will initiate any legal challenge to the validity or enforceability of this Agreement, and the parties will cooperate in defending the validity or enforceability of this Agreement against any challenge by any third party. Any funds appropriated for payment under this Agreement shall be escrowed in a separate City account in the event there is a legal challenge to this Agreement actually filed in a court of competent jurisdiction, and all escrowed sums shall be released to Company within thirty (30) days of any filed settlement or judgement order that mandates that such sums (or portion thereof) be released to Company.

17. Personal Agreement; Assignment. This Agreement is personal to the Company and does not attach to or run with the Property. Neither party shall record this Agreement in the property records of the Boulder County Clerk and Recorder. The Company may not assign any of the obligations, benefits or provisions of the Agreement in whole or in any part without the express written authorization of the City Council of the City. Any purported assignment, transfer, pledge, or encumbrance made without such prior written authorization shall be void.

18. No Joint Venture. Nothing in this Agreement is intended or shall be construed to create a joint venture between the City and the Company and the City shall never be liable or responsible for any debt or obligation of Company.

19. No Third-Party Beneficiaries. The terms and conditions of this Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to City and Company, and nothing contained in this Agreement shall give or allow any such claim or right of action by any other third party on such Agreement. It is the express intention of the parties that any person other than City or Company receiving services or benefits under this Agreement shall be deemed to be an incidental beneficiary only.

This Agreement is enacted this _____ day of _____, 2024.

DILLON COMPANIES, LLC
d/b/a King Soopers
a Kansas limited liability company

By: _____
Lisa Helton
Vice President, Tax and
Assistant Treasurer

CITY OF LOUISVILLE

By: _____
Christopher M. Leh
Mayor

ATTEST:

_____
Genny Kline, Interim City Clerk

Year	Gross Retail Sales Projections	Total Rate (3.775%)	Sales Tax (3%)	Open Space (0.5%)	Historic Preservation (0.125%)	Recreation Center (0.150%)	Sales Tax Rebate	City Share Kept
Year 1	$ 62,661,248.00	$ 2,365,462.11	$ 1,879,837.44	$ 313,306.24	$ 78,326.56	$ 93,991.87	$ 1,409,878.08	$ 955,584.03
Year 2	$ 68,304,496.00	$ 2,578,494.72	$ 2,049,134.88	$ 341,522.48	$ 85,380.62	$ 102,456.74	$ 1,536,851.16	$ 1,041,643.56
Year 3	$ 72,936,188.00	$ 2,753,341.10	$ 2,188,085.64	$ 364,680.94	$ 91,170.24	$ 109,404.28	$ 1,641,064.23	$ 1,112,276.87
Year 4	$ 77,354,940.00	$ 2,920,148.99	$ 2,320,648.20	$ 386,774.70	$ 96,693.68	$ 116,032.41	$ 1,740,486.15	$ 1,179,662.84
Year 5	$ 80,496,000.00	$ 3,038,724.00	$ 2,414,880.00	$ 402,480.00	$ 100,620.00	$ 120,744.00	$ 1,811,160.00	$ 1,227,564.00
Year 6	$ 82,910,880.00	$ 3,129,885.72	$ 2,487,326.40	$ 414,554.40	$ 103,638.60	$ 124,366.32	$ 1,865,494.80	$ 1,264,390.92
Year 7	$ 85,398,206.00	$ 3,223,782.28	$ 2,561,946.18	$ 426,991.03	$ 106,747.76	$ 128,097.31	$ 1,921,459.64	$ 1,302,322.64
Year 8	$ 87,960,153.00	$ 3,320,495.78	$ 2,638,804.59	$ 439,800.77	$ 109,950.19	$ 131,940.23	$ 1,979,103.44	$ 1,341,392.33
Year 9	$ 90,598,957.00	$ 3,420,110.63	$ 2,717,968.71	$ 452,994.79	$ 113,248.70	$ 135,898.44	$ 1,094,496.10	$ 2,325,614.52
Year 10	$ 93,316,926.00	$ 3,522,713.96	$ 2,799,507.78	$ 466,584.63	$ 116,646.16	$ 139,975.39	$ -	$ 3,522,713.96
Year 11	$ 96,116,434.00	$ 3,628,395.38	$ 2,883,493.02	$ 480,582.17	$ 120,145.54	$ 144,174.65	$ -	$ 3,628,395.38
Year 12	$ 98,999,927.00	$ 3,737,247.24	$ 2,969,997.81	$ 494,999.64	$ 123,749.91	$ 148,499.89	$ -	$ 3,737,247.24
Total	**$ 997,054,355.00**	**$ 37,638,801.90**	**$ 29,911,630.65**	**$ 4,985,271.78**	**$ 1,246,317.94**	**$ 1,495,581.53**	**$ 15,000,000.00**	**$ 22,638,801.90**
							$ -	
	$15 Million Cap						**$ 15,000,000.00**	**$ 22,638,801.90**

Anticipated Cost Sharing		
	Applicant Rebate	City Retained
Building Permit and Fees	$ 53,460.00	$ 53,460.00
Construction Use Tax	$ 117,750.00	$ 178,587.50
Sign Permit	$ 3,907.50	$ 5,457.50
Vacancy Bonus	$ 100,000.00	
Sales Tax Rebate	$ 15,000,000.00	$ 22,638,801.90
TOTAL	**$ 15,275,117.50**	**$ 22,876,306.90**

Business Assistance Package (BAP) for New King Soopers Marketplace

August 6, 2024

King Soopers Marketplace

- King Soopers is one of over 20 flags of the brand Kroger and King Soopers operates nearly 120 stores across the state of Colorado.
- King Soopers Marketplace is an expanded store that will offer full service grocery, pharmacy and expanded general merchandise to include outdoor living products, electronics, home goods and toys.

1171 Dillon Road

- 118,00 SF reuse of currently vacant box
- Addition of fueling center
- $15.7 Million build out with additional $10 Million in equipment and fixtures
- 75 full time employees and 175 part time employees

City of Louisville

Proposed Incentive

- Total Package: $15,280,000
  - $15 million sales tax rebate cap through a 75% sales tax rebate
  - $280,000 cap for building permits and other fees at 50% rebate
- 12-year time frame
- All rebate-based components with caps for each component
- Agreement terms/ends once maximum incentive is received or end of 12 years, whichever occurs first

City of Louisville

4/19/2023

Year	Gross Retail Sales Projections	Sales Tax (3%)	Open Space (0.5%)	Historic Preservation (0.125%)	Recreation Center (0.150%)	Sales Tax Rebate	City Share Kept
1	$62,661,248.00	$1,879,837.44	$313,306.24	$78,326.56	$93,991.87	$1,409,878.08	$955,584.03
2	$68,304,496.00	$2,049,134.88	$341,522.48	$85,380.62	$102,456.74	$1,536,851.16	$1,041,643.56
3	$72,936,188.00	$2,188,085.64	$364,680.94	$91,170.24	$109,404.28	$1,641,064.23	$1,112,276.87
4	$77,354,940.00	$2,320,648.20	$386,774.70	$96,693.68	$116,032.41	$1,740,486.15	$1,179,662.84
5	$80,496,000.00	$2,414,880.00	$402,480.00	$100,620.00	$120,744.00	$1,811,160.00	$1,227,564.00
6	$82,910,880.00	$2,487,326.40	$414,554.40	$103,638.60	$124,366.32	$1,865,494.80	$1,264,390.92
7	$85,398,206.00	$2,561,946.18	$426,991.03	$106,747.76	$128,097.31	$1,921,459.64	$1,302,322.64
8	$87,960,153.00	$2,638,804.59	$439,800.77	$109,950.19	$131,940.23	$1,979,103.44	$1,341,392.33
9	$90,598,957.00	$2,717,968.71	$452,994.79	$113,248.70	$135,898.44	$1,094,496.10	$2,325,614.52
10	$93,316,926.00	$2,799,507.78	$466,584.63	$116,646.16	$139,975.39	$	$3,522,713.96
11	$96,116,434.00	$2,883,493.02	$480,582.17	$120,145.54	$144,174.65	$	$3,628,395.38
12	$98,999,927.00	$2,969,997.81	$494,999.64	$123,749.91	$148,499.89	$	$3,737,247.24
Total ($)	**$997,054,355.00**	**$29,911,630.65**	**$4,985,271.78**	**$1,246,317.94**	**$1,495,581.53**	**$15,000,000**	**$22,638,801.90**

Anticipated Cost Sharing

	Applicant Rebate	City Retained
Building Permit and Fees	$ 53,460.00	$ 53,460.00
Construction Use Tax	$ 117,750.00	$ 178,587.50
Sign Permit	$ 3,907.50	$ 5,457.50
Vacancy Bonus	$ 100,000.00	
Sales Tax Rebate	$ 15,000,000.00	$ 2,638,801.90
TOTAL	**$ 15,275,117.50**	**$ 22,876,306.90**

City of Louisville

4/19/2023

Additional Information

- Would be a second store for King Soopers, there is no plan to close the South Boulder Road location.
- The City would also receive $15 cents from each bag sold at this new location.
- Anticipated payroll of over $6.75 million annually.
- Planned opening in Q2-Q3 2026.
- As all components are rebate based, the funds will be paid back to the company based on actual costs/sales and will be paid from new money generated by the project.

City of Louisville

Questions?

City of Louisville

City of Louisville
COLORADO • SINCE 1878

CITY COUNCIL COMMUNICATION
AGENDA ITEM 10D

SUBJECT: **ORDINANCE NO. 1876, SERIES 2024 – AN ORDINANCE AMENDING CHAPTER 15.18.030 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE – 2nd READING – PUBLIC HEARING (advertised *Daily* Camera 7/14/24)**

DATE: **AUGUST 6, 2024**

PRESENTED BY: **ROB ZUCCARO, AICP, COMMUNITY DEVELOPMENT DIRECTOR**
CHAD ROOT, CHIEF BUILDING OFFICIAL

SUMMARY:
Staff is presenting a draft ordinance amending Louisville Municipal Code Section 15.18.030 (Attachment No. 1) concerning amendments to the 2021 International Energy Conservation Code (IECC). The proposed ordinance is the result of staff research and public input on how to ensure the feasibility of implementing the previously adopted amendments to the code, including standards for net-zero residential construction and electric heat pump requirements for commercial water and space heating. The proposed code update provides alternative paths to meet the intended code outcomes, clarifies certain aspects of the code, streamlines certain administrative procedures, and aligns the code with equipment and material availability. Specific changes to the code include the following:

- Specifies that the commercial all-electric space and water heating requirement only applies to all new construction and removes any standards for additions and alternations to existing commercial buildings.
- Allows gas backup space heating equipment for the commercial all-electric space heating standards.
- Removes post-construction documentation, one-year compliance check, monitoring and metering requirements for new commercial construction subject to Appendix PT, Energy Use Intensity (EUI) modeling standards.
- Clarifies the EUI standards applicable to small office development between 0-5,000 sq. ft.
- Clarifies that R-1 and R-2 occupancies shall be subject to Appendix PT, the EUI modeling standards, rather than Appendix RC, Zero Energy Residential Building Provisions.
- Amends the commercial door U-value to match market availability of commercial type doors.
- Corrects missing commercial R-values for insulation of metal buildings, and for piping and ducting.
- Adds minimum heat pump standards for both commercial and residential development to ensure that they are climate appropriate.

- Updates furnace efficiency standards to match product availability.
- Allows an exception to meeting Appendix RC, Zero Energy Residential Building Provisions if a home is certified through the Passive House Institute US, Inc. (PHIUS) program.
- Allows a Home Energy Rating System (HERS) in lieu of the Energy Rating Index (ERI) specified in the code.
- Updates the HERS minimum standard from 47 to 50, which will be easier to achieve, but still requires renewable energy offset to a net-zero hers of 0.
- Removes the requirement to install electric vehicle charging infrastructure for commercial development when parking spaces are added or reconfigured if not part of a new building or building addition.

City Council requested that the Building Code Board of Appeal (BCBOA) review the draft ordinance and provide a recommendation. Staff has incorporated some of the BCBOA's recommended amendments into the staff recommended draft (Attachment No. 1). A BCBOA alternative recommended draft is included as Attachment No. 2 and includes several other changes to the code highlighted as track changes. Some of the BCBOA amendments would alter policy direction provided in the code, such as requirements for electric heat pump space and water heating, and net zero residential provisions. Council has not provided specific direction to change these policies, therefore, staff has provided both drafts for consideration.

The major differences in the staff and BCBOA code versions are summarized below:

<u>All-Electric Building Definition</u> (Section C202 General Definitions)

Staff Drafted Ordinance – Attachment No. 1
Defines all-electric building as eliminating all combustion equipment. (Code does not require all-electric building construction, but this is the most accurate definition).

BCBOA Alternative – Attachment No. 2
Defines all-electric building as providing electric "primary heating" but would allow combustion equipment for any other system.

<u>Applicability of Commercial Code Options</u> (Section C202 General Definitions)

Staff Recommended Ordinance
Certain commercial building types must meet an energy modeling target (Appendix PT) and others would meet prescriptive energy code. All new buildings would need to meet all-electric space and water heating. Building additions would no longer need to meet all-electric space and water heating.

BCBOA Alternative – Attachment No. 2
All commercial buildings could meet the prescriptive code. The provisions of Appendix PT and the all-electric space and water heating standards would be optional. (Although, in later sections the BOA recommends eliminating all-electric space and water heating standards).

Space Heating Equipment (Section C403.2.4)

Staff Drafted Ordinance – Attachment No. 1
Continues to disallow fossil-fuel and electric resistance space heating but limits the requirement to new construction only. Several exceptions are provided for space heating, and industrial and commercial processing needs are also exempt. Based on feedback from the business community and based on industry outreach related to reliable available equipment, the exceptions were expanded to allow fossil-fuel back up to electric hearing systems.

BCBOA Alternative – Attachment No. 2
Elimination of the requirements and allow fossil fuel equipment, with efficiency standards in place.

Water Heating Equipment (Section C404.10)

Staff Drafted Ordinance – Attachment No. 1
Continues to disallow fossil-fuel and electric resistance water heating but limits the requirement to new construction only. Several exceptions are provided for industrial and commercial processing needs.

BCBOA Alternative – Attachment No. 2
Elimination of the requirements and allow fossil fuel equipment, with efficiency standards in place.

Residential Thermal Envelope (Section R402.1.2.)

Staff Drafted Ordinance – Attachment No. 1
Above grade walls would need to meet a minimum insulation requirement of R-30 or R-20 with R-5 continuous insulation (ci). This is the minimum required to meet the minimum code standard mandated by the State through HB22-1362.

BCBOA Alternative – Attachment No. 2
Allow an above grade wall minimum insulation requirement of R-21.

Appendix RC, Net Zero Residential Construction (Section R401.2)

Staff Drafted Ordinance – Attachment No. 1
New residential single-family construction (both attached and detached) must meet Appendix RC, which requires enhanced energy efficiency above the base code and net zero construction. In addition, the existing city code and HB22-1362 require solar ready construction.

BCBOA Alternative – Attachment No. 2
New residential development does not need to meet Appendix RC and would only need to meet solar ready construction as an alternative to Appendix RC.

BACKGROUND:

City Code Adoptions and Policy Direction

On October 29, 2021, the City Council adopted the 2021 IECC with amendments, including the adoption of Appendix RC, which provides net-zero development standards for new residential development. The 2021 IECC provides minimum energy efficiency standards above that found in the International Residential Code (IRC) and International Building Code (IBC). The ordinance also included minimum electric vehicle (EV) charging standards for all new development. Ordinance No. 1816, Series 2021 and the minutes from the adoption hearing are included as Attachment Nos. 3 and 4.

On December 20, 2022, the City Council adopted further amendments to the 2021 IECC that were specific to commercial development. This included the adoption of standards to require electric heat pumps for commercial space and domestic water heating, with exemptions for commercial kitchens and a broad range of commercial, industrial and institutional processes. The ordinance also included a new appendix that requires certain commercial uses, including office, multi-family residential development, and warehouse development, to meet minimum energy use performance targets that are more stringent than the base IECC codes. Ordinance 1845, Series 2022 and the minutes from the adoption hearing are included as Attachment Nos. 5 and 6.

As part of the development of the commercial code provisions, the City hired Group 14 Engineering and Lotus Engineering and Sustainability to conduct a study and gather community input on options to strengthen the City's commercial energy code standards. This included an analysis of a net-zero commercial code option vs an energy use standard as an alternative to a full net-zero code. The final report and recommendations from Group 14/Lotus are included as Attachment No. 7.

Following the adoption of Ordinance 1845, Series 2022, City Council asked that staff conduct outreach on the adopted codes after hearing concerns over the feasibility and

stringency of some of the code standards. In August of 2023 City staff and a City consultant with Shums Coda Associates held a public open house to gather feedback on the adopted codes. Staff received feedback from residents, business owners, land owners, developers and their design consultants on specific issues of concern. The feedback received at the open house is the basis for several of the proposed updates to the code. City staff has also identified several code provisions as part of implementing the codes since their adoptions and after conducting further research that are included in proposed updates.

State Energy Code Requirements

On June 6, 2022, the Governor signed into law HB22-1362, Building Greenhouse Gas Emissions. HB22-1362 requires municipalities that adopt new building codes after July 1, 2023 to adopt the 2021 IECC and the State's Model Electric Ready and Solar Ready Codes, or codes with equal or better energy performance.

HB22-1362:
https://leg.colorado.gov/bills/hb22-1362

State Model Electric Ready and Solar Ready Codes:
https://energyoffice.colorado.gov/buildings/building-energy-codes/energy-code-board

The City's current codes comply with HB22-1362. With the adoption of the proposed code amendments, the City must verify continued compliance with the minimum energy performance standards required by HB22-1362. The City's Building Official has reviewed the staff recommended code update to verify compliance with the minimum 2021 IECC and State Model Electric Ready and Solar Ready Code standards.

ANALYSIS:

The purpose of the staff-recommended code update is to meet the same policy intent of the original code adoption, which is to have more progressive energy standards than the base 2021 IECC code, but also ensuring that the codes are structured so that they are feasible and balanced to support economic vitality in the City. Staff has incorporated comments from business and developer outreach and worked with a consultant, Shums Coda Associates, who has expertise in drafting energy codes. Staff also reviewed the code to ensure it meets the minimum standards of HB22-1362.

The BCBOA code version would reverse the City's requirements for commercial electric heat pump space and domestic water heating and eliminate requirements for residential net-zero construction. While technology is generally available to meet the heat pump standards, the equipment needed is often difficult to obtain and may be significantly more expensive. This additional cost and delays in obtaining compliance equipment could impact business attraction and expansion opportunities for the City. In addition, the net-zero residential appendix adds cost to home construction. This could have impacts on the rate of completing rebuilding efforts in Marshall Fire impacted

neighborhoods considering that lots sold to new owners would need to meet the more expensive net-zero code. The additional costs of net-zero residential construction may also influence overall affordability of housing and the ability to attract new residential construction and affordable housing opportunities to the City.

FISCAL IMPACT:
No fiscal impact is anticipated from the changes to the code.

SUSTAINABILITY ADVISORY BOARD:
The Sustainability Advisory Board has submitted a letter with comments on the proposed code amendment (Attachment No. 8). The letter requests several amendments to the proposed code draft.

STAFF RECOMMENDATION:
Staff recommends approval of Ordinance No. 1876, Series 2024.

ATTACHMENTS:
1. Ordinance No. 1876, Series 2024
2. BCBOA Recommended Code Draft
3. Ordinance 1816, Series 2021
4. October 19, 2021 City Council Minutes
5. Ordinance 1845, Series 2022
6. December 20, 2022 City Council Minutes
7. Group 14/Lotus Energy Code Update Recommendation Report
8. Louisville Sustainability Advisory Board Memo

STRATEGIC PLAN IMPACT:

☐	**Financial Stewardship & Asset Management**	☐	**Reliable Core Services**
☒	**Vibrant Economic Climate**	☐	**Quality Programs & Amenities**
☒	**Engaged Community**	☐	**Healthy Workforce**
☐	**Supportive Technology**	☐	**Collaborative Regional Partner**

ORDINANCE NO. 1876
SERIES 2024

AN ORDINANCE AMENDING CHAPTER 15.18.030 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE

WHEREAS, the City Council has adopted from time-to-time certain building and construction standards; and

WHEREAS, it is deemed to be in the interest of the public health, safety and general welfare to adopt by reference thereto the 2021 edition of the International Energy Conservation Code with amendments and additions to such code; and

WHEREAS, the City Council adopted Ordinance No. 1816, Series 2021 and Ordinance No. 1845, Series 2022, which included the adoption of Appendix RC to the 2021 edition of the International Energy Conservation Code, and provisions for electric space and water heating provisions for commercial development, and a new Appendix PT setting standards for energy ratings for certain commercial development; and

WHEREAS, following additional research and public input on the provisions adopted in Ordinance No. 1816, Series 2021 and Ordinance No. 1845, Series 2022, the City desires to make certain amendments to such codes to ensure the feasibility of implementation of the codes; and

WHEREAS, the City of Louisville remains committed to its adopted goals to reduce energy consumption, increase clean energy sources, and support the transition to a low-carbon community as outlined in the Sustainability Action Plan and Resolution 25, Series 2019, A Resolution Setting Clean Energy and Carbon Reduction Goals; and

WHEREAS, reducing building energy consumption is an effective strategy to reduce community-wide energy consumption and increase long-term cost savings for businesses; and

WHEREAS, the City Council is committed to environmental, economic and social sustainability, ensuring the International Energy Conservation Code is attainable for current and future business owners and tenants, supporting affordable housing and local businesses development; and

WHEREAS, the City Council, after proper notice as required by law, has held a public hearing on this ordinance providing for amendments to said codes.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

Section 1. Section 15.18.030 of the Louisville Municipal Code, concerning amendments and deletions to the 2021 International Energy Conservation Code, is hereby amended as follows (deleted text in ~~strikethrough~~ and new text underlined):

1. *Section C101.1 Title*, is amended to insert "the City of Louisville" so the section will read:

   C101.1 Title. These regulations shall be known as the Energy Conservation Code of the City of Louisville, and shall be cited as such. It is referred to herein as "this code."

2. *Section C103.2 Information on construction documents*, is hereby amended to read as follows:

   C103.2 Information on construction documents. Construction documents shall be drawn to scale upon suitable material. Electronic media documents are permitted to be submitted when *approved* by the *code official*. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed, and show in sufficient detail pertinent data and features of the building, systems and equipment herein governed. Details shall include the following as applicable:

      1. Energy compliance path.
      2. Insulation materials and their *R*-values
      3. Fenestration *U*-factor and solar heat gain coefficients (SHGCs).
      4. Area-weighted *U*-factor and solar heat gain coefficient (SHGC) calculations.
      5. Mechanical system design criteria.
      6. Mechanical and service water heating systems and equipment types, sizes, fuel source and efficiencies.
      7. Economizer description.
      8. Equipment and system controls.
      9. Fan motor horsepower (hp) and controls.
      10. Duct sealing, duct and pipe insulation and location.
      11. Lighting fixture schedule with wattage and control narrative.
      12. Location and *daylight* zones on floor plans.
      13. Air barrier and air sealing details, including the location of the air barrier.
      14. Location of pathways for routing of raceways or cable from the solar ready zone to the electrical service panel.

3. *Section C202 General Definitions*, is hereby amended by adding, in alphabetical order, the following definitions:

All-Electric Building: A building that contains no combustion equipment, including piping or plumbing for combustion equipment, installed within the building or building site.

Combustion Equipment: Any equipment or appliance used for space heating, service water heating, cooking, clothes drying and/or lighting that uses fuel gas or fuel oil.

~~*Electric Vehicle (EV):* A vehicle registered for on-road use, primarily powered by an electric motor that draws current from a rechargeable storage source that is charged by being plugged into an electrical current source.~~

~~*Electric Vehicle Supply Equipment (EVSE):* The electrical conductors and associated equipment external to the electric vehicle that provide a connection between the premises wiring and the electric vehicle to provide electric vehicle charging.~~

~~*Electric Vehicle Capable Space:* A designated parking space that is provided with conduit sized and rated for a minimum 40-amp, 208/240-Volt dedicated branch circuit and shall be no less than 1" in size. Conduit must be continuous from the future or existing electrical panelboard or switchboard location(s) and end at a junction box or receptacle located within close proximity of the parking space. The electrical panel serving the parking space shall have sufficient capacity and physical space for a dual-pole, 40-amp breaker. The conduit shall be sealed at the junction or outlet box that is capped off, with the conduit sealed and the cap labeled as "For future electric vehicle charging".~~

~~*Electric Vehicle Ready Space:* A designated parking space that is provided with a dedicated branch circuit with wiring capable of supporting a minimum 40-ampere, 208/240- Volt circuit that terminates at a receptacle, plug, junction box, or an installed electric vehicle supply equipment within close proximity of the parking space. There shall be adequate reserved space in an electrical panelboard or switchboard to meet the electric vehicle requirements.~~

~~*Electric Vehicle Supply Equipment (EVSE) Installed Space:* A designated parking space with dedicated electric vehicle supply equipment capable of supplying a minimum 40-amp, dedicated circuit rated at 208/240 Volt from a building electrical panelboard.~~

Emergency Power System: A source of automatic electric power of a required capacity and duration to operate required life safety, fire alarm, detection, and ventilation systems in the event of a failure of the primary

power. Emergency power systems are those required for electrical loads where interruption of the primary power could result in loss of human life or serious injuries.

Energy Use Intensity (EUI): The annual building site energy use per square foot of gross floor area in units of kBTU/sq ft.

Residential Building: I

Standby Power System: A source of automatic electric power of a required capacity and duration to operate required building, hazardous materials or ventilation systems in the event of a failure of the primary power. Standby power systems are those required for electrical loads where interruption of the primary power could create hazards or hamper rescue or fire-fighting operations.

Tenant Finish: The first tenant occupying a space(s) in a core and shell. Multiple tenants may be considered as a tenant finish until the entire space within the core and shell has had a tenant. Once a space within a core and shell has been occupied it becomes an existing building.

4. *C401.2.* Commercial buildings shall comply with ~~Section C401.2.1~~ one of the following, as applicable

C401.2.1 Performance targets. New commercial building types included in the scope of Appendix PT shall comply with Appendix PT and Sections C403.2.4 and C404.10.

C401.2.2 Core and shell. Core and shell buildings shall comply with the provisions of Section C402.1.3 through C402.5. When mechanical systems are installed, core and shell buildings shall also meet the provisions in C403.2.4, C404.10, and Section C408.

C401.2.2.1 Core and shell buildings shall submit a letter of agreement to the City stating the tenant spaces included in the scope of Appendix PT shall meet the EUI target established in Table PT103 and shall include these requirements in their lease or purchase agreements.

C401.2.3 Tenant finish. Tenant finishes included in the scope of Appendix PT shall comply with Appendix PT and C403.2.4 and C404.10. All other tenant finishes shall comply with the Prescriptive Compliance option, which requires compliance with Sections C401.3, C401.4, C402 through C406, and C408.

C401.2.4 Other commercial building types. Commercial building types not included above, including additions, shall comply with the

Prescriptive Compliance option, which requires compliance with Sections C401.3, C401.4, C402 through C406, and C408.

Exception: ~~Additions, alterations,~~ Alterations, repairs, and changes of occupancy to existing buildings complying with Chapter 5.

5. *Section C401.2.1 International Energy Conservation Code*, is hereby deleted and replaced to read as follows:

   C401.2.1 International Energy Conservation Code

   Commercial buildings shall be built all-electric unless the fuel gas options of C403.3.2 and the additional electric infrastructure requirements of C405.14 are met. All buildings must comply with the following:

   City of Louisville's Prescriptive Compliance. The Prescriptive Compliance option requires compliance with Sections C401.3, C401.4, C402 through C406, and Section C408.

   Core and shell buildings shall be required to comply with the provisions of Section C402.1.3 through C402.5 of the 2021 International Energy Conservation Code.

6. *Section C401.2.2 ASHRAE 90.1*, is hereby deleted in its entirety.

7. A new *Section C401.4 Mandatory Requirements for Commercial Buildings*, is hereby added to read as follows:

   C401.4 Mandatory Requirements for Commercial Buildings. Commercial buildings must comply with Table C401.4.

Table C401.4 (Mandatory)
Requirements for Commercial Buildings

Title	IECC Section
Air leakage	C402.5
Calculation of heating and cooling loads	C403.1.1
Data centers	C403.1.2
System Design	C403.2
Heating and cooling equipment efficiency	C403.3
Heating and cooling system controls	C403.4, except C403.4.3, C403.4.4, C403.4.5

Economizer fault detection and diagnostics	C403.5.5
Ventilation and exhaust systems	C403.7, except C403.7.4.1
Fan and fan controls	C403.8, except C403.8.6
Large diameter ceiling fans	C403.9
Refrigeration equipment performance	C403.11, except C403.11.3
Construction of HVAC system elements	C403.12
Mechanical systems located outside of the building thermal envelope	C403.13
Service water heating	C404
Electrical power and lighting systems	C405, except C405.3
Maintenance information and system commissioning	C408

8. *Table C402.1.3 Opaque Thermal Envelope Insulation Component Minimum Requirements, R-Value Method*, is hereby deleted and replaced with the following:

Table C402.1.3 (Mandatory)
Opaque Thermal Envelope Insulation Component of an Average Minimum Requirements, *R*-Value Method in following locations:

Roof C402.2.3	
Insulation entirely above roof deck	R-49
Metal buildings[a]	R-21 + R-11 LS
Attic and other	R-49
Walls. Above grade C402.2.2	
Mass[d]	R-21
Metal buildings	R-21 + R-10ci
Metal framed	R-21+ R-10ci
Wood framed and other	R-21
Walls, Below grade C402.2.5	
Below-grade wall[b]	R-10
Floors C402.2.3	
Mass[c]	R-21
Joist/framing	R-38
Slab-on-grade floors C402.2.4	
Unheated	R-20 for 24" below
Heated[e]	R-15 for 36" below + R-5 full slab

For SI: 1 inch = 25.4 mm, 1 pound per square foot = 4.88 kg/m^2, 1 pound per cubic foot = 16 kg/m^3.
NR = No Requirement, LS = Liner System.

a.Where using *R*-value compliance method, a thermal spacer block shall be provided,
b.Where heated slabs are below grade, below-grade walls shall comply with the exterior insulation requirements for heated slabs.
c.“Mass floors” shall be in accordance with Section C402.2.3.
d.“Mass walls” shall be in accordance with Section C402.2.2.
e. The first value is for perimeter insulation and the second value is for full, under-slab insulation.

9. *Section C402.1.4 Assembly U-factor, C-factor or F-factor-based method,* is hereby deleted in its entirety.

10. *Section C402.1.5 Component performance alternative,* is hereby deleted in its entirety.

11. *Table C402.4 Building Envelope Fenestration Maximum U-Factor and SHGC Requirements,* is hereby deleted and replaced with the following:

Table C402.4
Building Envelope Fenestration

Vertical Fenestration	
Maximum U-Factor	0.45
Maximum SHGC	0.33
Maximum air leakage rate for all fenestration except curtain walls and storefront glazing	.20 cfm/ft2
Maximum air leakage rate for curtain walls and storefront glazing	.06 cfm/ft2
Skylights	
Maximum U-Factor	0.50
Maximum SHGC	0.40
Maximum Air leakage rate	.20 cfm/ft2

~~12. *Section C402.4.1 Maximum area*, is hereby deleted and replaced with the following:~~

~~C402.4.1 Minimum area of natural lighting. Not less than eight percent of the floor area shall be glazed.~~

~~13. *Section C402.4.2 Minimum skylight fenestration area*, is hereby deleted and replaced with the following:~~

~~**C402.4.2 Minimum area of natural lighting.** A minimum skylight area of three percent of the roof area shall be provided for all roofs.~~

~~Exception: Roof areas designated for solar ready zones shall not be included in roof area calculation.~~

12. **C403.2** *System design.* Mechanical systems shall be designed to comply with Sections C403.2.1 through ~~403.2.3~~ C403.2.4. Where elements of a building's mechanical systems are addressed in Sections C403 through C403.14, such elements shall comply with the applicable provisions of those sections.

13. Section C403.2.4 Space heating equipment is added as follows:

    C403.2.4 Space heating equipment. Fossil-fuel warm air furnaces appliances and electric resistance space heating equipment shall not be permitted for space heating in new construction.

    Exceptions:
    1. *Emergency backup.* Where it is required by an applicable law or regulation to provide space heating with an emergency power system or a standby power system.
    2. *Certain make-up air systems.* Electric resistance in make-up air systems where energy recovery ventilation is prohibited by the International Mechanical Code.
    3. *Supplementary heat.* Electric resistance and natural gas/ propane heat used for supplementary heat in accordance with Section C403.4.1.1
    4. *Electric resistance budget.* In addition to any exceptions in this section, Up to 5 W of electric resistance space heating per square foot of conditioned floor area in the building, not including supplementary heat.
    5. *Integrated units.* Electric resistance heating elements, natural gas, propane supplemental heating integrated into heat pump equipment.
    6. *Heated plenums.* Electric resistance in heated plenums.
    7. *Temporary systems.* Temporary electric resistance heating systems are permitted where serving future tenant spaces that are unfinished and unoccupied, provided that the heating equipment is sized and controlled to achieve interior space temperatures no higher than needed to prevent freezing.
    8. *Freeze protection.* Electric resistance in heating systems intended for freeze protection.
    9. Outdoor systems. Equipment used for outdoor heating.
    10. Specific conditions. Portions of buildings that require fossil fuel or electric resistance space heating for specific conditions approved by the Building Official for research, health care, process or other specific needs that cannot practicably be served by heat pump or other space heating systems. This does not constitute a blanket exception for any occupancy type.
    11. Replacements. Replacement fuel-fired appliances.

12. Backup heat. For back up heat to operate when the heat pump cannot adequately heat the space/buildings due to extreme cold weather.
13. Where cfm/sq. ft. ventilation requirements result in conditions where the Building Official determines that space heating requirements cannot reasonably be met without combustion space heating systems.

14. Section C403.2.5 Heat pump efficiencies is added as follows:
C403.2.5. Heat pump efficiencies:
    a. Ductless System
        1. 14.3 SEER2;
        2. 7.5 HSPF2; or
        3. EnergyStar Cold Climate certified
    b. Ducted System
        1. 15.2 SEER2;
        2. 9 HSPF2; or
        3. EnergyStar Cold Climate certified

14. *Section C403.3.2 HVAC equipment performance requirements*, is hereby ~~deleted in its entirety and replaced~~ amended by adding the following at the beginning of the section with remainder of section to remain ~~to read as follows~~:

C403.3.2 When HVAC fuel fired equipment is permitted to be installed, equipment shall meet the minimum efficiency requirements of Tables C403.3.2(1) through C403.3.2(16) when tested and rated in accordance with the applicable test procedure. Plate-type liquid-to-liquid heat exchangers shall meet the minimum requirements of AHRI 400. The efficiency shall be verified through certification under an approved certification program or, where a certification program does not exist, the equipment efficiency ratings shall be supported by data furnished by the manufacturer. Where multiple rating conditions or performance requirements are provided, the equipment shall satisfy all stated requirements. Where components, such as indoor or outdoor coils, from different manufacturers are used, calculations and supporting data shall be furnished by the designer that demonstrates that the combined efficiency of the specified components meets the requirements herein.

~~HVAC/fuel fired equipment performance requirements. Unless built all-electric, all new combustion equipment shall comply with the more efficient HVAC equipment performance of Sections C406.2, C406.2.3, and C406.2.4 and the additional electric infrastructure requirements in Section C405.14. A mechanical compliance certificate demonstrating compliance with section C406.2.3 and/or C406.2.4 shall be required for all HVAC, fuel fired and Service Water Heating equipment.~~

~~The efficiency shall be verified through certification under an approved certification program or, where a certification program does not exist, the equipment efficiency ratings shall be supported by data furnished by the manufacturer. Where multiple rating conditions or performance requirements are provided, the equipment shall satisfy all stated requirements. Where components, such as indoor or outdoor~~

~~coils, from different manufacturers are used, calculations and supporting data shall be furnished by the designer that demonstrates that the combined efficiency of the specified components meets the requirements herein. (Tables C403.2.(1) through (16) are expressly retained and remain applicable to HVAC equipment performance.)~~

~~Exceptions:~~

~~1. Factory, laboratory, and high hazard occupancy combustion equipment, except for HVAC and domestic water heating.~~

~~2. Commercial Kitchens.~~

~~3. Other combustion equipment approved by the Building Official based on demonstration by the applicant that compliance with this section is not feasible and the equipment proposed is the most efficient appliance reasonably available.~~

16. *Section C403.4.1 Thermostatic controls*, is hereby deleted and replaced with the following:

C403.4.1 Thermostatic controls. The supply of heating and cooling energy to each *zone* shall be controlled by individual thermostatic controls capable of responding to temperature within the *zone*. Where humidification or dehumidification or both is provided, no fewer than one humidity control device shall be provided for each humidity control system. Occupancy sensors shall be provided on the thermostat to setback in accordance with C403.4.2.1

Exception: Independent perimeter systems that are designed to offset only building envelope heat losses, gains or both serving one or more perimeter *zones* also served by an interior system provided that both of the following conditions are met:

1. The perimeter system includes not fewer than one thermostatic control *zone* for each building exposure having exterior walls facing only one orientation (within ±45 degrees) (0.8 rad) for more than 50 contiguous feet (15 240 mm).
2. The perimeter system heating and cooling supply is controlled by thermostats located within the *zones* served by the system.

17. *Section C403.12.1 Duct and plenum insulation and sealing*, is hereby deleted and replaced with the following:

C403.12.1 Duct and plenum insulation and sealing. All supply and return air ducts and plenums shall be insulated with not less than R-12. Ducts, air handlers and filter boxes shall be sealed. Joints and seams shall comply with Section 603.9 of the International Mechanical Code.

18. *Section C403.12.3 Piping insulation*, is hereby amended to read as follows:

C403.12.3 Piping insulation. Piping serving as part of a heating or cooling system shall be thermally insulated to R-5.

19. *Section C404.4 Insulation of piping*, is hereby amended to read as follows:

C404.4 Insulation of piping. Piping from a water heater to the termination of the heated water fixture supply pipe shall be insulated to R-3. On both the inlet and outlet piping of a storage water heater or heated water storage tank, the piping to a heat trap or the first 8 feet (2438 mm) of piping, whichever is less, shall be insulated. Piping that is heat traced shall be insulated to R-3 or the heat trace manufacturer's instructions.

20. Section C404.10 Water heating equipment is added as follows:

C404.10 Water heating equipment. Fossil fuel and electric resistance instantaneous and storage water heaters shall not be used to provide hot water <u>in new construction.</u>

Exceptions:

1. *Emergency backup.* Where it is required by an applicable law or regulation to provide water heating with an emergency power system or a standby power system.
2. *Integrated units*. Resistance heating elements integrated into heat pump water heating equipment.
3. *Recirculation loops*. Electric resistance elements used for recirculation loop temperature maintenance.
4. *Small systems.* Electric storage water heaters with a rated water storage volume no greater than 20 gallons.
5. *Point-of-use systems.* Instantaneous electric water heaters located within 10 feet of the point of use.
6. *Renewable electricity*. Electric resistance equipment where not less than 100 percent of the annual service water-heating requirement is provided by an *on-site renewable energy system* not used to meet any other provision of this code.
7. *Renewable or waste thermal energy*. Electric resistance storage water heating equipment in *buildings* where not less than 75% of the annual service water heating requirement is met by a solar thermal system or other renewable thermal system.
8. *High-temperature requirements*. Water heating systems that serve end-uses or have a storage requirement that necessitates a water temperature of 141°F (55°C) or hotter.
9. *Electric resistance budget.* In addition to any exceptions in this section, a budget of 24 kW plus 0.1 watts per square foot of building area of electric resistance service water heating capacity per building.

10. *Commercial kitchens*. Electric booster-heaters serving commercial dishwashers, commercial food service equipment, and other approved process equipment that require supply water temperatures of 120°F (49°C) or higher.
11. *Replacements.* Replacement of gas-fired storage water heaters or instantaneous water heaters.

21. Section C405.2.1 Occupant sensor controls, is hereby amended to read as follows:

C405.2.1 Occupant sensor controls. Occupant *sensor controls* shall be installed to control lighting.

22. *Section C405.2.2 Time-switch controls*, is hereby deleted in its entirety.

23. *Section C405.2.2.1 Time-switch control function*, is hereby deleted in its entirety.

24. *Section C405.2.3 Light-reduction controls*, is renumbered to C405.2.2.

25. *Section C405.2.3.1 Light-reduction function*, is renumbered to C405.2.2.1.

26. *Section C405.2.4 Daylight-responsive controls*, is renumbered to C405.2.3.

27. *Section C405.2.4.1 Daylight-responsive control function*, is renumbered to C405.2.3.1.

28. *Section C405.2.4.2 Sidelit daylight zone*, is renumbered to C405.2.3.2.

29. *Section C405.2.4.3 Toplit daylight zone,* is renumbered to C405.2.3.3.

30. *Section C405.2.4.4 Atriums,* is renumbered to C405.2.3.4.

31. *Section C405.2.5 Specific application controls,* is renumbered to C405.2.4.

32. *Section C405.2.6 Manual controls,* is renumbered to C405.2.5.

33. *Section C405.2.7 Exterior lighting controls,* is renumber to C405.2.6.

34. *Section C405.2.7.1 Daylight shut off,* is renumbered to C405.2.6.1.

35. *Section C405.2.7.2 Building façade and landscape lighting,* is renumbered to C405.2.6.2.

36. *Section C405.2.7.3 Lighting setback,* is renumbered to C405.2.6.3.

37. *Section C405.2.7.4 Exterior time-switch control function,* is renumbered to C405.2.6.4.

38. *Section C405.2.8 Parking garage lighting control*, is renumbered to C405.2.7.

39. *Section C405.4.3 Gas lighting, is hereby amended to read as follows:*

C405.4.3 Gas lighting. Gas-fired lighting appliances shall not be permitted.

40. A new *Section C405.13 Electric vehicle charging infrastructure for new construction and building addition of 256 or more of original square footage*, is hereby added to read as follows:

Section C405.13.1 Electric vehicle charging infrastructure for new construction and building addition of 25% or more of original square footage. Electric vehicle charging shall be provided and installed in accordance with this section, National Electrical Code (NFPA 70), and Section 17.20.170 of the Louisville Municipal Code. ~~When parking spaces are added or modified without an increase in building floor area, only the new parking spaces are subject to this requirement.~~ All *EVSE Installed*, *EV Ready* and *EV Capable* spaces are to be included in the calculation for the number of minimum vehicle spaces required, as provided by the applicable article of the Louisville Zoning Code.

Section C405.13.2 Identification. The circuit breakers or circuit breaker spaces reserved for the *EVSE Installed, EV Ready*, and *EV Capable* spaces shall be clearly identified in the panelboard directory. The conduit for electric vehicle capable spaces shall be clearly identified at both the panelboard and the termination point at the parking space~~.~~

40. A new *Section C405.14 Additional electric infrastructure*, is hereby added to read as follows:

Section C405.14 Additional electric infrastructure. All *combustion equipment* and end-uses shall be installed in accordance with this section.

C405.14.1 Electric infrastructure for dwelling and sleeping units. *Combustion equipment* and end-uses serving individual dwelling units or sleeping units shall comply with Section R404.5.

C405.14.2 Combustion equipment. *Combustion equipment* shall be provided with conduit that is continuous between a junction box located

within 3 feet (914 mm) of the appliance or equipment and an electrical panel. The junction box, conduit and bus bar in the electrical panel shall be rated and sized to accommodate a branch circuit with sufficient capacity for an equivalent electric appliance, equipment or end use with an equivalent equipment capacity. The electrical junction box and electrical panel shall have labels stating, “For Future Electric Equipment”.

Exception: Industrial and manufacturing uses are exempt from Section C405.14.

41. *Section C502.1.1 General,* is hereby amended to read as follows:

Additions to an existing building, building system or portion thereof shall conform to the provisions of Section C401.2.4 as those provisions relate to new construction without requiring the unaltered portion of the existing building or building system to comply with this code. Additions shall not create unsafe or hazardous condition or overload existing building systems. An addition shall be deemed to comply with this code if the addition alone complies or if the existing building and addition comply with this code as a single building.

42. *Section C503.1 General* Exception 3 is deleted in its entirety.

43. *Section C503.2 Building Envelope* is amended with exception remaining to read as follows:

New building envelope assemblies that are part of the alteration shall comply with Sections C402.1 through C402.5. Existing ceilings, roofs, all wall types, or floors exposed during construction shall comply with Table C402.1.3.

44. *Section C505.1 General*, is hereby amended to read as follows:

C505.1 General. Where the use in a space changes from one use in Table C405.3.2(1) or C405.3.2(2) to another use in Table C405.3.2(1) or C405.3.2(2), the installed lighting wattage shall comply with Section C405.3. Where the space undergoing a change in occupancy or use is in a building with a fenestration area that exceeds the limitations of Section C402.4.1, the space is exempt from Section C402.4.1 provided that there is not an increase in fenestration area.

Exception: Egress doors with fenestration are allowed to bring total fenestration percentages over the allowed maximum amount of vertical fenestration.

APPENDIX PT

MODELING TO A PERFORMANCE TARGET

PT101 Scope. This section establishes criteria for demonstrating compliance with a performance target, and is required for new hotels (occupancy R-1), multifamily (occupancy R-2), offices, primary and secondary schools, and warehouses. All end use load components within and associated with the building and their building sites shall be modeled.

PT102 Mandatory requirements. The requirements in this section are mandatory requirements and shall be required in addition to the provisions of ASHRAE 90.1 Appendix G.

PT103 Performance target. Projects of the types listed in Table PT103 shall demonstrate that the proposed design reaches a fixed energy use intensity (EUI) less than or equal to the values in Table PT103, calculated utilizing the energy modeling procedures of Appendix G of ASHRAE 90.1. For *buildings* with multiple occupancy types, the modeled performance target shall be a weighted average of the floor area of each occupancy type.

Exception: Energy used for electric vehicle charging, data centers, and process loads shall be excluded from compliance modeling.

TABLE PT103
PERFORMANCE TARGETS

BUILDING TYPE	PERFORMANCE TARGET (kBTU/ft2)
Hotel (Occupancy R-1)	32
Multifamily (Occupancy R-2)	32
Office, small (≥ 0 - 5,000 ft2)	19
Office, medium (5,000 – 50,000 ft2)	23
Office, large (>50,000 ft2)	28
School, primary	34
School, secondary	31
Warehouse	11

PT104 Renewable Energy. On-site renewable energy generated by a system installed as part of this project that is used by the building shall be subtracted from the proposed design energy consumption prior to calculating the proposed building performance.

PT105 Performance documentation. Documentation to verify compliance with this section shall be provided to the code official.

PT105.1 Projected compliance report. Permit submittals shall include a report documenting the proposed design is projected to meet the EUI target. The compliance report shall include the following specific information beyond the information required in ASHRAE 90.1 Appendix G:

1. Address of the building.
2. An inspection checklist documenting the building component characteristics of the proposed design.
3. Name of individual completing the report.
4. Name and version of compliance software tool.
5. Documentation of the reduction in energy use associated with on-site energy.

PT105.2 Construction plan requirements. Construction plans shall depict all component characteristics of the proposed design utilized for the EUI in accordance with ASHRAE 90.1 Appendix G.

~~**PT105.3 Measured performance report.** Projects shall demonstrate compliance with this code by documenting that the building has achieved the EUI performance calculated based on 12 months of metered energy use after occupancy.~~

~~**PT105.3.1 Demonstration of operating energy use.** Metered energy data demonstrating compliance with the EUI target shall be reported to the building official using Energy Star Portfolio Manager and adjusted for the percentage of floor area occupied. While at least 75 percent occupied, the building shall operate at or below its assigned energy use target established in Section PT103 for any recording period of 12 consecutive months that is completed within three years of the date of the Certificate of Occupancy. The owner shall notify the building official when this 12-month period has been successfully completed.~~

~~**PT106 Energy metering and monitoring.** All projects must install submetering or monitoring capabilities to support building energy performance analysis. The project must include capabilities to store and access a 24-month continuous data set on an ongoing basis.~~

PT106.1 End-use monitoring. Measurement devices shall be installed in new *buildings* to monitor the electric energy use of each of the following separately:

1. Total electric energy.
2. HVAC systems energy use.
3. Interior lighting.
4. Exterior lighting.
5. Receptacle circuits.
6. Data centers representing over 10 percent of total building load or 5 percent of building floor area.
7. Other process loads that represent 10 percent or more of total building energy use based on building energy use modeling.

PT106.2 Independent metering. The following items shall be independently metered. Individual meters used to comply with this section may not serve multiple *buildings*.

1. All fuel sources serving the building.
2. Energy production from on-site renewable energy systems.
3. Electric vehicle (EV) supply equipment.
4. Data centers representing over 10 percent of total building load or 5 percent of building floor area.
5. Other process loads that represent 10 percent or more of total building energy use based on building energy use modeling.
6. Individual tenant energy loads.

45. *Section R101.1 Title,* is amended to insert "the City of Louisville" so the section will read:

R101.1 Title. These regulations shall be known as the Energy Conservation Code of the City of Louisville and shall be cited as such. It is referred to herein as "this code."

46. *Section R103.2 Information on construction documents,* is amended to read as follows:

R103.2 Information on construction documents. Construction documents shall be drawn to scale upon suitable material. Electronic media documented are permitted to be submitted when *approved* by the *code official*. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed, and show in sufficient detail pertinent data and features of the building, systems and equipment herein governed. Details shall include the following as applicable:

1. Energy compliance path.
2. Insulation materials and their *R*-values
3. Fenestration *U*-factor and solar heat gain coefficients (SHGCs).
4. Area-weighted *U*-factor and solar heat gain coefficient (SHGC) calculations.
5. Mechanical system design criteria.
6. Mechanical and service water heating systems and equipment types, sizes, fuel source and efficiencies.
7. Equipment and system controls.
8. Duct sealing, duct and pipe insulation and location.
9. Air sealing detail.
10. Location of pathways for routing of raceways or cable from the solar ready zone to the electrical service panel.

47. *Section R202 General Definitions*, is hereby amended by adding, in alphabetical order, the following definitions:

All-Electric Building: A building that contains no combustion equipment, or plumbing or piping for combustion equipment, installed within the building or building site.

Combustion Equipment: Any equipment or appliance used for space heating, service water heating, cooking, clothes drying and/or lighting that uses fuel gas or fuel oil.

~~*Electric Vehicle (EV):* A vehicle registered for on-road use, primarily powered by an electric motor that draws current from a rechargeable storage source that is charged by being plugged into an electrical current source.~~

~~*Electric Vehicle Supply Equipment (EVSE):* The electrical conductors and associated equipment external to the electric vehicle that provide a connection between the premises wiring and the electric vehicle to provide electric vehicle charging.~~

~~*Electric Vehicle Capable Space:* A designated parking space that is provided with conduit sized and rated for a minimum 40-amp, 208/240-Volt dedicated branch circuit and shall be no less than 1" in size. Conduit must be continuous from the future or existing electrical panel board or switchboard location(s) and end at a junction box or receptacle located within close proximity of the parking space. The electrical panel serving the parking space shall have sufficient capacity and physical space for a dual-pole, 40-amp breaker. The conduit shall be sealed at the junction or outlet box that is capped off, with the conduit sealed and the cap labeled as "For future electric vehicle charging".~~

~~*Electric Vehicle Ready Space:* A designated parking space that is provided with a dedicated branch circuit with wiring capable of supporting a minimum 40-ampere, 208/240- Volt circuit that terminates at a receptacle, plug, junction box, or an installed electric vehicle supply equipment within close proximity of the parking space. There shall be adequate reserved space in an electrical panel board or switchboard to meet the electric vehicle requirements~~.

Residential Building. For this code, includes detached one- and two-family dwellings and multiple single-family dwellings (townhouses) and R-3 and R-4 buildings three stories or less in height above grade plane.

48. *Section R401.2 Application,* is hereby deleted and replaced with the following:

R401.2 Application. New ~~R~~residential buildings shall be built using appendix RB and RC and shall be built all-electric unless the fuel gas options of R403.7 and additional electric infrastructure requirements of R404.5 are met. ~~All residential buildings shall comply with the R401.2.1 City of Louisville's Prescriptive Compliance or R406 Energy Rating Index with a maximum rating index of 50 before the installation of solar panels~~

Exceptions:

1. New residential buildings certified through the Passive House Institute US, Inc. (PHIUS) program
2. Additions shall comply with R401.2.1 and Chapter 5
3. ~~Additions,~~ ~~a~~Alterations, repairs and changes of occupancy to existing buildings complying with Chapter 5.

49. *Section R401.2.1 Prescriptive Compliance Option,* is hereby deleted and replaced with the following:

R401.2.1 City of Louisville's Prescriptive Compliance. The City of Louisville's Prescriptive compliance requires compliance with Sections R401 through R404.

50. Section R401.2.2 Total Building Performance Option, is hereby deleted in its entirety.

51. Section R401.2.4 Tropical Climate Region, is hereby deleted in its entirety.

52. *Section R401.2.5 Additional Energy Efficiency*, is hereby amended to read as follows:

Section R401.2.5 Additional Energy Efficiency. Building shall comply with one of the additional efficiency options and shall be installed in according to Section R408.2.

53. A new *Section R401.4 Mandatory requirements for residential buildings*, is hereby added to read as follows:

R401.4 Mandatory requirements for residential buildings. Residential building must comply with the following sections from the 2021 International Energy Conservation Code found in Table R401.4 and Section R401.2.

Table R401.~~3~~4
Mandatory requirements for residential buildings

Title	IECC Section
Vapor retarder	R402.1.1
Eave baffle	R402.2.3
Access hatches and doors	R402.2.4.1
Crawl space wall insulation	R402.4.1.2
Maximum fenestration U-factor and SHGC	R402.5
Mechanical Controls	R403.1
Ducts	R403.3 except R403.3.2, R403.3.3, and R403.6
Mechanical system piping insulation	R403.4
Heated water circulation and temperature maintenance systems	R403.5.1
Drain Water heat recovery units	R403.5.3
Mechanical ventilation	R403.6 including E403.6.1
Equipment sizing and efficiency rating	R403.7
Systems serving multiple dwelling units	R403.8
Snow melt and ice systems	R403.9
Energy consumption of pools and spas	R403.10
Portable spas	R403.11
Residential pools and permanent residential spas	R403.12
Lighting equipment	R404.1
Interior lighting controls	R404.2

54. *Section R402.1 General*, is hereby amended to read as follows:

R402.1 General. The building thermal envelope shall comply with the requirements of Section R402.1.1 and R402.1.2.

55. *Section R402.1.2 Insulation and fenestration*, is hereby deleted and replaced with the following*:*

R402.1.2 Insulation ~~and fenestration~~. New and replacement ~~A~~assemblies shall have R-value of insulation materials equal to or greater than that specified in Table R402.1.2 ~~unless an alternative path is specified while using HERS energy rating index of 50.~~

Exception: New Construction complying with exception 1 of R401.2

Table R402.1.2
Average Insulation and Fenestration Requirements by Component

Roof	R-60
Above grade walls	~~R-21~~ R-30 or R-20 &R-5 ci
Below grade walls	~~R-21~~ R-19
Floors	R-38
Non heated slab on grade	R-10 for 4ft
Heated slab on grade	R-15 for 4 ft + R-5 under full slab
Fenestration U-Factor	.30
Fenestration SHGC	.33
Skylight U-Factor	.50
Skylight SHGC	.40
Hot Water Pipes	R-3
Warm Air Ducts	R-8

55. Section R402.1.5 Total UA alternative, is hereby deleted in its entirety.

56. Section R402.3.3 Glazed fenestration exemption, is hereby amended to read as follows:

R402.3.3 Glazed fenestration exemption. Not greater than 15 square feet (1.4 m^2) of glazed fenestration per dwelling unit shall be exempt from the U-factor and SHGC requirements in Section R402.1.2.

57. *Section R402.4.1.2 Testing*, is hereby deleted and replaced to read as follows:

Section R402.4.1.2 Testing. All new buildings or dwelling units that are heated or cooled, and additions over 500 square feet shall be tested for air leakage.

58. *Section R402.5 Maximum fenestration U-factor and SHGC*, is hereby deleted and replaced with the following*:*

Section R402.5 Maximum fenestration U-factor and SHGC. The maximum U-factor and solar heat gain coefficient (SHGC) for fenestration shall not be required in storm shelters complying with ICC 500.

59. *Section R403.3.1 Ducts located outside conditioned space*, is hereby deleted and replaced with the following*:*

R403.3.1 *Ducts located outside conditioned space*. All supply and return ducts shall be insulated to a minimum R-8 if located outside a conditioned space.

60. *Section R403.5.2 Hot water pipe insulation*, is hereby deleted and replaced with the following*:*

R403.5.2 Hot water pipe insulation. All service hot water piping shall be insulated to a minimum ~~R-5~~ R-3.

62. *Section R403.7 Equipment sizing and efficiency rating*, is hereby deleted and replaced with the following*:*

R403.7 Equipment sizing and efficiency rating. All new buildings and additions greater than 500 square feet with heating and cooling equipment shall be sized in accordance with ACCA Manual S based on building loads calculated in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies. In addition to complying with Sec. R404.6 Additional Electric Infrastructure, new and replacement electrical heating and cooling equipment shall have an efficiency rating equal to or greater than the minimum required by federal law for the geographic location where the equipment is installed. New gas heating equipment shall comply with the following efficiencies:

1. Gas furnaces shall have a minimum of ~~96%~~ 95% efficiency.
2. Gas boilers shall have a minimum of ~~90%~~ 95% AFUE.
3. On demand water heaters shall have a greater than .92 uniform energy factor.
4. Heat pump efficiencies:
   a. Ductless System
      1. 14.3 SEER2;
      2. 7.5 HSPF2; or
      3. EnergyStar Cold Climate certified
   b. Ducted System
      1. 15.2 SEER2;
      2. 9 HSPF2; or

3. EnergyStar Cold Climate certified

Exception: Solid fuel stoves/gas fireplaces, outdoor fire pits, gas stoves and ovens.

63. *Section R404.1.1 Fuel gas lighting equipment, is hereby amended to read as follows:*

R404.1.1 Fuel gas lighting equipment. Fuel gas lighting systems shall not be installed.

64. A new *Section R404.4 Electric vehicle charging infrastructure for new construction and building addition of 50% or more of original square footage*, is hereby added to read as follows:

Section R404.4 Electric vehicle charging infrastructure for new construction and building addition of 50% or more of original square footage. Electric infrastructure for the current and future charging of *electric vehicles* shall be installed in accordance with this section per Section 17.20.170 of the Louisville Municipal Code*. EV ready spaces and EV capable spaces* are permitted to be counted toward meeting minimum parking requirements.

R404.4.1 One- and two- family dwellings and townhouses. One- and two-family dwellings and townhouses with a dedicated attached or detached garage or on-site parking spaces shall be provided with electric vehicle charging in accordance with Section 17.20.170 of the Louisville Municipal Code.

R404.4.1.1 Minimum EV Ready infrastructure. Minimum EV Ready Space infrastructure shall require the following:

1. Installation of conductors:
    a. Conductors shall be installed of sufficient size to accommodate a minimum 240VAC 40Amp branch circuit to each parking space where required.
    b. Conductors shall terminate in either a receptacle, plug, junction or outlet box, or an *EVSE* installed in the parking space.
2. The electrical panel directory shall designate the branch circuit as “EV Ready” and the junction box or receptacle shall be labelled “EV Ready.”

R404.4.1.2 Construction documents. Construction documents shall graphically indicate and label all EV ready spaces and associated termination locations. For all

Townhouses and one- and two-family dwellings with an electrical utility service of 200 Amps or greater, a panelboard schedule shall be provided indicating the EV Ready circuit breaker space(s) and the circuit designation(s).

R404.4.2 Group R occupancies. Group-R occupancies (~~R-2,~~ R-3, and R-4 buildings three stories and less) with three or more dwelling units and/or sleeping units shall be provided with electric vehicle charging in accordance with Section 17.20.170 of the Louisville Municipal Code.

Electric vehicle charging shall be provided and installed in accordance with this section and the National Electrical Code (NFPA 70). When parking spaces are added or modified without an increase in building floor area, only the new parking spaces are subject to this requirement.

65. A new *Section R404.5 Additional electric infrastructure*, is hereby added to read as follows:

R404.5 Additional electric infrastructure. *Combustion equipment* shall be installed in accordance with this section.

R404.5.1 Combustion equipment and end-uses. *Combustion equipment* shall be provided with a dedicated, appropriately phased circuit that shall have a minimum amperage requirement for a comparable electric appliance, equipment or end use, an electrical receptacle or junction box that is connected to the electric panel, and conductors of adequate capacity within 6 feet (1829 mm) of the appliance or equipment.

Each such circuit shall be accessible with no obstructions. A reserved circuit breaker space shall be installed in the electrical panel adjacent to the circuit breaker for the branch circuit and labeled for each circuit. Both ends of the unused conductor or conduit shall be labeled “For Future Electric Equipment” and be electrically isolated.

66. *Section R405 Total building performance*, is deleted in its entirety.

67. *Section R406.3 Building thermal envelope*, is hereby deleted in its entirety and replaced with the following*:*

R406.3 Building thermal envelope. ~~Building and portions thereof shall comply with Table R406.3.~~

68. *Section R406.3.1 On-site renewables are not included,* is deleted in its entirety.

69. *Section R406.3.2 On-site renewables are included,* is deleted in its entirety.

70. *Section ~~406.3.2~~* R407 *Tropical Climate Region Compliance Path,* is deleted in its entirety.

71. *Section R502.1.1 General*, is hereby amended to read as follows:

Additions to an existing building, building system or portion thereof shall conform to the provisions of R401.2.1 as those provisions relate to new construction without requiring the unaltered portion of the existing building or building system to comply with this code. Additions shall not create unsafe or hazardous conditions or overload existing building systems. An addition shall be deemed to comply with this code where the addition alone complies, where the existing building and addition comply with this code as a single building, or where the building with the addition does not use more energy than the existing building. Additions shall be in accordance with Section R502.2 or R502.3.

72. *Section R503.1.1 Building Envelope* is amended to read as follows:
Building envelope assemblies that are part of the alteration shall comply with Section R401.2.1

Section R503.1.1 Building envelope Exception 2 is deleted in its entirety and replaced with the following.

2. Section R402.4.1.2 Testing

73. *Section R505.1 General* is hereby amended to remove the exception.

74. *Section R505.1.1 Unconditioned space,* is hereby deleted and replaced with the following:

R505.1.1 Unconditioned space. Any unconditioned or low-energy space that is altered to become a conditioned space shall comply with Section R503.

75. RC102.1 General is amended to read as follows.

RC102.1 General. New residential buildings shall comply with Sections RC102.2 through RC102.9.

76. RC102.2 Energy Rating Index zero energy score is amended to read as follows.

RC102.2 Energy Rating Index zero energy score.
Compliance with this section requires that the rated design be shown to have a Home Energy Rating System (HERS) score of 50 before solar and 0 with solar when compared to the Energy Rating Index (ERI) reference design determined in accordance with RESNET/ICC 301 for both of the following:

1. ERI value not including on-site power production (OPP) calculated in accordance with RESNET/ICC 301.
2. ERI value including on-site power production calculated in accordance with RESNET/ICC 301 with the OPP in Equation 4.1.2 of RESNET/ICC 301 adjusted in accordance with Equation RC-1.

Adjusted OPP = OPP + CREF + REPC (Equation RC-1)

where:
CREF = Community Renewable Energy Facility power production—the yearly energy, in kilowatt hour equivalent (kWheq), contracted from a community renewable energy facility that is qualified under applicable state and local utility statutes and rules, and that allocates bill credits to the rated home.
REPC = Renewable Energy Purchase Contract power production—the yearly energy, in kilowatt hour equivalent (kWheq), contracted from an energy facility that generates energy with photovoltaic, solar thermal, geothermal energy or wind systems, and that is demonstrated by an energy purchase contract or lease with a duration of not less than 15 years.

RC102.2.1 HERS Score. Buildings shall comply with the scores in Table RC102.2.1.

Table RC102.2.1.

HERS SCORE NOT INCLUDING OPP	HERS SCORE INCLUDING OPP
50	0

76. RC102.3 through RC102.9 are added to Appendix RC to read as follows.

RC102.3 Mandatory Sections. All projects shall comply with all sections within Table RC102.3.

Table RC102.3
Mandatory requirements for residential buildings

Title	IECC Section
Vapor retarder	R402.1.1
Eave baffle	R402.2.3
Access hatches and doors	R402.2.4.1
Crawl space wall insulation	R402.4.1.2

Maximum fenestration U-factor and SHGC	R402.5
Mechanical Controls	R403.1
Ducts	R403.3 except R403.3.2, R403.3.3, and R403.6
Mechanical system piping insulation	R403.4
Heated water circulation and temperature maintenance systems	R403.5.1
Drain Water heat recovery units	R403.5.3
Mechanical ventilation	R403.6 including E403.6.1
Equipment sizing and efficiency rating	R403.7
Systems serving multiple dwelling units	R403.8
Snow melt and ice systems	R403.9
Energy consumption of pools and spas	R403.10
Portable spas	R403.11
Residential pools and permanent residential spas	R403.12
Lighting equipment	R404.1
Interior lighting controls	R404.2

RC102.4 Building Envelope. The building thermal envelope shall be greater or equal to the levels of efficiency and SHGC in Table RC102.4.

Table RC102.4
Average of the Minimum Insulation and Maximum Fenestration Requirements by Component

Roof	R-60
Above grade walls	R-21
Below grade walls	R-21
Floors	R-38
Non heated slab on grade	R-10 for 4ft
Heated slab on grade	R-15 for 4 ft + R-5 under full slab
Fenestration U-Factor	.30

Fenestration SHGC	.33
Skylight U-Factor	.50
Skylight SHGC	.40

RC102.5 Verification by approved agency.
Verification of compliance with Section R102.4 as outlined in Sections of this appendix shall be completed by an approved third party. Verification of compliance with Section R102.3 shall be completed by the authority having jurisdiction or an approved third-party inspection agency in accordance with Section R105.4.

RC102.6 Documentation.
Documentation of the software used to determine the ERI and the parameters for the residential building shall be in accordance with Sections RC102.6.1 through RC102.6.4

RC102.6.1 Compliance software tools.
Software tools used for determining HERS shall be Approved Software Rating Tools in accordance with RESNET/ICC 301.

RC102.6.2 Compliance report.
Compliance software tools shall generate a report that documents that the home and the HERS score of the rated design complies with RC102. Compliance documentation shall be created for the proposed design and shall be submitted with the application for the building permit. Confirmed compliance documents of the built dwelling unit shall be created and submitted to the code official for review before a certificate of occupancy is issued. Compliance reports shall include information in accordance with Sections RC102.6.3 and RC102.6.4.

RC102.7 Additional documentation.
The code official shall be permitted to require the following documents:

1. Documentation of the building component characteristics of the ERI reference design.

2. A certification signed by the builder providing the building component characteristics of the rated design.

3. Documentation of the actual values used in the software calculations for the rated design.

RC102.8 Specific approval.
Performance analysis tools meeting the applicable subsections of Section RC102 shall be approved. Documentation demonstrating the approval of

performance analysis tools in accordance with Section RC102shall be provided.

RC102.9 Input values.
Where calculations require input values not specified by Sections RC 102, those input values shall be taken from RESNET/ICC 301.

Section 2. If any article, section, paragraph, sentence, clause, or phrase of this ordinance is held to be unconstitutional or invalid for any reason, such decision shall not affect the validity or constitutionality of the remaining portions of this ordinance. The City Council hereby declares that it would have passed this ordinance and each part or parts hereof irrespective of the fact that any one part or parts be declared unconstitutional or invalid.

Section 3. The repeal or modification of any provision of any prior ordinance by this ordinance shall not release, extinguish, alter, modify, or change in whole or in part any penalty, forfeiture or liability, either civil or criminal, which shall have been incurred under such provision, and each provision shall be treated and held as still remaining in force for the purpose of sustaining any judgment, decree, or order which can or may be rendered, entered, or made in such actions, suits, proceedings, or prosecutions.

Section 4. All other ordinances or portions thereof inconsistent or conflicting with this ordinance or any portion hereof are hereby repealed to the extent of such inconsistency or conflict.

INTRODUCED, READ, PASSED ON FIRST READING, AND ORDERED PUBLISHED this 9th day of July, 2024.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Meredyth Muth, City Clerk

APPROVED AS TO FORM:

_____
Kelly PC, City Attorney

PASSED AND ADOPTED ON SECOND AND FINAL READING, this 6th day of August, 2024.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Genny Kline, Interim City Clerk

BCBOA DRAFT

ORDINANCE NO. _____, SERIES 2024

AN ORDINANCE AMENDING CHAPTER 15.18.030 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING THE 2021 INTERNATIONAL ENERGY CONSERVATION

WHEREAS, the City Council has adopted from time-to-time certain building and construction standards; and

WHEREAS, it is deemed to be in the interest of the public health, safety and general welfare to adopt by reference thereto the 2021 edition of the International Energy Conservation Code; and

WHEREAS, the City of Louisville remains committed to its adopted goals to reduce energy consumption, increase clean energy sources, and support the transition to a low-carbon community as outlined in the Sustainability Action Plan and Resolution 25, Series 2019, "A Resolution Setting Clean Energy and Carbon Reduction Goals"; and

WHEREAS, reducing building energy consumption is an effective strategy to reduce community-wide energy consumption and increase long-term cost savings for businesses; and

WHEREAS, the City Council is committed to environmental, economic and social sustainability, ensuring the International Energy Conservation Code is attainable for current and future business owners and tenants, supporting affordable housing and local businesses development.

WHEREAS, the City Council, after proper notice as required by law, has held a public hearing on this ordinance providing for the adoption of said codes; and

WHEREAS, the 2021 edition of the International Energy Conservation Code, with amendments, has been submitted to the City Council in writing and the City Council has determined that such codes should be adopted as herein set forth.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

Section 15.18.030 of the Louisville Municipal Code, concerning amendments and deletions to the 2021 International Energy Conservation Code, is hereby amended as follows (deleted text in ~~strikethrough~~ and new text <u>underlined</u>):

1. *Section C101.1 Title*, is amended to insert "the City of Louisville" so the section will read:

C101.1 Title. These regulations shall be known as the Energy Conservation Code of the City of Louisville, and shall be cited as such. It is referred to herein as "this code."

2. *Section C103.2 Information on construction documents*, is hereby amended to read as follows:

C103.2 Information on construction documents. Construction documents shall be drawn to scale upon suitable material. Electronic media documented are permitted to be submitted when *approved* by the *code official*. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed, and show in sufficient detail pertinent data and features of the building, systems and equipment herein governed. Details shall include the following as applicable:

1. Energy compliance path.
2. Insulation materials and their *R*-values
3. Fenestration *U*-factor and solar heat gain coefficients (SHGCs).
4. Area-weighted *U*-factor and solar heat gain coefficient (SHGC) calculations.
5. Mechanical system design criteria.
6. Mechanical and service water heating systems and equipment types, sizes, fuel source and efficiencies.
7. Economizer description.
8. Equipment and system controls.
9. Fan motor horsepower (hp) and controls.
10. Duct sealing, duct and pipe insulation and location.
11. Lighting fixture schedule with wattage and control narrative.
12. Location and *daylight* zones on floor plans.
13. Air barrier and air sealing details, including the location of the air barrier.
14. Location of pathways for routing of raceways or cable from the solar ready zone to the electrical service panel.

3. *Section C202 General Definitions*, is hereby amended by adding, in alphabetical order, the following definitions:

All-Electric Building: A building that contains no combustion equipment for primary heating~~, or piping or plumbing for combustion equipment, installed within the building or building site.~~

Formatted: Strikethrough

Combustion Equipment: Any equipment or appliance used for space heating, service water heating, cooking, clothes drying and/or lighting that uses fuel gas or fuel oil.

~~*Electric Vehicle (EV):* A vehicle registered for on-road use, primarily powered by an electric motor that draws current from a rechargeable storage source that is charged by being plugged into an electrical current source.~~

~~*Electric Vehicle Supply Equipment (EVSE):* The electrical conductors and associated equipment external to the electric vehicle that provide a connection between the premises wiring and the electric vehicle to provide electric vehicle charging.~~

~~*Electric Vehicle Capable Space:* A designated parking space that is provided with conduit sized and rated for a minimum 40 amp, 208/240 Volt dedicated branch circuit and shall be no less than 1" in size. Conduit must be continuous from the future or existing electrical panelboard or switchboard location(s) and end at a junction box or receptacle located within close proximity of the parking space. The electrical panel serving the parking space shall have sufficient capacity and physical space for a dual-pole, 40-amp breaker. The conduit shall be sealed at the junction or outlet box that is capped off, with the conduit sealed and the cap labeled as "For future electric vehicle charging".~~

~~*Electric Vehicle Ready Space:* A designated parking space that is provided with a dedicated branch circuit with wiring capable of supporting a minimum 40-ampere, 208/240 Volt circuit that terminates at a receptacle, plug, junction box, or an installed electric vehicle supply equipment within close proximity of the parking space. There shall be adequate reserved space in an electrical panelboard or switchboard to meet the electric vehicle requirements.~~

~~*Electric Vehicle Supply Equipment (EVSE) Installed Space:* A designated parking space with dedicated electric vehicle supply equipment capable of supplying a minimum 40 amp, dedicated circuit rated at 208/240 Volt from a building electrical panelboard.~~

Emergency Power System: A source of automatic electric power of a required capacity and duration to operate required life safety, fire alarm, detection, and ventilation systems in the event of a failure of the primary power. Emergency power systems are those required for electrical loads where interruption of the primary power could result in loss of human life or serious injuries.

Energy Use Intensity (EUI): The annual building site energy use per square foot of gross floor area in units of kBTU/sq ft.

Residential Building: For this code, includes detached one- and two-family dwellings and multiple single-family dwellings (townhouses) R-3 and R-4 buildings three stories or less in height above grade plane.

Standby Power System: A source of automatic electric power of a required capacity and duration to operate required building, hazardous materials or

ventilation systems in the event of a failure of the primary power. Standby power systems are those required for electrical loads where interruption of the primary power could create hazards or hamper rescue or fire-fighting operations.

Tenant Finish: The first tenant occupying a space(s) in a core and shell. Multiple tenants may be considered as a tenant finish until the entire space within the core and shell has had a tenant. Once a space within a core and shell has been occupied it becomes an existing building.

4. *C401.2.* Commercial buildings shall comply with ~~Section C401.2.1~~ one of the following, as applicable

   C401.2.1 Performance targets. New commercial building types included in the scope of Appendix PT shall comply with Appendix PT and/or Sections C403.2.4 and C404.10.

   C401.2.2 Core and shell. Core and shell buildings shall comply with the provisions of Section C402.1.3 through C402.5. When mechanical systems are installed, core and shell buildings shall also meet the provisions in C403.2.4, C404.10, and Section C408.

   C401.2.2.1 Core and shell buildings shall submit a letter of agreement to the City stating the tenant spaces included in the scope of Appendix PT shall meet the EUI target established in Table PT103 and shall include these requirements in their lease or purchase agreements.

   C401.2.3 Tenant finish. Tenant finishes included in the scope of Appendix PT shall comply with Appendix PT and/or C403.2.4 and C404.10. All other tenant finishes shall comply with the Prescriptive Compliance option, which requires compliance with Sections C401.3, C401.4, C402 through C406, and C408.

   C401.2.4 ~~Other commercial building types.~~ Commercial building ~~types not included above~~, including additions, shall comply with the Prescriptive Compliance option, which requires compliance with Sections C401.3, C401.4, C402 through C406, and C408.

   Exception: ~~Additions, alterations,~~ Alterations, repairs, and changes of occupancy to existing buildings complying with Chapter 5.

5. *Section C401.2.1 International Energy Conservation Code*, is hereby deleted and replaced to read as follows:

   C401.2.1 International Energy Conservation Code

Commercial buildings shall be built all-electric unless the fuel gas options of C403.3.2 and the additional electric infrastructure requirements of C405.14 are met. All buildings must comply with the following:

City of Louisville's Prescriptive Compliance. The Prescriptive Compliance option requires compliance with Sections C401.3, C401.4, C402 through C406, and Section C408.

Core and shell buildings shall be required to comply with the provisions of Section C402.1.3 through C402.5 of the 2021 International Energy Conservation Code.

6. *Section C401.2.2 ASHRAE 90.1,* is hereby deleted in its entirety.

7. A new *Section C401.4 Mandatory Requirements for Commercial Buildings,* is hereby added to read as follows:

C401.4 Mandatory Requirements for Commercial Buildings. Commercial buildings must comply with Table C401.4.

Table C401.4 (Mandatory)
Requirements for Commercial Buildings

Title	IECC Section
Air leakage	C402.5
Calculation of heating and cooling loads	C403.1.1
Data centers	C403.1.2
System Design	C403.2
Heating and cooling equipment efficiency	C403.3
Heating and cooling system controls	C403.4, except C403.4.3, C403.4.4, C403.4.5
Economizer fault detection and diagnostics	C403.5.5
Ventilation and exhaust systems	C403.7, except C403.7.4.1
Fan and fan controls	C403.8, except C403.8.6
Large diameter ceiling fans	C403.9
Refrigeration equipment performance	C403.11, except C403.11.3
Construction of HVAC system elements	C403.12
Mechanical systems located outside of the building thermal envelope	C403.13
Service water heating	C404
Electrical power and lighting systems	C405, except C405.3

Maintenance information and system commissioning	C408

8. *Table C402.1.3 Opaque Thermal Envelope Insulation Component Minimum Requirements, R-Value Method*, is hereby deleted and replaced with the following:

Table C402.1.3 (Mandatory)
Opaque Thermal Envelope Insulation Component of an Average Minimum Requirements, *R*-Value Method in following locations:

Roof C402.2.1	
Insulation entirely above roof deck	R-49
Metal buildings[a]	R-21 + R-11 LS
Attic and other	R-49
Walls. Above grade C402.2.2	
Mass[d]	R-21
Metal buildings	R-21 + R-10ci
Metal framed	R-21+ R-10ci
Wood framed and other	R-21
Walls, Below grade C402.2.5	
Below-grade wall[b]	R-10
Floors C402.2.3	
Mass[c]	R-21
Joist/framing	R-38
Slab-on-grade floors C402.2.4	
Unheated	R-20 for 24" below
Heated[e]	R-15 for 36" below + R-5 full slab

For SI: 1 inch = 25.4 mm, 1 pound per square foot = 4.88 kg/m^2, 1 pound per cubic foot = 16 kg/m^3.
NR = No Requirement, LS = Liner System.

a.Where using *R*-value compliance method, a thermal spacer block shall be provided,
b.Where heated slabs are below grade, below-grade walls shall comply with the exterior insulation requirements for heated slabs.
c."Mass floors" shall be in accordance with Section C402.2.3.
d."Mass walls" shall be in accordance with Section C402.2.2.
e. The first value is for perimeter insulation and the second value is for full, under-slab insulation.

9. *Section C402.1.4 Assembly U-factor, C-factor or F-factor-based method*, is hereby deleted in its entirety.

10. *Section C402.1.5 Component performance alternative*, is hereby deleted in its entirety.

11. *Table C402.4 Building Envelope Fenestration Maximum U-Factor and SHGC Requirements*, is hereby deleted and replaced with the following:

Table C402.4
Building Envelope Fenestration

Vertical Fenestration	
Maximum U-Factor	0.45
Maximum SHGC	0.33
Maximum Air leakage rate for all fenestration except curtain walls and storefront glazing	.20 cfm/ft2
Maximum air leakage rate for curtain walls and storefront glazing	.06 cfm/ft
Skylights	
Maximum U-Factor	0.50
Maximum SHGC	0.40
Maximum Air leakage rate	.20 cfm/ft2

~~12. *Section C402.4.1 Maximum area*, is hereby deleted and replaced with the following:~~

~~C402.4.1 Minimum area of natural lighting. Not less than eight percent of the floor area shall be glazed.~~

12. *Section C402.4.1.2* is deleted and replaced with the following:

C402.4.1 Minimum area of natural lighting. Not less than 8% of wall area for warehouses~~,~~ and industrial shall be glazed.

~~13. *Section C402.4.2 Minimum skylight fenestration area*, is hereby deleted and replaced with the following:~~

~~**C402.4.2 Minimum area of natural lighting.** A minimum skylight area of three percent of the roof area shall be provided for all roofs.~~

~~Exception: Roof areas designated for solar ready zones shall not be included in roof area calculation.~~

13. **C403.2** *System design.* Mechanical systems shall be designed to comply with Sections C403.2.1 through ~~403.2.3~~ C403.2.4. Where elements of a building's mechanical systems are addressed in Sections C403 through C403.14, such elements shall comply with the applicable provisions of those sections.

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14. Section C403.2.4 Space heating equipment is added as follows:

~~C403.2.4 Space heating equipment. Fossil-fuel warm-air furnaces appliances and electric resistance space heating equipment shall not be permitted for space heating in new construction.~~

C403.2.4. Heat pump efficiencies:

a. Ductless System
   1. 14.3 SEER2
   2. 7.5 HSPF2
   3. Or EnergyStar Cold Climate certified

b. Ducted System
   1. 15.2 SEER2
   2. 9 HSPF2
   3. Or EnergyStar Cold Climate certified

~~Exceptions:~~

~~1. *Emergency backup.* Where it is required by an applicable law or regulation to provide space heating with an emergency power system or a standby power system.~~

~~2. *Certain make-up air systems.* Electric resistance in make-up air systems where energy recovery ventilation is prohibited by the International Mechanical Code.~~

~~3. *Supplementary heat.* Electric resistance and natural gas/ propane heat used for supplementary heat in accordance with Section C403.4.1.1~~

~~4. *Electric resistance budget.* In addition to any exceptions in this section, Up to 5 W of electric resistance space heating per square foot of conditioned floor area in the building, not including supplementary heat.~~

~~5. *Integrated units.* Electric resistance heating elements, natural gas, propane supplemental heating integrated into heat pump equipment.~~

~~6. *Heated plenums.* Electric resistance in heated plenums.~~

~~7. *Temporary systems.* Temporary electric resistance heating systems are permitted where serving future tenant spaces that are unfinished and unoccupied, provided that the heating equipment is sized and controlled to achieve interior space temperatures no higher than needed to prevent freezing.~~

~~8. *Freeze protection.* Electric resistance in heating systems intended for freeze protection.~~

~~9. Outdoor systems. Equipment used for outdoor heating.~~

~~10. Specific conditions. Portions of buildings that require fossil-fuel or electric resistance space heating for specific conditions approved by the Building Official for research, health care, process or other specific needs that cannot practicably be served by heat pump or other space heating systems. This does not constitute a blanket exception for any occupancy type.~~

~~11. Replacements. Replacement fuel-fired appliances.~~

~~12. Backup heat. For back up heat to operate when the heat pump cannot adequately heat the space/buildings due to extreme cold weather.~~

~~13. Where cfm/sq. ft. ventilation requirements result in conditions where the Building Official determines that space heating requirements cannot reasonably be met without combustion space heating systems.~~

~~14.~~1. *Section C403.3.2 HVAC equipment performance requirements*, is hereby ~~deleted in its entirety and replaced~~ amended by adding the following at the beginning of the section with remainder of section to remain ~~to read as follows~~:

C403.3.2 When HVAC fuel fired equipment is permitted to be installed, equipment shall meet the minimum efficiency requirements of Tables C403.3.2(1) through C403.3.2(16) when tested and rated in accordance with the applicable test procedure. Plate-type liquid-to-liquid heat exchangers shall meet the minimum requirements of AHRI 400. The efficiency shall be verified through certification under an approved certification program or, where a certification program does not exist, the equipment efficiency ratings shall be supported by data furnished by the manufacturer. Where multiple rating conditions or performance requirements are provided, the equipment shall satisfy all stated requirements. Where components, such as indoor or outdoor coils, from different manufacturers are used, calculations and supporting data shall be furnished by the designer that demonstrates that the combined efficiency of the specified components meets the requirements herein.

~~HVAC/fuel fired equipment performance requirements. Unless built all-electric, all new combustion equipment shall comply with the more efficient HVAC equipment performance of Sections C406.2, C406.2.3, and C406.2.4 and the additional electric infrastructure requirements in Section C405.14. A mechanical compliance certificate demonstrating compliance with section C406.2.3 and/or C406.2.4 shall be required for all HVAC, fuel fired and Service Water Heating equipment.~~

~~The efficiency shall be verified through certification under an approved certification program or, where a certification program does not exist, the equipment efficiency ratings shall be supported by data furnished by the manufacturer. Where multiple rating conditions or performance requirements are provided, the equipment shall satisfy all stated requirements. Where components, such as indoor or outdoor coils, from different manufacturers are used, calculations and supporting data shall be furnished by the designer that demonstrates that the combined efficiency of the specified components meets the requirements herein. (Tables C403.2.(1) through (16) are expressly retained and remain applicable to HVAC equipment performance.)~~

~~Exceptions:~~

~~1. Factory, laboratory, and high hazard occupancy combustion equipment, except for HVAC and domestic water heating.~~

~~2. Commercial Kitchens.~~

~~3. Other combustion equipment approved by the Building Official based on demonstration by the applicant that compliance with this section~~

~~is not feasible and the equipment proposed is the most efficient appliance reasonably available.~~

16. *Section C403.4.1 Thermostatic controls*, is hereby deleted and replaced with the following:

C403.4.1 Thermostatic controls. The supply of heating and cooling energy to each *zone* shall be controlled by individual thermostatic controls capable of responding to temperature within the *zone*. Where humidification or dehumidification or both is provided, no fewer than one humidity control device shall be provided for each humidity control system. Occupancy sensors shall be provided on the thermostat to setback in accordance with C403.4.2.1

Exception: Independent perimeter systems that are designed to offset only building envelope heat losses, gains or both serving one or more perimeter *zones* also served by an interior system provided that both of the following conditions are met:

1. The perimeter system includes not fewer than one thermostatic control *zone* for each building exposure having exterior walls facing only one orientation (within ±45 degrees) (0.8 rad) for more than 50 contiguous feet (15 240 mm).
2. The perimeter system heating and cooling supply is controlled by thermostats located within the *zones* served by the system.

17. *Section C403.12.1 Duct and plenum insulation and sealing*, is hereby deleted and replaced with the following:

C403.12.1 Duct and plenum insulation and sealing. All supply and return air ducts and plenums shall be insulated with not less than R-12. Ducts, air handlers and filter boxes shall be sealed. Joints and seams shall comply with Section 603.9 of the International Mechanical Code.

18. *Section C403.12.3 Piping insulation*, is hereby amended to read as follows:

C403.12.3 Piping insulation. Piping serving as part of a heating or cooling system shall be thermally insulated to R-3.

19. *Section C404.4 Insulation of piping*, is hereby amended to read as follows:

C404.4 Insulation of piping. Piping from a water heater to the termination of the heated water fixture supply pipe shall be insulated to R-3. On both the inlet and outlet piping of a storage water heater or heated water storage tank, the piping to a heat trap or the first 8 feet (2438 mm) of piping, whichever is less, shall be insulated. Piping that is heat traced shall be insulated to R-3 or the heat trace manufacturer's instructions.

~~20. Section C404.10 Water heating equipment is added as follows:~~

C404.10 Water heating equipment. Fossil fuel and electric resistance instantaneous and storage water heaters shall not be used to provide hot water in new construction.

Exceptions:

1. *Emergency backup.* Where it is required by an applicable law or regulation to provide water heating with an emergency power system or a standby power system.
2. *Integrated units.* Resistance heating elements integrated into heat pump water heating equipment.
3. *Recirculation loops.* Electric resistance elements used for recirculation loop temperature maintenance.
4. *Small systems.* Electric storage water heaters with a rated water storage volume no greater than 20 gallons.
5. *Point-of-use systems.* Instantaneous electric water heaters located within 10 feet of the point of use.
6. *Renewable electricity*. Electric resistance equipment where not less than 100 percent of the annual service water heating requirement is provided by an *on-site renewable energy system* not used to meet any other provision of this code.
7. *Renewable or waste thermal energy*. Electric resistance storage water heating equipment in *buildings* where not less than 75% of the annual service water heating requirement is met by a solar thermal system or other renewable thermal system.
8. *High temperature requirements*. Water heating systems that serve end uses or have a storage requirement that necessitates a water temperature of 141°F (55°C) or hotter.
9. *Electric resistance budget.* In addition to any exceptions in this section, a budget of 24 kW plus 0.1 watts per square foot of building area of electric resistance service water heating capacity per building.
10. *Commercial kitchens.* Electric booster heaters serving commercial dishwashers, commercial food service equipment, and other approved process equipment that require supply water temperatures of 120°F (49°C) or higher.
11. *Replacements.* Replacement of gas-fired storage water heaters or instantaneous water heaters.

21. Section C405.2.1 Occupant sensor controls, is hereby amended to read as follows:

C405.2.1 Occupant sensor controls. Occupant *sensor controls* shall be installed to control lighting.

22. *Section C405.2.2 Time-switch controls*, is hereby deleted in its entirety.

23. *Section C405.2.2.1 Time-switch control function*, is hereby deleted in its entirety.

39. *Section C405.4.3 Gas lighting, is hereby amended to read as follows:*

C405.4.3 Gas lighting. Gas-fired lighting appliances shall not be permitted.

40. A new *Section C405.14 Additional electric infrastructure*, is hereby added to read as follows:

Section C405.14 Additional electric infrastructure. All *combustion equipment* and end-uses shall be installed in accordance with this section.

C405.14.1 Electric infrastructure for dwelling and sleeping units. *Combustion equipment* and end-uses serving individual dwelling units or sleeping units shall comply with Section R404.5.

C405.14.2 Combustion equipment. *Combustion equipment* shall be provided with conduit that is continuous between a junction box located within 3 feet (914 mm) of the appliance or equipment and an electrical panel. The junction box, conduit and bus bar in the electrical panel shall be rated and sized to accommodate a branch circuit with sufficient capacity for an equivalent electric appliance, equipment or end use with an equivalent equipment capacity. The electrical junction box and electrical panel shall have labels stating, "For Future Electric Equipment".

Exception: Industrial and manufacturing uses are exempt from Section C405.14.

41. *Section C502.1.1 General,* is hereby amended to read as follows:

Additions to an existing building, building system or portion thereof shall conform to the provisions of Section C401.2.4 as those provisions relate to new construction without requiring the unaltered portion of the existing building or building system to comply with this code. Additions shall not create unsafe or hazardous condition or overload existing building systems. An addition shall be deemed to comply with this code if the addition alone complies or if the existing building and addition comply with this code as a single building.

43. *Section C503.2 Building Envelope* is amended with exception remaining to read as follows:

New building envelope assemblies that are part of the alteration shall comply with Sections C402.1 through C402.5. Existing ceilings, roofs, all wall types, or floors exposed during construction shall comply with Table C402.1.3.

44. *Section C505.1 General*, is hereby amended to read as follows:

C505.1 General. Where the use in a space changes from one use in Table C405.3.2(1) or C405.3.2(2) to another use in Table C405.3.2(1) or C405.3.2(2), the installed lighting wattage shall comply with Section C405.3. Where the space

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undergoing a change in occupancy or use is in a building with a fenestration area that exceeds the limitations of Section C402.4.1, the space is exempt from Section C402.4.1 provided that there is not an increase in fenestration area.

Exception: Egress doors with fenestration are allowed to bring total fenestration percentages over the allowed maximum amount of vertical fenestration.

APPENDIX PT
MODELING TO A PERFORMANCE TARGET

PT101 Scope. This section establishes criteria for demonstrating compliance with a performance target, and is required for new hotels (occupancy R-1), multifamily (occupancy R-2), offices, primary and secondary schools, and warehouses. All end use load components within and associated with the building and their building sites shall be modeled.

PT102 Mandatory requirements. The requirements in this section are mandatory requirements and shall be required in addition to the provisions of ASHRAE 90.1 Appendix G.

PT103 Performance target. Projects of the types listed in Table PT103 shall demonstrate that the proposed design reaches a fixed energy use intensity (EUI) less than or equal to the values in Table PT103, calculated utilizing the energy modeling procedures of Appendix G of ASHRAE 90.1. For *buildings* with multiple occupancy types, the modeled performance target shall be a weighted average of the floor area of each occupancy type.

Exception: Energy used for electric vehicle charging, data centers, and process loads shall be excluded from compliance modeling.

TABLE PT103
PERFORMANCE TARGETS

BUILDING TYPE	PERFORMANCE TARGET (kBTU/ft2)
Hotel (Occupancy R-1)	32
Multifamily (Occupancy R-2)	32
Office, small (≥ 0 - 5,000 ft2)	19

Office, medium (5,000 – 50,000 ft2)	23
Office, large (>50,000 ft2)	28
School, primary	34
School, secondary	31
Warehouse	11

PT104 Renewable Energy. On-site renewable energy generated by a system installed as part of this project that is used by the building shall be subtracted from the proposed design energy consumption prior to calculating the proposed building performance.

PT105 Performance documentation. Documentation to verify compliance with this section shall be provided to the code official.

PT105.1 Projected compliance report. Permit submittals shall include a report documenting the proposed design is projected to meet the EUI target. The compliance report shall include the following specific information beyond the information required in ASHRAE 90.1 Appendix G:

1. Address of the building.
2. An inspection checklist documenting the building component characteristics of the proposed design.
3. Name of individual completing the report.
4. Name and version of compliance software tool.
5. Documentation of the reduction in energy use associated with on-site energy.

PT105.2 Construction plan requirements. Construction plans shall depict all component characteristics of the proposed design utilized for the EUI in accordance with ASHRAE 90.1 Appendix G.

~~**PT105.3 Measured performance report.** Projects shall demonstrate compliance with this code by documenting that the building has achieved the EUI performance calculated based on 12 months of metered energy use after occupancy.~~

~~**PT105.3.1 Demonstration of operating energy use.** Metered energy data demonstrating compliance with the EUI target shall be reported to the building official using Energy Star Portfolio Manager and adjusted for the percentage of floor area occupied. While at least 75 percent occupied, the building shall operate at or below its assigned energy use target established in Section PT103 for any recording period of 12 consecutive months that is~~

~~completed within three years of the date of the Certificate of Occupancy. The owner shall notify the building official when this 12-month period has been successfully completed.~~

~~**PT106 Energy metering and monitoring.** All projects must install submetering or monitoring capabilities to support building energy performance analysis. The project must include capabilities to store and access a 24-month continuous data set on an ongoing basis.~~

~~**PT106.1 End-use monitoring.** Measurement devices shall be installed in new *buildings* to monitor the electric energy use of each of the following separately:~~

1. ~~Total electric energy.~~
2. ~~HVAC systems energy use.~~
3. ~~Interior lighting.~~
4. ~~Exterior lighting.~~
5. ~~Receptacle circuits.~~
6. ~~Data centers representing over 10 percent of total building load or 5 percent of building floor area.~~
7. ~~Other process loads that represent 10 percent or more of total building energy use based on building energy use modeling.~~

~~**PT106.2 Independent metering.** The following items shall be independently metered. Individual meters used to comply with this section may not serve multiple *buildings*.~~

1. ~~All fuel sources serving the building.~~
2. ~~Energy production from on-site renewable energy systems.~~
3. ~~Electric vehicle (EV) supply equipment.~~
4. ~~Data centers representing over 10 percent of total building load or 5 percent of building floor area.~~
5. ~~Other process loads that represent 10 percent or more of total building energy use based on building energy use modeling.~~
6. ~~Individual tenant energy loads.~~

45. *Section R101.1 Title*, is amended to insert "the City of Louisville" so the section will read:

R101.1 Title. These regulations shall be known as the Energy Conservation Code of the City of Louisville and shall be cited as such. It is referred to herein as "this code."

46. *Section R103.2 Information on construction documents*, is amended to read as follows:

R103.2 Information on construction documents. Construction documents shall be drawn to scale upon suitable material. Electronic media documented are permitted to be submitted when *approved* by the *code official*. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed, and show in sufficient detail pertinent data and features of the building, systems and equipment herein governed. Details shall include the following as applicable:

1. Energy compliance path.
2. Insulation materials and their *R*-values
3. Fenestration *U*-factor and solar heat gain coefficients (SHGCs).
4. Area-weighted *U*-factor and solar heat gain coefficient (SHGC) calculations.
5. Mechanical system design criteria.
6. Mechanical and service water heating systems and equipment types, sizes, fuel source and efficiencies.
7. Equipment and system controls.
8. Duct sealing, duct and pipe insulation and location.
9. Air sealing detail.
10. Location of pathways for routing of raceways or cable from the solar ready zone to the electrical service panel.

47. *Section R202 General Definitions*, is hereby amended by adding, in alphabetical order, the following definitions:

All-Electric Building: A building that contains no combustion equipment for primary heating, ~~or plumbing or piping for combustion equipment, installed within the building or building site.~~

Combustion Equipment: Any equipment or appliance used for space heating, service water heating, cooking, clothes drying and/or lighting that uses fuel gas or fuel oil.

~~*Electric Vehicle (EV):* A vehicle registered for on-road use, primarily powered by an electric motor that draws current from a rechargeable storage source that is charged by being plugged into an electrical current source.~~

~~*Electric Vehicle Supply Equipment (EVSE):* The electrical conductors and associated equipment external to the electric vehicle that provide a connection between the premises wiring and the electric vehicle to provide electric vehicle charging.~~

~~*Electric Vehicle Capable Space:* A designated parking space that is provided with conduit sized and rated for a minimum 40 amp, 208/240 Volt dedicated branch circuit and shall be no less than 1" in size. Conduit must be continuous from the future or existing electrical panel board or switchboard location(s) and end at a junction box or receptacle located within close proximity of the parking space.~~

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~~The electrical panel serving the parking space shall have sufficient capacity and physical space for a dual-pole, 40-amp breaker. The conduit shall be sealed at the junction or outlet box that is capped off, with the conduit sealed and the cap labeled as "For future electric vehicle charging".~~

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~~*Electric Vehicle Ready Space:* A designated parking space that is provided with a dedicated branch circuit with wiring capable of supporting a minimum 40-ampere, 208/240- Volt circuit that terminates at a receptacle, plug, junction box, or an installed electric vehicle supply equipment within close proximity of the parking space. There shall be adequate reserved space in an electrical panel board or switchboard to meet the electric vehicle requirements~~.

Residential Building. For this code, includes detached one- and two-family dwellings and multiple single-family dwellings (townhouses) and R-3 and R-4 buildings three stories or less in height above grade plane.

48. *Section R401.2 Application,* is hereby deleted and replaced with the following:

R401.2 Application. New ~~R~~residential buildings shall be built using appendix RB or RC and shall be built all-electric unless the fuel gas options of R403.7 and additional electric infrastructure requirements of R404.5 are met. ~~All residential buildings shall comply with the R401.2.1 City of Louisville's Prescriptive Compliance or R406 Energy Rating Index with a maximum rating index of 50 before the installation of solar panels~~

Exceptions:

1. New residential buildings certified through the Passive House Institute US, Inc. (PHIUS) program
2. Additions shall comply with R401.2.1 and Chapter 5
3. ~~Additions,~~ ~~a~~Alterations, repairs and changes of occupancy to existing buildings complying with Chapter 5.

49. *Section R401.2.1 Prescriptive Compliance Option,* is hereby deleted and replaced with the following:

R401.2.1 City of Louisville's Prescriptive Compliance. The City of Louisville's Prescriptive compliance requires compliance with Sections R401 through R404.

50. Section R401.2.2 Total Building Performance Option, is hereby deleted in its entirety.

51. Section R401.2.4 Tropical Climate Region, is hereby deleted in its entirety.

52. *Section R401.2.5 Additional Energy Efficiency*, is hereby amended to read as follows:

Section R401.2.5 Additional Energy Efficiency. Building shall comply with one of the additional efficiency options and shall be installed in according to Section R408.2.

53. A new *Section R401.4 Mandatory requirements for residential buildings*, is hereby added to read as follows:

R401.4 Mandatory requirements for residential buildings. Residential building must comply with the following sections from the 2021 International Energy Conservation Code found in Table R401.4 and Section R401.2.

Table R401.~~3~~4
Mandatory requirements for residential buildings

Title	IECC Section
Vapor retarder	R402.1.1
Eave baffle	R402.2.3
Access hatches and doors	R402.2.4.1
Crawl space wall insulation	R402.4.1.2
Maximum fenestration U-factor and SHGC	R402.5
Mechanical Controls	R403.1
Ducts	R403.3 except R403.3.2, R403.3.3, and R403.6
Mechanical system piping insulation	R403.4
Heated water circulation and temperature maintenance systems	R403.5.1
Drain Water heat recovery units	R403.5.3
Mechanical ventilation	R403.6 including E403.6.1
Equipment sizing and efficiency rating	R403.7
Systems serving multiple dwelling units	R403.8
Snow melt and ice systems	R403.9
Energy consumption of pools and spas	R403.10
Portable spas	R403.11
Residential pools and permanent residential spas	R403.12
Lighting equipment	R404.1
Interior lighting controls	R404.2

54. *Section R402.1 General*, is hereby amended to read as follows:

R402.1 General. The building thermal envelope shall comply with the requirements of Section R402.1.1 and R402.1.2.

55. *Section R402.1.2 Insulation ~~and fenestration~~*, is hereby deleted and replaced with the following*:*

R402.1.2 Insulation ~~and fenestration~~. New and replacement ~~A~~assemblies shall have R-value of insulation materials equal to or greater than that specified in Table

R402.1.2 unless an alternative path is specified while using HERS energy rating index of 50.

Exception: New Construction complying with R401.2 or exception 1

56. *Section R402.1.2.1 Fenestration* is hereby added to read as following:

R402.1.2.1 Fenestration. New and replacement assemblies shall not exceed the value specified in Table R402.1.2.

Exception: New Construction complying with R401.2 or exception 1

Table R402.1.2
Average Insulation and Fenestration Requirements by Component

Roof	R-60
Above grade walls	R-21
Below grade walls	R-19
Floors	R-38
Non heated slab on grade	R-10 for 4ft
Heated slab on grade	R-15 for 4 ft + R-5 under full slab
Fenestration U-Factor	.30
Fenestration SHGC	.33
Skylight U-Factor	.50
Skylight SHGC	.40
Hot Water Pipes	R-3
Warm Air Ducts	R-8

55. Section R402.1.5 Total UA alternative, is hereby deleted in its entirety.

56. Section R402.3.3 Glazed fenestration exemption, is hereby amended to read as follows:

R402.3.3 Glazed fenestration exemption. Not greater than 15 square feet (1.4 m^2) of glazed fenestration per dwelling unit shall be exempt from the U-factor and SHGC requirements in Section R402.1.2.

57. *Section R402.4.1.2 Testing*, is hereby deleted and replaced to read as follows:

Section R402.4.1.2 Testing. All new buildings or dwelling units that are heated or cooled, and additions over 500 square feet shall be tested for air leakage.

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58. *Section R402.5 Maximum fenestration U-factor and SHGC*, is hereby deleted and replaced with the following*:*

Section R402.5 Maximum fenestration U-factor and SHGC. The maximum U-factor and solar heat gain coefficient (SHGC) for fenestration shall not be required in storm shelters complying with ICC 500.

59. *Section R403.3.1 Ducts located outside conditioned space*, is hereby deleted and replaced with the following*:*

R403.3.1 ***Ducts located outside conditioned space.*** All supply and return ducts shall be insulated to a minimum R-8 if located outside a conditioned space.

60. *Section R403.5.2 Hot water pipe insulation*, is hereby deleted and replaced with the following*:*

R403.5.2 Hot water pipe insulation. All service hot water piping shall be insulated to a minimum R-3.

~~61. *Section R403.6.1 Heat and recovery ventilation*, is hereby deleted and replaced in its entirety and the following is hereby added in lieu thereof:~~

~~**R403.5.2 Heat and recovery ventilation**. All new buildings and additions over 500 square feet shall be provided with a heat recovery or energy recovery ventilation system. The system shall be balanced with a minimum sensible heat recovery efficiency of 65 percent at 32°F (0°C) at a flow greater than or equal to the design airflow.~~

62. *Section R403.7 Equipment sizing and efficiency rating*, is hereby deleted and replaced with the following*:*

R403.7 Equipment sizing and efficiency rating. All new buildings and additions greater than 500 square feet with heating and cooling equipment shall be sized in accordance with ACCA Manual S based on building loads calculated in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies. In addition to complying with Sec. R404.6 Additional Electric Infrastructure, new and replacement electrical heating and cooling equipment shall have an efficiency rating equal to or greater than the minimum required by federal law for the geographic location where the equipment is installed. New gas heating equipment shall comply with the following efficiencies:

1. Gas furnaces shall have a minimum of 95% efficiency.
2. Gas boilers shall have a minimum of 95% AFUE.
3. On demand water heaters shall have a greater than .92 uniform energy factor.
4. Heat pump efficiencies:

~~a.~~c. Ductless System
1. 14.3 SEER2
2. 7.5 HSPF2
3. Or EnergyStar Cold Climate certified

~~b.~~d. Ducted System
1. 15.2 SEER2
2. 9 HSPF2
3. Or EnergyStar Cold Climate certified

Exception: Solid fuel stoves/gas fireplaces, outdoor fire pits, gas stoves and ovens.

63. *Section R404.1.1 Fuel gas lighting equipment, is hereby amended to read as follows:*

R404.1.1 Fuel gas lighting equipment. Fuel gas lighting systems shall not be installed.

~~64. A new *Section R404.4 Electric vehicle charging infrastructure for new construction and building addition of 50% or more of original square footage,* is hereby added to read as follows:~~

~~**Section R404.4 Electric vehicle charging infrastructure for new construction and building addition of 50% or more of original square footage.** Electric infrastructure for the current and future charging of *electric vehicles* shall be installed in accordance with this section per Section 17.20.170 of the Louisville Municipal Code. *EV ready spaces and EV capable spaces* are permitted to be counted toward meeting minimum parking requirements.~~

~~R404.4.1 One- and two- family dwellings and townhouses. One- and two-family dwellings and townhouses with a dedicated attached or detached garage or on-site parking spaces shall be provided with electric vehicle charging in accordance with Section 17.20.170 of the Louisville Municipal Code.~~

~~R404.4.1.1 Minimum EV Ready infrastructure. Minimum EV Ready Space infrastructure shall require the following:~~
~~1. Installation of conductors:~~
~~a. Conductors shall be installed of sufficient size to accommodate a minimum 240VAC 40Amp branch circuit to each parking space where required.~~
~~b. Conductors shall terminate in either a receptacle, plug, junction or outlet box, or an *EVSE* installed in the parking space.~~
~~2. The electrical panel directory shall designate the branch circuit as "EV Ready" and the junction box or receptacle shall be labelled "EV Ready."~~

~~R404.4.1.2 Construction documents. Construction documents shall graphically indicate and label all EV ready spaces and associated termination locations. For all Townhouses and one- and two-family dwellings with an electrical utility service of 200 Amps or greater, a panelboard schedule shall be provided indicating the EV Ready circuit breaker space(s) and the circuit designation(s).~~

~~R404.4.2 Group R occupancies. Group R occupancies (R-2, R-3, and R-4 buildings three stories and less) with three or more dwelling units and/or sleeping units shall be provided with electric vehicle charging in accordance with Section 17.20.170 of the Louisville Municipal Code.~~

~~Electric vehicle charging shall be provided and installed in accordance with this section and the National Electrical Code (NFPA 70). When parking spaces are added or modified without an increase in building floor area, only the new parking spaces are subject to this requirement.~~

65. A new *Section R404.5 Additional electric infrastructure*, is hereby added to read as follows:

R404.5 Additional electric infrastructure. *Combustion equipment* shall be installed in accordance with this section.

R404.5.1 Combustion equipment and end-uses. *Combustion equipment* shall be provided with a dedicated, appropriately phased circuit that shall have a minimum amperage requirement for a comparable electric appliance, equipment or end use, an electrical receptacle or junction box that is connected to the electric panel, and conductors of adequate capacity within 6 feet (1829 mm) of the appliance or equipment.

Each such circuit shall be accessible with no obstructions. A reserved circuit breaker space shall be installed in the electrical panel adjacent to the circuit breaker for the branch circuit and labeled for each circuit. Both ends of the unused conductor or conduit shall be labeled “For Future Electric Equipment” and be electrically isolated.

66. *Section R405 Total building performance*, is deleted in its entirety.

67. *Section R406.3 Building thermal envelope*, is hereby deleted in its entirety and replaced with the following*:*

R406.3 Building thermal envelope. ~~Building and portions thereof shall comply with Table R406.3.~~ The building thermal envelope shall be greater or equal to the levels of efficiency and SHGC in Table R402.1.2~~06.3~~.

~~Table R406.3~~
~~Average of the Minimum Insulation and Maximum Fenestration Requirements by Component~~

~~Roof~~	~~R-60~~
~~Above grade walls~~	~~R-21~~
~~Below grade walls~~	~~R-21~~
~~Floors~~	~~R-38~~
~~Non heated slab on grade~~	~~R-10 for 4ft~~
~~Heated slab on grade~~	~~R-15 for 4 ft + R-5 under full slab~~
~~Fenestration U-Factor~~	~~.30~~
~~Fenestration SHGC~~	~~.33~~
~~Skylight U-Factor~~	~~.50~~
~~Skylight SHGC~~	~~.40~~
~~Heated Water Pipes~~	~~R-5~~
~~Heated air Ducts~~	~~R-8~~

68. *Section R406.3.1 On-site renewables are not included*, is deleted in its entirety.

69. *Section R406.3.2 On-site renewables are included*, is deleted in its entirety.

70. *Section ~~406.3.2~~* R407 *Tropical Climate Region Compliance Path*, is deleted in its entirety.

71. *Section R502.1.1 General*, is hereby amended to read as follows:

Additions to an existing building, building system or portion thereof shall conform to the provisions of R401.2.1 as those provisions relate to new construction without requiring the unaltered portion of the existing building or building system to comply with this code. Additions shall not create unsafe or hazardous condition or overload existing building systems. An addition shall be

deemed to comply with this code where the addition alone complies, where the existing building and addition comply with this code as a single building, or where the building with the addition does not use more energy than the existing building. Additions shall be in accordance with Section R502.2 or R502.3.

72. *Section R503.1.1 Building Envelope* is amended to read as follows:
Building envelope assemblies that are part of the alteration shall comply with Section R401.2.1

Section R503.1.1 Building envelope Exception 2 is deleted in its entirety and replaced with the following.

2. Section R402.4.1.2 Testing

73. *Section R505.1 General* is hereby amended to remove the exception.

74. *Section R505.1.1 Unconditioned space,* is hereby deleted and replaced with the following:

R505.1.1 Unconditioned space. Any unconditioned or low-energy space that is altered to become a conditioned space shall comply with Section R503.

75. RC102.1 General is amended to read as follows.

RC102.1 General. New residential buildings shall comply with Sections RC102.2 through RC102.9.

76. RC102.2 Energy Rating Index zero energy score is amended to read as follows.

RC102.2 Energy Rating Index zero energy score.
Compliance with this section requires that the rated design be shown to have a Home Energy Rating System (HERS) score of 50~~47~~ before solar and 0 with solar when compared to the Energy Rating Index (ERI) reference design determined in accordance with RESNET/ICC 301 for both of the following:

1. ERI value not including on-site power production (OPP) calculated in accordance with RESNET/~~ICC 301~~ HERS~~.~~
2. ERI value including on-site power production calculated in accordance with RESNET/~~ICC 301~~ HERS with the OPP in Equation 4.1.2 of RESNET/~~ICC 301~~ HERS adjusted in accordance with Equation RC-1.

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Adjusted OPP = OPP + CREF + REPC (Equation RC-1)

where:
CREF = Community Renewable Energy Facility power production—the yearly energy, in kilowatt hour equivalent (kWheq), contracted from a community

renewable energy facility that is qualified under applicable state and local utility statutes and rules, and that allocates bill credits to the rated home.
REPC = Renewable Energy Purchase Contract power production—the yearly energy, in kilowatt hour equivalent (kWheq), contracted from an energy facility that generates energy with photovoltaic, solar thermal, geothermal energy or wind systems, and that is demonstrated by an energy purchase contract or lease with a duration of not less than 15 years.

RC102.2.1 HERS Score. Buildings shall comply with the scores in Table RC102.2.1.

Table RC102.2.1.

HERS SCORE NOT INCLUDING OPP	HERS SCORE INCLUDING OPP
5047	0

76. RC102.3 through RC102.9 are added to Appendix RC to read as follows.

RC102.3 Mandatory Sections. All projects shall comply with all sections within Table RC102.3.

Table RC102.3
Mandatory requirements for residential buildings

Title	IECC Section
Vapor retarder	R402.1.1
Eave baffle	R402.2.3
Access hatches and doors	R402.2.4.1
Crawl space wall insulation	R402.4.1.2
Maximum fenestration U-factor and SHGC	R402.5
Mechanical Controls	R403.1
Ducts	R403.3 except R403.3.2, R403.3.3, and R403.6
Mechanical system piping insulation	R403.4
Heated water circulation and temperature maintenance systems	R403.5.1
Drain Water heat recovery units	R403.5.3
Mechanical ventilation	R403.6 including E403.6.1
Equipment sizing and efficiency rating	R403.7
Systems serving multiple dwelling units	R403.8
Snow melt and ice systems	R403.9

Energy consumption of pools and spas	R403.10
Portable spas	R403.11
Residential pools and permanent residential spas	R403.12
Lighting equipment	R404.1
Interior lighting controls	R404.2

RC102.4 Building Envelope. The building thermal envelope shall be greater or equal to the levels of efficiency and SHGC in Table R402.1.2~~C102.4~~.

~~Table RC102.4~~
~~Average of the Minimum Insulation and Maximum Fenestration Requirements by Component~~

~~Roof~~	~~R-60~~
~~Above grade walls~~	~~R-21~~
~~Below grade walls~~	~~R-21~~
~~Floors~~	~~R-38~~
~~Non heated slab on grade~~	~~R-10 for 4ft~~
~~Heated slab on grade~~	~~R-15 for 4 ft + R-5 under full slab~~
~~Fenestration U-Factor~~	~~.30~~
~~Fenestration SHGC~~	~~.33~~
~~Skylight U-Factor~~	~~.50~~
~~Skylight SHGC~~	~~.40~~

RC102.5 Verification by approved agency.
Verification of compliance with Section R102.4 as outlined in Sections of this appendix shall be completed by an approved third party. Verification of compliance with Section R102.3 shall be completed by the authority having jurisdiction or an approved third-party inspection agency in accordance with Section R105.4.

RC102.6 Documentation.
Documentation of the software used to determine the ERI and the parameters for the residential building shall be in accordance with Sections RC102.6.1 through RC102.6.4

RC102.6.1 Compliance software tools.
Software tools used for determining HERS shall be Approved Software Rating Tools in accordance with RESNET/ICC 301.

RC102.6.2 Compliance report.

Compliance software tools shall generate a report that documents that the home and the HERS score of the rated design complies with RC102. Compliance documentation shall be created for the proposed design and shall be submitted with the application for the building permit. Confirmed compliance documents of the built dwelling unit shall be created and submitted to the code official for review before a certificate of occupancy is issued. Compliance reports shall include information in accordance with Sections RC102.6.3 and RC102.6.4.

RC102.7 Additional documentation.
The code official shall be permitted to require the following documents:

1. Documentation of the building component characteristics of the ERI reference design.

2. A certification signed by the builder providing the building component characteristics of the rated design.

3. Documentation of the actual values used in the software calculations for the rated design.

RC102.8 Specific approval.
Performance analysis tools meeting the applicable subsections of Section RC102 shall be approved. Documentation demonstrating the approval of performance analysis tools in accordance with Section RC102shall be provided.

RC102.9 Input values.
Where calculations require input values not specified by Sections RC 102, those input values shall be taken from HERS RESNET/ICC 301.

INTRODUCED, READ, PASSED ON FIRST READING, AND ORDERED PUBLISHED this _____ day of _____, 2024.

_____
Chris Leh, Mayor

ATTEST:

_____
Meredyth Muth, City Clerk

APPROVED AS TO FORM:

_____
Kelly PC, City Attorney

PASSED AND ADOPTED ON SECOND AND FINAL READING, this _____ day of _____, 2024.

_____
Chris Leh, Mayor

ATTEST:

_____
Meredyth Muth, City Clerk

DRAFT

Second Reading Amendments

Ordinance No. 1816, Series 2021 is revised to read as follows (amendments are shown in **bold underline** and ~~**bold strikeout**~~):

ORDINANCE NO. 1816

AN ORDINANCE ADOPTING BY REFERENCE THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE, WITH AMENDMENTS, REPEALING CHAPTER 15.60 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING THE PRESCRIPTIVE ENERGY CODE AND DESIGN CRITERIA, AND AMENDING TITLE 17 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING ELECTRIC VEHICLE CHARGING INFRASTRUCTURE

WHEREAS, the City Council has adopted from time to time certain building and construction standards; and

WHEREAS, it is deemed to be in the interest of the public health, safety and general welfare to adopt by reference thereto the 2021 edition of the International Energy Conservation Code; and

WHEREAS, the City of Louisville remains committed to its adopted goals to reduce energy consumption, increase clean energy sources, and support the transition to a low-carbon community as outlined in the Sustainability Action Plan and Resolution 25, Series 2019, "A Resolution Setting Clean Energy and Carbon Reduction Goals"; and

WHEREAS, reducing building energy consumption is an effective strategy to reduce community-wide energy consumption and increase long-term cost savings for residents and businesses; and

WHEREAS, the City Council desires to add requirements for solar readiness, electric vehicle charging infrastructure, and building electrification to build a more resilient building stock and support future building and transportation electrification efforts pursued by residents and businesses; and

WHEREAS, the City Council, after proper notice as required by law, has held a public hearing on this ordinance providing for the adoption of said codes; and

WHEREAS, the 2021 edition of the International Energy Conservation Code has been submitted to the City Council in writing and the City Council has determined that such codes should be adopted as herein set forth.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

Section 1. Chapter 15.18 of the Louisville Municipal Code is hereby repealed and reenacted to read as follows:

INTERNATIONAL ENERGY CONSERVATION CODE

Sec. 15.18.010. Adoption.
Sec. 15.18.020. Appendices adopted.
Sec. 15.18.030. Amendments and Deletions to the 2021 International Energy Conservation Code.
Sec. 15.18.040. Design criteria.
Sec. 15.18.050. Applicability.
Sec. 15.18.060. Copies available.
Sec. 15.18.070. Violations and penalties.

Sec. 15.18.010. - Adoption.

The International Energy Conservation Code, 2021 Edition, published by the International Code Council, 4051 West Flossmoor Road, Country Club Hills, Illinois, 60478-5795, is hereby adopted by reference thereto and incorporated into and made a part of the Louisville Municipal Code. The subject matter of the International Energy Conservation Code is to regulate and govern energy efficient building envelopes and the installation of energy efficient mechanical, lighting and power systems in the City of Louisville, and to provide for the issuance of permits and collection of fees therefor. The International Energy Conservation Code, 2021 Edition, is adopted as amended by the City, including the outline table of contents and index, for the minimum requirements for minimum energy efficiency.

Sec. 15.18.20. Appendices adopted.

The following appendices of the 2021 International Energy Conservation Code are hereby specifically adopted; any appendices not listed are not adopted: **Appendix RC, Zero Energy Residential Building Provisions,** Appendix CB, Solar Ready Zone – Commercial and Appendix RB, Solar Ready Provisions – Detached One and Two-Family Dwellings and Townhouses. Group R2, R3, and R4, three stories or less shall comply with Appendix RB.

Sec. 15.18.030. - Amendments and Deletions to the 2021 International Energy Conservation Code

The 2021 International Energy Conservation Code adopted in Section 15.18.010 is hereby amended in the following respects. An ellipsis (…) indicates when the remainder of a section of the 2021 International Energy Conservation Code is to remain unchanged and in full force and effect.

1. ***Section C101.1 Title***, is amended to insert "the City of Louisville" so the section will read:

C101.1 Title. These regulations shall be known as the Energy Conservation Code of the City of Louisville, and shall be cited as such. It is referred to herein as "this code."

2. *Section C103.2 Information on construction documents*, is hereby amended to read as follows:

C103.2 Information on construction documents. Construction documents shall be drawn to scale upon suitable material. Electronic media documented are permitted to be submitted when *approved* by the *code official*. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed, and show in sufficient detail pertinent data and features of the building, systems and equipment herein governed. Details shall include the following as applicable:

1. **Energy compliance path.**
2. **Insulation materials and their *R*-values**
3. **Fenestration *U*-factor and solar heat gain coefficients (SHGCs).**
4. **Area-weighted *U*-factor and solar heat gain coefficient (SHGC) calculations.**
5. **Mechanical system design criteria.**
6. **Mechanical and service water heating systems and equipment types, sizes, fuel source and efficiencies.**
7. **Economizer description.**
8. **Equipment and system controls.**
9. **Fan motor horsepower (hp) and controls.**
10. **Duct sealing, duct and pipe insulation and location.**
11. **Lighting fixture schedule with wattage and control narrative.**
12. **Location and *daylight* zones on floor plans.**
13. **Air barrier and air sealing details, including the location of the air barrier.**
14. **Location of pathways for routing of raceways or cable from the solar ready zone to the electrical service panel.**

~~2.~~ **3.** ***Section C202 General Definitions***, is hereby amended by adding, in alphabetical order, the following definitions:

All-Electric Building: **A building that contains no combustion equipment, or plumbing for combustion equipment, installed within the building or building site.**

Combustion Equipment: Any equipment or appliance used for space heating, service water heating, cooking, clothes drying and/or lighting that uses fuel gas or fuel oil.

Electric Vehicle (EV): A vehicle registered for on-road use, primarily powered by an electric motor that draws current from a rechargeable storage source that is charged by being plugged into an electrical current source.

Electric Vehicle Supply Equipment (EVSE): The electrical conductors and associated equipment external to the electric vehicle that provide a connection between the premises wiring and the electric vehicle to provide electric vehicle charging.

Electric Vehicle Capable Space: A designated parking space that is provided with conduit sized and rated for a minimum 40-amp, 208/240-Volt dedicated branch circuit and shall be no less than 1" in size. Conduit must be continuous from the future or existing electrical panelboard or switchboard location(s) and end at a junction box or receptacle located within close proximity of the parking space. The electrical panel serving the parking space shall have sufficient capacity and physical space for a dual-pole, 40-amp breaker. The conduit shall be sealed at the junction or outlet box that is capped off, with the conduit sealed and the cap labeled as "For future electric vehicle charging".

Electric Vehicle Ready Space: A designated parking space that is provided with a dedicated branch circuit with wiring capable of supporting a minimum 40-ampere, 208/240- Volt circuit that terminates at a receptacle, plug, junction box, or an installed electric vehicle supply equipment within close proximity of the parking space. There shall be adequate reserved space in an electrical panelboard or switchboard to meet the electric vehicle requirements.

Electric Vehicle Supply Equipment (EVSE) Installed Space: A designated parking space with dedicated electric vehicle supply equipment capable of supplying a minimum 40-amp, dedicated circuit rated at 208/240 Volt from a building electrical panelboard.

~~3.~~ **4.** ***Section C401.2 Application,*** is hereby amended to read as follows:

C401.2 Application
Commercial buildings shall comply with Section C401.2.1

~~4.~~ **5.** ***Section C401.2.1 International Energy Conservation Code,*** is hereby deleted and replaced to read as follows:

C401.2.1 International Energy Conservation Code

Commercial buildings shall **be built all-electric unless the fuel gas options of C403.3.2 and the additional electric infrastructure requirements of C405.14 are met. All buildings must comply** with the following:

City of Louisville's Prescriptive Compliance. The Prescriptive Compliance option requires compliance with Sections C401.3, C401.4, C402 through C406, and Section C408.

Core and shell buildings shall be required to comply with the provisions of Section C402.1.3 through C402.5 of the 2021 International Energy Conservation Code.

~~5.~~ **6.** ***Section C401.2.2 ASHRAE 90.1***, is hereby deleted in its entirety.

~~6.~~ **7.** A new ***Section C401.4 Mandatory Requirements for Commercial Buildings***, is hereby added to read as follows:

C401.4 Mandatory Requirements for Commercial Buildings. Commercial buildings must comply with Table C401.4.

Table C401.4 (Mandatory)
Requirements for Commercial Buildings

Title	IECC Section
Air leakage	C402.5
Calculation of heating and cooling loads	C403.1.1
Data centers	C403.1.2
System Design	C403.2
Heating and cooling equipment efficiency	C403.3
Heating and cooling system controls	C403.4, except C403.4.3, C403.4.4, C403.4.5
Economizer fault detection and diagnostics	C403.5.5
Ventilation and exhaust systems	C403.7, except C403.7.4.1
Fan and fan controls	C403.8, except C403.8.6
Large diameter ceiling fans	C403.9
Refrigeration equipment performance	C403.11, except C403.11.3
Construction of HVAC system elements	C403.12
Mechanical systems located outside of the building thermal envelope	C403.13
Service water heating	C404
Electrical power and lighting systems	C405, except C405.3

Maintenance information and system commissioning	C408

~~7.~~ **8.** ***Table C402.1.3 Opaque Thermal Envelope Insulation Component Minimum Requirements, R-Value Method,*** is hereby deleted and replaced with the following:

Table C402.1.3 (Mandatory)
Opaque Thermal Envelope Insulation Component of an Average Minimum Requirements, *R*-Value Method in following locations:

Roof C402.2.1	
Insulation entirely above roof deck	R-49
Metal buildings[a]	R-21 + R-11 LS
Attic and other	R-49
Walls. Above grade C402.2.2	
Mass[d]	R-21
Metal buildings	R-21
Metal framed	R-21
Wood framed and other	R-21
Walls, Below grade C402.2.5	
Below-grade wall[b]	R-10
Floors C402.2.3	
Mass[c]	R-21
Joist/framing	R-38
Slab-on-grade floors C402.2.4	
Unheated	R-20 for 24”
Heated[e]	R-15 for 36" below + R-5 full slab

For SI: 1 inch = 25.4 mm, 1 pound per square foot = 4.88 kg/m^2, 1 pound per cubic foot = 16 kg/m^3.
NR = No Requirement, LS = Liner System.

a.Where using *R*-value compliance method, a thermal spacer block shall be provided,
b.Where heated slabs are below grade, below-grade walls shall comply with the exterior insulation requirements for heated slabs.
c.“Mass floors” shall be in accordance with Section C402.2.3.
d.“Mass walls” shall be in accordance with Section C402.2.2.
e. The first value is for perimeter insulation and the second value is for full, under-slab insulation.

~~8.~~ **9.** ***Section C402.1.4 Assembly U-factor, C-factor or F-factor-based method,*** is hereby deleted in its entirety.

~~9.~~ **10.** ***Section C402.1.5 Component performance alternative***, is hereby deleted in its entirety.

~~10.~~ **11.** ***Table C402.4 Building Envelope Fenestration Maximum U-Factor and SHGC Requirements,*** is hereby deleted and replaced with the following:

Table C402.4
Building Envelope Fenestration

Vertical Fenestration	
Maximum U-Factor	0.30
Maximum SHGC	0.33
Maximum Air leakage rate for all fenestration except curtain walls and storefront glazing	.20 cfm/ft2
Maximum air leakage rate for curtain walls and storefront glazing	.06 cfm/ft
Skylights	
Maximum U-Factor	0.50
Maximum SHGC	0.40
Maximum Air leakage rate	.20 cfm/ft2

~~11.~~ **12.** ***Section C402.4.1 Maximum area***, is hereby deleted and replaced with the following:

> **C402.4.1 Minimum area of natural lighting.** Not less than eight percent of the floor area shall be glazed.

~~12.~~ **13.** ***Section C402.4.2 Minimum skylight fenestration area***, is hereby deleted and replaced with the following:

> **C402.4.2 Minimum area of natural lighting.** A minimum skylight area of three percent of the roof area shall be provided for all roofs.
>
> **Exception:** Roof areas designated for solar ready zones shall not be included in roof area calculation.

~~13.~~ **14. *Section C403.3.2 HVAC equipment performance requirements*, is hereby deleted in its entirety and replaced to read as follows:**

~~**A. The first paragraph is hereby deleted in its entirety and replaced to read as follows:**~~

> **C403.3.2 HVAC/fuel fired equipment performance requirements. Unless built all-electric, all new combustion equipment shall comply with the more efficient HVAC equipment performance of Sections C406.2, C406.2.3, and C406.2.4 and the additional electric infrastructure requirements in Section C405.14. A mechanical compliance certificate demonstrating compliance with section C406.2.3 and/or C406.2.4 shall be required for all HVAC, fuel fired and Service Water Heating equipment.**

The efficiency shall be verified through certification under an approved certification program or, where a certification program does not exist, the equipment efficiency ratings shall be supported by data furnished by the manufacturer. Where multiple rating conditions or performance requirements are provided, the equipment shall satisfy all stated requirements. Where components, such as indoor or outdoor coils, from different manufacturers are used, calculations and supporting data shall be furnished by the designer that demonstrates that the combined efficiency of the specified components meets the requirements herein. (Tables C403.2.(1) through (16) are expressly retained and remain applicable to HVAC equipment performance.)

Exceptions:

1. Factory, laboratory, and high hazard occupancy combustion equipment, except for HVAC and domestic water heating.

2. Commercial Kitchens.

3. Other combustion equipment approved by the Building Official based on demonstration by the applicant that compliance with this section is not feasible and the equipment proposed is the most efficient appliance reasonably available.

~~13~~. **15.** ***Section C403.4.1 Thermostatic controls***, is hereby deleted and replaced with the following:

C403.4.1 Thermostatic controls. The supply of heating and cooling energy to each *zone* shall be controlled by individual thermostatic controls capable of responding to temperature within the *zone*. Where humidification or dehumidification or both is provided, no fewer than one humidity control device shall be provided for each humidity control system. Occupancy sensors shall be provided on the thermostat to setback in accordance with C403.4.2.1

Exception: Independent perimeter systems that are designed to offset only building envelope heat losses, gains or both serving one or more perimeter *zones* also served by an interior system provided that both of the following conditions are met:

1. The perimeter system includes not fewer than one thermostatic control *zone* for each building exposure having exterior walls facing only one orientation (within ±45 degrees) (0.8 rad) for more than 50 contiguous feet (15 240 mm).
2. The perimeter system heating and cooling supply is controlled by thermostats located within the *zones* served by the system.

~~14.~~ **16.** ***Section C403.12.1 Duct and plenum insulation and sealing***, is hereby deleted and replaced with the following:

C403.12.1 Duct and plenum insulation and sealing. All supply and return air ducts and plenums shall be insulated with not less than R-12. Ducts, air handlers and filter boxes shall be sealed. Joints and seams shall comply with Section 603.9 of the International Mechanical Code.

~~15.~~ **17.** ***Section C403.12.3 Piping insulation***, is hereby amended to read as follows:

C403.12.3 Piping insulation. Piping serving as part of a heating or cooling system shall be thermally insulated to R-5.

~~16.~~ **18.** ***Section C404.4 Insulation of piping***, is hereby amended to read as follows:

C404.4 Insulation of piping. Piping from a water heater to the termination of the heated water fixture supply pipe shall be insulated to R-3. On both the inlet and outlet piping of a storage water heater or heated water storage tank, the piping to a heat trap or the first 8 feet (2438 mm) of piping, whichever is less, shall be insulated. Piping that is heat traced shall be insulated to R-3 or the heat trace manufacturer's instructions.

~~17.~~ **19.** ***Section C405.2.1 Occupant sensor controls***, is hereby amended to read as follows:

C405.2.1 Occupant sensor controls. Occupant *sensor controls* shall be installed to control lighting.

~~18.~~ **20.** ***Section C405.2.2 Time-switch controls***, is hereby deleted in its entirety.

~~19.~~ **21.** ***Section C405.2.2.1 Time-switch control function***, is hereby deleted in its entirety.

~~20.~~ **22.** ***Section C405.2.3 Light-reduction controls***, is renumbered to C405.2.2.

~~21.~~ **23.** ***Section C405.2.3.1 Light-reduction function***, is renumbered to C405.2.2.1.

~~22.~~ **24.** ***Section C405.2.4 Daylight-responsive controls***, is renumbered to C405.2.3.

~~23.~~ **25.** ***Section C405.2.4.1 Daylight-responsive control function***, is renumbered to C405.2.3.1.

~~24.~~ **26.** ***Section C405.2.4.2 Sidelit daylight zone***, is renumbered to C405.2.3.2.

~~25.~~ **27.** ***Section C405.2.4.3 Toplit daylight zone,*** is renumbered to C405.2.3.3.

~~26.~~ **28.** ***Section C405.2.4.4 Atriums,*** is renumbered to C405.2.3.4.

~~27.~~ **29.** ***Section C405.2.5 Specific application controls,*** is renumbered to C405.2.4.

~~28.~~ **30.** ***Section C405.2.6 Manual controls,*** is renumbered to C405.2.5.

~~29.~~ **31.** ***Section C405.2.7 Exterior lighting controls,*** is renumber to C405.2.6.

~~30.~~ **32.** ***Section C405.2.7.1 Daylight shut off,*** is renumbered to C405.2.6.1.

~~31.~~ **33.** ***Section C405.2.7.2 Building façade and landscape lighting,*** is renumbered to C405.2.6.2.

~~32.~~ **34.** ***Section C405.2.7.3 Lighting setback,*** is renumbered to C405.2.6.3.

~~33.~~ **35.** ***Section C405.2.7.4 Exterior time-switch control function,*** is renumbered to C405.2.6.4.

~~34.~~ **36.** ***Section C405.2.8 Parking garage lighting control***, is renumbered to C405.2.7.

37. ***Section C405.4.3 Gas lighting, is hereby amended to read as follows:***

> **C405.4.3 Gas lighting. Gas-fired lighting appliances shall not be permitted.**

~~35.~~ **38.** A new ***Section C405.13 Electric vehicle charging infrastructure for new construction and building addition of 25% or more of original square footage***, is hereby added to read as follows:

> **Section C405.13.1 Electric vehicle charging infrastructure for new construction and building addition of 25% or more of original square footage.** Electric vehicle charging shall be provided and installed in accordance with this section, National Electrical Code (NFPA 70), and Section 17.20.170 of the Louisville Municipal Code. When parking spaces are added or modified without an increase in building floor area, only the new parking spaces are subject to this requirement. All *EVSE Installed*, *EV Ready* and *EV Capable* spaces are to be included in the calculation for the number of minimum vehicle spaces required, as provided by the applicable article of the Louisville Zoning Code.
>
> **Section C405.13.2 Identification.** The circuit breakers or circuit breaker spaces reserved for the *EVSE Installed*, *EV Ready*, and *EV Capable* spaces shall be clearly identified in the panelboard directory. The conduit for electric vehicle capable spaces shall be clearly identified at both the panelboard and the termination point at the parking space.

~~36.~~ **39.** A new ***Section C405.14 Additional electric infrastructure***, is hereby added to read as follows:

Section C405.14 Additional electric infrastructure. All *combustion equipment* and end-uses shall be installed in accordance with this section.

C405.14.1 Electric infrastructure for dwelling and sleeping units. *Combustion equipment* and end-uses serving individual dwelling units or sleeping units shall comply with Section R404.5.

C405.14.2 Combustion equipment. *Combustion equipment* shall be provided with conduit that is continuous between a junction box located within 3 feet (914 mm) of the appliance or equipment and an electrical panel. The junction box, conduit and bus bar in the electrical panel shall be rated and sized to accommodate a branch circuit with sufficient capacity for an equivalent electric appliance, equipment or end use with an equivalent equipment capacity. The electrical junction box and electrical panel shall have labels stating, "For Future Electric Equipment".

Exception: Industrial and manufacturing uses are exempt from Section C405.14.

~~37.~~ **40.** ***Section C505.1 General***, is hereby amended to read as follows:

C505.1 General. Where the use in a space changes from one use in Table C405.3.2(1) or C405.3.2(2) to another use in Table C405.3.2(1) or C405.3.2(2), the installed lighting wattage shall comply with Section C405.3. Where the space undergoing a change in occupancy or use is in a building with a fenestration area that exceeds the limitations of Section C402.4.1, the space is exempt from Section C402.4.1 provided that there is not an increase in fenestration area.

Exception: Egress doors with fenestration are allowed to bring total fenestration percentages over the allowed maximum amount of vertical fenestration.

~~38.~~ **41.** ***Section R101.1 Title,*** is amended to insert "the City of Louisville" so the section will read:

R101.1 Title. These regulations shall be known as the Energy Conservation Code of the City of Louisville and shall be cited as such. It is referred to herein as "this code."

42. *Section R103.2 Information on construction documents*, is amended to read as follows:

R103.2 Information on construction documents. Construction documents shall be drawn to scale upon suitable material. Electronic

media documented are permitted to be submitted when *approved* by the *code official*. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed, and show in sufficient detail pertinent data and features of the building, systems and equipment herein governed. Details shall include the following as applicable:

1. **Energy compliance path.**
2. **Insulation materials and their *R*-values**
3. **Fenestration *U*-factor and solar heat gain coefficients (SHGCs).**
4. **Area-weighted *U*-factor and solar heat gain coefficient (SHGC) calculations.**
5. **Mechanical system design criteria.**
6. **Mechanical and service water heating systems and equipment types, sizes, fuel source and efficiencies.**
7. **Equipment and system controls.**
8. **Duct sealing, duct and pipe insulation and location.**
9. **Air sealing detail.**
10. **Location of pathways for routing of raceways or cable from the solar ready zone to the electrical service panel.**

~~39.~~ **43.** ***Section R202 General Definitions***, is hereby amended by adding, in alphabetical order, the following definitions:

All-Electric Building: **A building that contains no combustion equipment, or plumbing for combustion equipment, installed within the building or building site.**

Combustion Equipment: Any equipment or appliance used for space heating, service water heating, cooking, clothes drying and/or lighting that uses fuel gas or fuel oil.

Electric Vehicle (EV): A vehicle registered for on-road use, primarily powered by an electric motor that draws current from a rechargeable storage source that is charged by being plugged into an electrical current source.

Electric Vehicle Supply Equipment (EVSE): The electrical conductors and associated equipment external to the electric vehicle that provide a connection between the premises wiring and the electric vehicle to provide electric vehicle charging.

Electric Vehicle Capable Space: A designated parking space that is provided with conduit sized and rated for a minimum 40-amp, 208/240-Volt dedicated branch circuit and shall be no less than 1" in size. Conduit must be continuous from the future or existing electrical panel board or switchboard

location(s) and end at a junction box or receptacle located within close proximity of the parking space. The electrical panel serving the parking space shall have sufficient capacity and physical space for a dual-pole, 40-amp breaker. The conduit shall be sealed at the junction or outlet box that is capped off, with the conduit sealed and the cap labeled as "For future electric vehicle charging".

Electric Vehicle Ready Space: A designated parking space that is provided with a dedicated branch circuit with wiring capable of supporting a minimum 40-ampere, 208/240- Volt circuit that terminates at a receptacle, plug, junction box, or an installed electric vehicle supply equipment within close proximity of the parking space. There shall be adequate reserved space in an electrical panel board or switchboard to meet the electric vehicle requirements.

~~40.~~ **44.** ***Section R401.2 Application,*** is hereby deleted and replaced with the following:

> **R401.2 Application.** Residential buildings shall be **built ~~100%~~** all-electric unless **the** fuel gas **options of R403.7 and additional electric infrastructure requirements of R404.5** are met. **~~and all~~ All** residential buildings shall comply with the R401.2.1 City of Louisville's Prescriptive Compliance or R406 Energy Rating Index with a maximum rating index of 50 before the installation of solar panels.
>
> **Exception:** Additions, alterations, repairs and changes of occupancy to existing buildings complying with Chapter 5.

~~41.~~ **45.** ***Section R401.2.1 Prescriptive Compliance Option,*** is hereby deleted and replaced with the following:

> **R401.2.1 City of Louisville's Prescriptive Compliance.** The City of Louisville's Prescriptive compliance requires compliance with Sections R401 through R404.

~~42.~~ **46.** ***Section R401.2.2 Total Building Performance Option***, is hereby deleted in its entirety.

~~43.~~ **47.** ***Section R401.2.4 Tropical Climate Region***, is hereby deleted in its entirety.

~~44.~~ **48.** ***Section R401.2.5 Additional Energy Efficiency***, is hereby amended to read as follows:

> **Section R401.2.5 Additional Energy Efficiency.** Building shall comply with one of the additional efficiency options and shall be installed in according to Section R408.2.

~~45.~~ **49.** A new ***Section R401.4 Mandatory requirements for residential buildings***, is hereby added to read as follows:

R401.3 Mandatory requirements for residential buildings. Residential building must comply with the following sections from the 2021 International Energy Conservation Code.

Table R401.3
Mandatory requirements for residential buildings

Title	IECC Section
Vapor retarder	R402.1.1
Eave baffle	R402.2.3
Access hatches and doors	R402.2.4.1
Crawl space wall insulation	R402.4.1.2
Maximum fenestration U-factor and SHGC	R402.5
Mechanical Controls	R403.1
Ducts	R403.3 except R403.3.2, R403.3.3, and R403.6
Mechanical system piping insulation	R403.4
Heated water circulation and temperature maintenance systems	R403.5.1
Drain Water heat recovery units	R403.5.3
Mechanical ventilation	R403.6 including E403.6.1
Equipment sizing and efficiency rating	R403.7
Systems serving multiple dwelling units	R403.8
Snow melt and ice systems	R403.9
Energy consumption of pools and spas	R403.10
Portable spas	R403.11
Residential pools and permanent residential spas	R403.12
Lighting equipment	R404.1
Interior lighting controls	R404.2

~~46.~~ **50.** ***Section R402.1 General***, is hereby amended to read as follows:

R402.1 General. The building thermal envelope shall comply with the requirements of Section R402.1.1 and R402.1.2.

~~47.~~ **51.** ***Section R402.1.2 Insulation and fenestration***, is hereby deleted and replaced with the following***:***

R402.1.2 Insulation and fenestration. Assemblies shall have R-value of insulation materials equal to or greater than that specified in Table R402.1.2 unless an alternative path is specified while using HERS energy rating index of 50.

Table R402.1.2
Average Insulation and Fenestration Requirements by Component

Roof	R-60
Above grade walls	R-21
Below grade walls	R-21
Floors	R-38
Non heated slab on grade	R-10 for 4ft
Heated slab on grade[a]	R-15 for 4 ft + R-5 under full slab
Fenestration U-Factor	.30
Fenestration SHGC	.33
Skylight U-Factor	.50
Skylight SHGC	.40

a. The first value is for perimeter insulation and the second value is for full, under-slab insulation.

~~48.~~ **52.** ***Section R402.1.5 Total UA alternative***, is hereby deleted in its entirety.

~~49.~~ **53.** ***Section R402.3.3 Glazed fenestration exemption***, is hereby amended to read as follows:

> **R402.3.3 Glazed fenestration exemption**. Not greater than 15 square feet (1.4 m^2) of glazed fenestration per dwelling unit shall be exempt from the U-factor and SHGC requirements in Section R402.1.2.

~~50.~~ **54.** ***Section R402.4.1.2 Testing***, is hereby deleted and replaced to read as follows:

> **Section R402.4.1.2 Testing.** All new buildings or dwelling units that are heated or cooled, and additions over 500 square feet shall be tested for air leakage.

~~51.~~ **55.** ***Section R402.5 Maximum fenestration U-factor and SHGC***, is hereby deleted and replaced with the following***:***

> **Section R402.5 Maximum fenestration U-factor and SHGC.** The maximum U-factor and solar heat gain coefficient (SHGC) for fenestration shall not be required in storm shelters complying with ICC 500.

~~52.~~ **56.** ***Section R403.3.1 Ducts located outside conditioned space,*** is hereby deleted and replaced with the following*:*

R403.3.1 ***Ducts located outside conditioned space*****.** All supply and return ducts shall be insulated to a minimum R-8 if located outside a conditioned space.

~~53.~~ **57.** ***Section R403.5.2 Hot water pipe insulation,*** is hereby deleted and replaced with the following*:*

R403.5.2 Hot water pipe insulation. All service hot water piping shall be insulated to a minimum R-5.

~~54.~~ **58.** ***Section R403.6.1 Heat and recovery ventilation,*** is hereby deleted and replaced in its entirety and the following is hereby added in lieu thereof*:*

R403.5.2 Heat and recovery ventilation. All new buildings and additions over 500 square feet shall be provided with a heat recovery or energy recovery ventilation system. The system shall be balanced with a minimum sensible heat recovery efficiency of 65 percent at 32°F (0°C) at a flow greater than or equal to the design airflow.

~~55.~~ **59.** ***Section R403.7 Equipment sizing and efficiency rating,*** is hereby deleted and replaced with the following*:*

R403.7 Equipment sizing and efficiency rating. All new buildings and additions greater than 500 square feet with heating and cooling equipment shall be sized in accordance with ACCA Manual S based on building loads calculated in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies. In addition to complying with Sec. R404.6 Additional Electric Infrastructure, new and replacement **electrical** heating and cooling equipment shall have an efficiency rating equal to or greater than the minimum required by federal law for the geographic location where the equipment is installed. **New gas heating equipment shall comply with the following efficiencies:**

1. Gas furnaces shall have a minimum of 96% efficiency.
2. Gas boilers shall have a minimum of 90% AFUE.
3. On demand water heaters shall have greater than .92 uniform energy factor.

Exception: Solid fuel stoves/gas fireplaces, outdoor fire pits, gas stoves and ovens.

60. ***Section R404.1.1 Fuel gas lighting equipment, is hereby amended to read as follows:***

R404.1.1 Fuel gas lighting equipment. Fuel gas lighting systems shall not be installed.

~~56.~~ **61.** A new ***Section R404.4 Electric vehicle charging infrastructure for new construction and building addition of 50% or more of original square footage,*** is hereby added to read as follows:

Section R404.4 Electric vehicle charging infrastructure for new construction and building addition of 50% or more of original square footage. Electric infrastructure for the current and future charging of *electric vehicles* shall be installed in accordance with this section per Section 17.20.170 of the Louisville Municipal Code. *EV ready spaces and EV capable spaces* are permitted to be counted toward meeting minimum parking requirements.

R404.4.1 One- and two- family dwellings and townhouses. One- and two-family dwellings and townhouses with a dedicated attached or detached garage or on-site parking spaces shall be provided with electric vehicle charging in accordance with Section 17.20.170 of the Louisville Municipal Code.

R404.4.1.1 Minimum EV Ready infrastructure. Minimum EV Ready Space infrastructure shall require the following:

1. Installation of conductors:
    a. Conductors shall be installed of sufficient size to accommodate a minimum 240VAC 40Amp branch circuit to each parking space where required.
    b. Conductors shall terminate in either a receptacle, plug, junction or outlet box, or an *EVSE* installed in the parking space.
2. The electrical panel directory shall designate the branch circuit as "EV Ready" and the junction box or receptacle shall be labelled "EV Ready."

R404.4.1.2 Construction documents. Construction documents shall graphically indicate and label all EV ready spaces and associated termination locations. For all Townhouses and one- and two-family dwellings with an electrical utility service 200 Amps or greater, a panelboard schedule shall be provided indicating the EV Ready circuit breaker space(s) and the circuit designation(s).

R404.4.2 Group R occupancies. Group-R occupancies (R-2, R-3, and R-4 buildings three stories and less) with three or more dwelling units and/or sleeping units shall be provided with electric vehicle

charging in accordance with Section 17.20.170 of the Louisville Municipal Code.

Electric vehicle charging shall be provided and installed in accordance with this section and the National Electrical Code (NFPA 70). When parking spaces are added or modified without an increase in building floor area, only the new parking spaces are subject to this requirement.

~~57.~~ **62.** A new ***Section R404.5 Additional electric infrastructure,*** is hereby added to read as follows:

R404.5 Additional electric infrastructure. *Combustion equipment* shall be installed in accordance with this section.

R404.5.1 Combustion equipment and end-uses. *Combustion equipment* shall be provided with a dedicated, appropriately phased circuit that shall have a minimum amperage requirement for a comparable electric appliance, equipment or end use, an electrical receptacle or junction box that is connected to the electric panel, and conductors of adequate capacity within 6 feet (1829 mm) of the appliance or equipment.

Each such circuit shall be accessible with no obstructions. A reserved circuit breaker space shall be installed in the electrical panel adjacent to the circuit breaker for the branch circuit and labeled for each circuit. Both ends of the unused conductor or conduit shall be labeled "For Future Electric Equipment" and be electrically isolated.

~~58.~~ **63.** ***Section R405 Total building performance,*** is deleted in its entirety.

~~59.~~ **64.** ***Section R406.3 Building thermal envelope,*** is hereby deleted and replaced with the following:

R406.3 Building thermal envelope. Building and portions thereof shall comply with Table R406.3.

Table R406.3
Average of the Insulation and Fenestration Requirements by Component

Roof	R-60
Above grade walls	R-21
Below grade walls	R-21
Floors	R-38
Non heated slab on grade	R-10 for 4ft

Heated slab on grade	R-15 for 4 ft + R-5 under full slab
Fenestration U-Factor	.30
Fenestration SHGC	.33
Skylight U-Factor	.50
Skylight SHGC	.40

~~60.~~ **65.** ***Section R406.3.1 On-site renewables are not included,*** is deleted in its entirety.

~~61.~~ **66.** ***Section R406.3.2 On-site renewables are included,*** is deleted in its entirety.

~~62.~~ **67.** ***Section R406.3.2 Tropical Climate Region Compliance Path,*** is deleted in its entirety.

~~63.~~ **68.** ***Section R505.1 General,*** is hereby amended to remove the exception.

~~64.~~ **69.** ***Section R505.1.1 Unconditioned space,*** is hereby deleted and replaced with the following:

> **R505.1.1** Unconditioned space. Any unconditioned or low-energy space that is altered to become a conditioned space shall comply with Section R503.

Sec.15.18.040. – Design criteria.

All new heated commercial and residential heated structures shall meet the following design criteria:

1. **Non-reducible ~~Snow~~ roof snow load**: 30 pounds per square foot.

2. Wind speed:

   a. 145 miles per hour three second gust ASCE-7-10;

   b. ASTM D3161 test with Class F Application.

3. Wind exposure: "C", unless in the opinion of the Chief Building Official greater restrictions are needed to protect public safety.

4. Seismic zone: B.

5. Frost line depth: 36 inches below finished grade.

6. Weathering: Severe – Climate Zone 5B.

7. Termite: Slight.

8. Decay: Slight.

9. Winter design temperature: one degree.

10. Anticipated snow: six inches.

11. Ice and water shield: required on all shingled roofs – eaves only. Shields must extend from the lowest edges to a point at least 24 inches inside the exterior wall line of the building.

12. Drip edge: required on both eaves and rakes of roof.

13. Air freezing index: less than 1000.

14. Mean annual temperature: 47 degrees.

15. Elevation: 5,337 feet above sea level.

16. Sump pumps:

a. Cannot drain into sanitary or storm sewer;

b. Must daylight into lawn away from foundation;

c. Perimeter foundation systems must day light or drain into sump pit and then sump pump, and sump pump must drain into lawn.

17. Drainage from house: slope at least six inches in the first ten feet.

18. Retaining walls:

a. Less than 48 inches from the bottom of the footing to the top of the retaining wall with no surcharge: no permit required.

b. More than 48 inches from bottom of footing to top of retaining wall, or any wall with surcharge: requires stamped engineering plans.

19. Backflow preventer: required on all residential irrigation systems (see cross connection control regulations).

20. Hot water heaters:

a. Expansion tanks required for all hot water heaters;

b. Drain pan required if placed on wood floor.

Sec.15.18.050. - Applicability.

Notwithstanding anything in the International Energy Conservation Code to the contrary, a developer/owner of a residential or commercial building may elect an inspection in accordance with the policies and procedures of the International Energy Conservation Code, as amended herein.

Sec. 15.18.060. - Copies available.
At least one copy of the International Energy Conservation Code, 2021 Edition, as amended herein, certified to be true and accurate, shall be available for public inspection at the office of the Building Safety Division, during business hours. The city clerk shall at all times maintain a reasonable supply of copies of the code available for purchase by the public at a moderate price. Electronic copies are available, without amendment, at https://codes.iccsafe.org/public/collections/I-Codes.

Sec. 15.18.070. - Violations and penalties.
It shall be unlawful for any person, firm, or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy or maintain any building or structure or cause or permit the work to be done, in violation of the provisions of this chapter or the terms of the code or standards adopted and incorporated in this chapter. Any person convicted of a violation of any provision of this chapter or of the provisions of the code or standards adopted and incorporated in this chapter shall be subject to the penalty provided in section 1.28.010.

Section 2. Chapter 15.60 of the Louisville Municipal Code is hereby repealed.

Section 3. Title 17 the Louisville Municipal Code is hereby amended by the addition of a new Section 17.20.170 to read as follows:

Sec. 17.20.170. – Electric vehicle charging infrastructure. ~~Vehicle Charging Infrastructure.~~

A. Purpose and Intent. The purpose and intent of this section is to facilitate and encourage the use of electric vehicles, to expedite the establishment of convenient and cost-effective electric vehicle infrastructure, and establish the minimum requirements for such infrastructure to serve both short and long-term parking needs.

B. Definitions. The following definitions shall apply to this Section:

Electric vehicle charging stations (EVCS) means a public or private parking space that is served by battery charging station equipment that has as its primary purpose the transfer of electric energy (by conductive or inductive means) to a battery or other energy storage device in an electric vehicle.

Electric vehicle charging station – private restricted use means an electric vehicle charging station that is:

1. Privately owned and restricted access (e.g., single-family dwelling unit, executive parking, designated employee parking, assigned parking at multi-family residential building); or

2. Publicly owned and restricted (e.g., fleet parking with no access to the general public).

Electric vehicle charging station – public use means an electric vehicle charging station that is:

1. Publicly owned and publicly available (e.g., Park-n-ride, public library parking lot, Recreation and Senior Center lot, etc); or

2. Privately owned and available to visitors of the use (e.g., shopping center, hotel, office, etc.)

Electric vehicle parking space means any marked parking space that identifies the use to be exclusively for the parking of an electric vehicle.

C. Number of required electric vehicle charging stations. The following table sets forth the number of required charging stations for all new development or redevelopments as required in Chapter 15.18 of the Louisville Municipal Code. This list is not intended to be exhaustive of each use category, however is intended to establish general categories of use tiers. The Director of Planning and Building Safety shall determine the appropriate tier if the use is not identified in the table below.

1. Requirements will be rounded up to the nearest whole number.

2. Minimum electrical and hardware requirements for EVSE Installed, EV Ready, and EV Capable are set forth in Chapter 15.18 of the Louisville Municipal Code.

	EV Installed	EV- Ready	EV Capable
Residential Uses			
Single-Family unit		1 space	1 space

Multi-Family unit, with dedicated parking spaces or garages		1 space	1 space
Tier 1			
Multi-Family, without dedicated parking spaces or garages	10% of spaces	10% of spaces	50% of spaces
Hotel, Motel, Extended Stay Lodging Facility			
Tier 2 – Employment oriented uses	7% of spaces	10% of spaces	15% of spaces
Business and Professional Offices			
General research facilities, light industrial facilities including manufacturing, assembly, warehouse and fabrication			
Hospital			
Tier 3 – Service and Sales oriented uses	5% of spaces	10% of spaces	10% of spaces
Private and public recreational and social facilities, membership clubs, lodges, and fraternal organizations			
Religious institution			
Commercial amusement, indoor and outdoor			
Schools, including public, private, vocational or business			
Restaurant			
Retail			
Personal service			
Medical and dental clinics			

D. Permitted locations.

1. EVCS are permitted in every zoning district when accessory to a principal permitted use. Such stations located a single-family and designated multi-family units shall be private restricted use only.

2. If the primary use of the parcel is the retail electric charging of vehicles, then the use shall be considered an automotive fueling station for zoning purposes. Installation shall be located in zone districts which permit this use.

E. General requirements.

1. Accessible spaces. A charging station will be considered accessible if it is located adjacent to, and can serve, an accessible parking space as

defined and required by the ADA. It is not necessary to designate the EVSE exclusively for the use of vehicles parked in the accessible space.

2. EVCS – public use shall be subject to the following requirements.

a. The EVCSs shall be located in a manner that will be easily seen by the public for informational and security purposes.

b. The EVCSs shall be located in desirable and convenient parking locations will serve as an incentive for the use of electric vehicles.

c. The EVCSs must be operational during the normal business hours of the use(s) that it serves.

d. The EVSE shall be maintained in all respects, including the functioning of equipment. A phone number or other contact information shall be provided on the equipment for reporting problems with the equipment or access to it.

e. The property owner may collect a service fee for the use of EVSE.

F. The requirements of this section shall be shall be implemented through the building permit process and shall apply to:

1. All new construction, expansion or modification projects for which a building permit has not been issued as of November 24, 2021; and

2. All planned unit developments for which a building permit has not been issued as of November 24, 2021, irrespective of whether such planned unit development was approved or approved and recorded prior to such date, unless a waiver was expressly granted through the planned unit development review process set forth in Chapter 17.28.

Section 4. If any article, section, paragraph, sentence, clause, or phrase of this ordinance is held to be unconstitutional or invalid for any reason, such decision shall not affect the validity or constitutionality of the remaining portions of this ordinance. The City Council hereby declares that it would have passed this ordinance and each part or parts hereof irrespective of the fact that any one part or parts be declared unconstitutional or invalid.

Section 5. The repeal or modification of any provision of any prior ordinance by this ordinance shall not release, extinguish, alter, modify, or change in whole or in part any penalty, forfeiture or liability, either civil or criminal, which shall have been incurred under such provision, and each provision shall be treated and held as still remaining in force for the purpose of sustaining

any judgment, decree, or order which can or may be rendered, entered, or made in such actions, suits, proceedings, or prosecutions.

Section 6. All other ordinances or portions thereof inconsistent or conflicting with this ordinance or any portion hereof are hereby repealed to the extent of such inconsistency or conflict.

INTRODUCED, READ, PASSED ON FIRST READING, AND ORDERED PUBLISHED this 21st day of September, 2021.

Ashley Stolzmann, Mayor

ATTEST:

Meredyth Muth, City Clerk

CITY OF LOUISVILLE SEAL COLORADO

APPROVED AS TO FORM:

Kelly PC, City Attorney

PASSED AND ADOPTED ON SECOND AND FINAL READING, this 19th day of October, 2021.

Ashley Stolzmann, Mayor

ATTEST:

Meredyth Muth, City Clerk

CITY OF LOUISVILLE SEAL COLORADO

Kim Bauer, Preservation Planner, reviewed the site and history of the building. It meets the criteria for landmark designation by age, architectural significance, cultural significance, and physical integrity. She reviewed the criteria for a preservation grant noting how this construction fits into the preservation, rehabilitation, and restoration areas.

The Historic Preservation Commission reviewed both requests and recommends approval; staff also recommends approval of both the landmark designation and grant resolution.

Public Comments - None

Mayor Stolzmann thanked the applicant for bringing this forward.

Mayor Pro Tem Maloney stated this is exactly the intention of the program and he supports it. Councilmember Fahey agreed.

Mayor Stolzmann closed the public hearing.

Motion: Mayor Pro Tem Maloney moved to approve Resolution No. 71; seconded by Councilmember Fahey

Vote: Motion passed by unanimous roll call vote.

Motion: Mayor Pro Tem Maloney moved to approved Resolution No. 72; seconded by Councilmember Dickinson

Vote: Motion passed by unanimous roll call vote

ORDINANCE NO. 1816, SERIES 2021 – AN ORDINANCE ADOPTING BY REFERENCE THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE, WITH AMENDMENTS, REPEALING CHAPTER 15.60 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING THE PRESCRIPTIVE ENERGY CODE AND DESIGN CRITERIA, AND AMENDING TITLE 17 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING ELECTRIC VEHICLE CHARGING INFRASTRUCTURE – 2nd READING, PUBLIC HEARING (advertised *Daily Camera* 9/26/21)

Mayor Stolzmann introduced the item and asked for any disclosures; seeing none she opened the public hearing.

Katie Baum, Sustainability Coordinator, presented the IECC updates. The city is currently under the 2018 IECC with prescriptive energy and design criteria and solar readiness for residential and commercial buildings. The IECC is updated every three years, but this year is the first edition with significant efficiency gains since 2012. There are multiple changes from the 2018 IECC regarding residential structures in building insulation values,

HVAC systems and lighting and power. The changes to commercial buildings are in the building envelopes, HVAC, service water heating, lighting and power and renewables.

She advised Council there are some amendments to the ordinance since 1st reading. The ordinance presented tonight was updated to require fuel source and renewable systems pathways in construction documents. All residential and commercial new construction will be all-electric or be built with high efficiency HVAC equipment and with electric-ready infrastructure. EV charging will be enforced at the time of building permit, with a clarification that projects within a PUD approved prior to the ordinance, but which have not obtained a building permit, will be required to comply with the ordinance.

Solar readiness does not require that solar be installed on new construction, but space and capacity for installing such a system is required.

Electrical vehicle readiness requires the infrastructure for an EV ready parking space or EV charging station be included at time of construction for future buildout of EV charging. The ordinance details the requirements for EV readiness for each building type.

Council requested information on building electrification requirements in other Colorado municipalities and zero energy appendices. Those were included in the packet. Staff recommends approval of the ordinance as proposed this evening with the amendment to Table R402.1.2.

Councilmember Lipton asked what types of building permit actions would trigger the need to comply with the upgraded standards. Chad Root, Chief Building Official, responded the trigger would be adding over 50% of square footage to a home would require meeting the new requirements. Commercial permits would be set up in the same fashion.

Councilmember Lipton asked about gas fireplaces. Root stated those will be exempt.

Public Comments

Hazel Van Zale, a student at Louisville Elementary School, spoke in favor of adopting the 2021 IECC and appendix to reduce greenhouse gas emissions.

Weston Gano, a student at Louisville Elementary School, spoke in favor of adopting the 2021 IECC and appendix to reduce our energy footprint.

Baxter Case, a student at Louisville Elementary School, spoke in favor of adopting the IECC and appendix.

Peter Geise, 808 Spyglass Circle, stated he is hesitant on moving forward with some of the requirements of the IECC and appendix. He urged a more cautious approach.

Tess Weltzin, spoke in favor of adopting the IECC and the appendix to reduce greenhouse gas emissions for generations to come.

Sadie Gabriel, a student at Louisville Middle School, spoke in support of adopting the IECC and appendix to reduce greenhouse gas emissions and indoor air quality.

Evan Hiatt, a student at Louisville Elementary School, spoke in support of adopting the IECC and appendix as the building sector is a large polluter.

RJ Harrington, 457 East Raintree Court, spoke in support of approving the IECC and appendix.

Grady Gabriel, a student at Louisville Middle School, spoke in support of approving the IECC and appendix. New buildings need to be run by renewable energy and not fossil fuels.

Amelie Valliere, a student at Louisville Middle School, spoke in support of adopting the IECC and appendix to reduce greenhouse gas emissions.

Isabelle Valliere, a student at Louisville Middle School, spoke in support of adopting the IECC and appendix to reduce greenhouse gas emissions and improve indoor air quality.

Arthur Towber, a student at Louisville Middle School, spoke in support of adopting the IECC and appendix to stop global warming with stricter laws for building homes.

Caleb Forrester, a student at Louisville Middle School, spoke in support of adopting the IECC and appendix to make homes more energy efficient.

Andy Johnson, 920 Lincoln Avenue, spoke in support of adopting the IECC and appendix.

Tiffany Boyd, 550 Grant Avenue, spoke in support of adopting the IECC and appendix.

Tamar Krantz, 691 West Street, spoke in support of adopting the Zero Energy Homes appendix.

Mike Kranzdorf, spoke in support of some of the proposals, but stated he doesn't understand why EV chargers need to be installed in certain areas. He asked that consideration of the appendix be moved to phase 2 of adoption and expressed concern about raising costs for low income home owners.

Councilmember Fahey noted that when people spend more on these upgrades it can be long-term cost savings in other ways such as energy use.

Mayor Pro Tem Maloney stated he supports the ordinance.

Councilmember Dickinson stated he supports the ordinance and asked if any other cities in Colorado have adopted the 2021 IECC yet. Consultant Hope Medina stated many jurisdictions are working on adopting it but Louisville might be the first or one of the first if adopted this evening.

Mayor Stolzmann stated there is consensus on adopting the code this evening. She would like to do more than the proposal by adding Appendix CC. She also proposed striking out the alternatives for fuel gas options thereby requiring all new building be all electric.

Councilmember Brown expressed support for Mayor Stolzmann's proposals.

Councilmember Lipton asked what the practical impacts would be of these additions. He asked how long it would take to do further public engagement. Director Zuccaro stated it would likely take 3-6 months to do a full public process and research on the impacts.

Councilmember Lipton voiced support of the ordinance as presented by staff, but thinks that the appendices needs more research and deliberation.

Mayor Stolzmann stated there is clear support for this from the community and sustainability initiatives are a part of the Council's work plan. The minor proposals are a start but there is a lot more work to do.

Councilmember Leh stated he wants to move quickly but he also wants to avoid unintended consequences. He doesn't know the impact on affordable housing and would like additional public input.

Councilmember Brown stated he does not feel there is the need for additional public input; he feels residents support these moves.

Mayor Stolzmann noted there are unintended consequences of inaction. There is information in the packet about how switching to electric will lower costs in the long run.

Councilmember Brown reemphasized support of the appendices and striking the gas fuel option.

Mayor Pro Tem Maloney stated he doesn't hear disagreement about direction only timing. Staff has proposed a phase II which is part of Council's work plan. All electric is something Council supports, but there needs to be more information and discussion. Phase II might take a few months, but it's not years.

Public Comments

Mark Cathcart, 7017 Sweet Clover Lane, spoke in support of the ordinance and including the appendices.

RJ Harrington, 457 E Raintree Ct, spoke in support of passage of the ordinance and including the appendices.

Maxine Most, suggested Council consider a moratorium on new construction until this can be sorted out.

Tiffany Boyd, 550 Grant Ave, a member of the Louisville Sustainability Advisory Board read sections of the letter from the board included in the packet.

Mike Kranzdorf, noted his concerns that the business community is not being considered as part of the Louisville Community. He stated builders and property owners want to help and do the right thing, but asked Council to accept input and take some additional time.

Andy Johnson, encouraged adopting IECC, and stated the residential appendix is doable. He noted there are ways for residential construction to meet these requirements; commercial is going to be a harder switch to flip and there does need to be more time for the commercial appendices.

Councilmember Lipton stated his support for the ordinance as written and getting more public input on the appendices.

Mayor Stolzmann closed the public hearing.

Motion: Councilmember Lipton moved to approved Ordinance No. 1816 as presented tonight; Mayor Pro Tem Maloney seconded.

Substitute Motion: Mayor Stolzmann moved to approved Ordinance No. 1816 as presented, but also adding the zero energy residential and commercial appendices and striking fuel gas options for new commercial and new residential buildings; Councilmember Brown seconded.

Councilmember Dickinson asked what striking fuel gas option impact would have regarding backup systems. Mayor Stolzmann responded that her intent is that there would be no fossil infrastructure to new buildings.

Vote on the substitute motion failed 4-3 with Mayor Stolzmann and Councilmembers Brown and Fahey voting yes.

Substitute Motion: Councilmember Dickinson made a substitute motion to approve Ordinance No. 1816 but adding the residential appendix. Mayor Stolzmann seconded.

Vote on the substitute motion by Councilmember Dickinson passed 4-3 with Councilmembers Leh and Lipton and Mayor Pro Tem Maloney voting no.

Councilmember Leh expressed his hope that Council will vote on adding the commercial appendices in three months.

Mayor Stolzmann reiterated the items coming forward in coming months, such as construction waste diversion, green roofs, amortization on retro fits, and all electric requirements, as well as EV capable requirements and insulation requirements.

ORDINANCE NO. 1817, SERIES 2021 – AN ORDINANCE APPROVING THE VACATION OF A 125-FOOT BY 30.60-FOOT WIDE RIGHT-OF-WAY LYING SOUTH OF LOT 9, BLOCK 10, LOUISVILLE HEIGHTS SUBDIVISION IN THE CITY OF LOUISVILLE (601 MCKINLEY AVENUE) – 2nd READING, PUBLIC HEARING (advertised *Daily Camera* 10/10/21)

Mayor Stolzmann introduced the item and asked if there are any disclosures; seeing none she opened the public hearing.

Interim Director Ritchie stated this is a request for a right of way vacation for property adjacent to 601 McKinley Avenue. She reviewed the site and history of this piece of property. She noted this piece of land was to be used for an alley that was never developed and in 1984 the previous homeowners had entered into a license agreement with the City to put in a fence. The applicant coordinated with City staff and Xcel and the ordinance establishes a 7.9' wide utility easement on the southern portion of the vacated area to allow access for Xcel to the utility line and to the City to maintain the sanitary line to the south of the property.

Staff finds that retention of the area for right of way is not needed for any current or future City purpose. Approval of the vacation request will also not result in loss of access to any property. Staff recommends approval of the ordinance.

Cody Thompson, applicant, spoke to his request for the additional land to accommodate the home he is proposing for the parcel.

Public Comments – None

Councilmember Brown asked what the value of the property is. City Attorney Kelly stated that State Statute does not allow the City to be compensated for loss of the right of way.

Public Comments

RJ Harrington stated this is another example of a home being scraped and rebuilt.

Mayor Stolzmann stated there is likely no public purpose for the property. Additionally it has been fenced in for private use since 1984, and she feels vacation makes sense in this circumstance.

ORDINANCE NO. 1845
SERIES 2022

(Second reading amendments shown with deleted text in ~~**Bold Strikethrough**~~ and new text in **Bold Double Underline**.)

AN ORDINANCE AMENDING CHAPTER 15.18.030 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING AMENDMENTS AND DELETIONS TO THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE TO INCLUDE REQUIREMENTS FOR COMMERCIAL ENERGY USE INTENSITY PERFORMANCE TARGETS AND RESTRICTIONS OF FOSSIL FUEL SPACE AND WATER HEATING EQUIPMENT

WHEREAS, the City Council has adopted from time to time certain building and construction standards; and

WHEREAS, it is deemed to be in the interest of the public health, safety and general welfare to adopt by reference thereto the 2021 edition of the International Energy Conservation Code; and

WHEREAS, the City of Louisville remains committed to its adopted goals to reduce energy consumption, increase clean energy sources, and support the transition to a low-carbon community as outlined in the Sustainability Action Plan and Resolution 25, Series 2019, "A Resolution Setting Clean Energy and Carbon Reduction Goals"; and

WHEREAS, reducing building energy consumption is an effective strategy to reduce community-wide energy consumption and increase long-term cost savings for businesses; and

WHEREAS, the City Council desires to add requirements for energy use intensity performance standards and building electrification to build a more resilient building stock and support future building electrification efforts pursued and businesses; and

WHEREAS, the City Council, after proper notice as required by law, has held a public hearing on this ordinance providing for the adoption of said codes; and

WHEREAS, the 2021 edition of the International Energy Conservation Code, with amendments, has been submitted to the City Council in writing and the City Council has determined that such codes should be adopted as herein set forth.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

Chapter, 15.18.030 of the Louisville Municipal Code, concerning amendments and deletions to the 2021 International Energy Conservation Code, is hereby amended to read as follows, with new text in underline:

1. Section C202 GENERAL DEFINITIONS is amended to add the following definitions in alphabetical order:

EMERGENCY POWER SYSTEM. A source of automatic electric power of a required capacity and duration to operate required life safety, fire alarm, detection, and ventilation systems in the event of a failure of the primary power. Emergency power systems are those required for electrical loads where interruption of the primary power could result in loss of human life or serious injuries.

ENERGY USE INTENSITY (EUI). The annual building site energy use per square foot of gross floor area in units of kBTU/sq ft.

STANDBY POWER SYSTEM. A source of automatic electric power of a required capacity and duration to operate required building, hazardous materials or ventilation systems in the event of a failure of the primary power. Standby power systems are those required for electrical loads where interruption of the primary power could create hazards or hamper rescue or fire-fighting operations.

2. Section C401.2 Application is deleted in its entirely and replaced as follows:

C401.2. Commercial *buildings* and their building site shall comply with one of the following, as applicable:

C401.2.1 Performance targets. New commercial *building* types included in the scope of Appendix PT shall comply with Appendix PT and Sections C403.2.4 and C404.10.

C401.2.2 Core and shell. Core and shell buildings shall comply with the provisions of Section C402.1.3 through C402.5. When mechanical systems are installed, core and shell buildings shall also meet the provisions in **C403.2.4, C404.10, and** Section C408.

C401.2.2.1 Core and shell buildings shall submit a letter of agreement to the City stating the tenant spaces included in the scope of Appendix PT shall meet the EUI target established in Table PT103, and shall include these requirements in their lease or purchase agreements.

C401.2.3 Tenant finish. Tenant finishes included in the scope of Appendix PT shall comply with Appendix PT **and C403.2.4 and C404.10**. All other tenant finishes shall comply with the Prescriptive Compliance option, which requires compliance with Sections C401.3, C401.4, C402 through C406, and C408.

C401.2.4 Other commercial building types. Commercial *building* types not included above shall comply with the Prescriptive Compliance option, which requires compliance with Sections C401.3, C401.4, C402 through C406, and C408.

Exception: Additions, alterations, repairs, and changes of occupancy to existing buildings complying with Chapter 5.

3. Section C403.2 System design is modified as follows:

C403.2 System design. Mechanical systems shall be designed to comply with Sections C403.2.1 through ~~C403.2.3~~ C403.2.4. Where elements of a building's mechanical systems are addressed in Sections C403 through C403.14, such elements shall comply with the applicable provisions of those sections.

4. Section C403.2.4 Space heating equipment is added as follows:

C403.2.4 Space heating equipment. Fossil-fuel **~~warm-air furnaces~~ appliances** and electric resistance space heating equipment shall not be permitted for space heating.

Exceptions:

1. **Emergency backup.** Where it is required by an applicable law or regulation to provide space heating with an emergency power system or a standby power system.
2. **~~Where cfm/sq. ft. ventilation requirements result in conditions where the Building Official determines that space heating requirements cannot reasonably be met without combustion space heating systems.~~**
2. **~~3.~~ Certain make-up air systems.** Electric resistance in make-up air systems where energy recovery ventilation is prohibited by the International Mechanical Code.
3. **~~4.~~ Supplementary heat.** Electric resistance heat used for supplementary heat in accordance with Section C403.4.1.1
4. **~~5.~~ Electric resistance budget. In addition to any exceptions in this section, ~~Up~~ up** to 5 W of electric resistance space heating per square foot of *conditioned floor area* in the *building*, not including supplementary heat.
   Electric resistance heating elements integrated into heat pump equipment.
5. **~~6.~~ Integrated units.** Electric resistance heating elements integrated into heat pump equipment.
6. **~~7.~~ Heated plenums.** Electric resistance in heated plenums.
7. **Temporary systems. Temporary electric resistance heating systems are permitted where serving future tenant spaces that are unfinished and unoccupied, provided that the heating equipment is sized and controlled to**

achieve interior space temperatures no higher than needed to prevent freezing.

8. **Freeze protection.** ~~**Electric resistance for freeze protection elements.**~~ **Electric resistance in heating systems intended for freeze protection.**
9. **Outdoor systems.** Equipment used for outdoor heating.
10. **Specific conditions. Portions of buildings that require fossil fuel or electric resistance space heating for specific conditions approved by the Building Official for research, health care, process or other specific needs that cannot practicably be served by heat pump or other space heating systems. This does not constitute a blanket exception for any occupancy type.**
11. ~~**10.**~~ **Replacements.** Replacement fuel-fired ~~**furnace equipment**~~ **appliances**.

5. Section C404.10 Water heating equipment is added as follows:

C404.10 Water heating equipment. Fossil fuel and electric resistance instantaneous and storage water heaters shall not be used to provide hot water.

Exceptions:

1. **Emergency backup. Where it is required by an applicable law or regulation to provide water heating with an emergency power system or a standby power system.**
2. ~~**1.**~~ **Integrated units.** Resistance heating elements integrated into heat pump water heating equipment.
3. ~~**2.**~~ **Recirculation loops.** Electric resistance elements used for recirculation loop temperature maintenance.
4. ~~**3.**~~ **Small systems.** Electric storage water heaters with a rated water storage volume no greater than 20 gallons.
5. ~~**4.**~~ **Point-of-use systems.** Instantaneous electric water heaters located within 10 feet of the point of use.
6. ~~**5.**~~ **Renewable electricity.** Electric resistance equipment where not less than 100 percent of the annual service water-heating requirement is provided by an *on-site renewable energy system* not used to meet any other provision of this code.
7. ~~**6.**~~ **Renewable or waste thermal energy.** Electric resistance storage water heating equipment in *buildings* where not less than 75% of the annual service water heating requirement is met by a solar thermal system or other renewable thermal system.
8. ~~**7.**~~ **High-temperature requirements.** Water heating systems that serve end-uses or have a storage requirement that necessitates a water temperature of 141°F (55°C) or hotter.
9. **Electric resistance budget. In addition to any exceptions in this section, a budget of 24 kW plus 0.1 watts per square foot of building area of electric resistance service water heating capacity per building.**
10. **Commercial kitchens. Electric booster-heaters serving commercial dishwashers, commercial food service equipment, and other approved**

process equipment that require supply water temperatures of 120°F (49°C) or higher.

11. ~~8.~~ **Replacements.** Replacement of gas-fired storage water heaters or instantaneous water heaters.

APPENDIX PT
MODELING TO A PERFORMANCE TARGET

PT101 Scope. This section establishes criteria for demonstrating compliance with a performance target, and is required for new multifamily (occupancy R-2), offices greater than 5,000 ft^2, primary and secondary schools, parking garages, and warehouses. All end use load components within and associated with the building and their building sites shall be modeled.

PT102 Mandatory requirements. The requirements in this section are mandatory requirements and shall be required in addition to the provisions of ASHRAE 90.1 Appendix G.

PT103 Performance target. Projects of the types listed in Table PT103 shall demonstrate that the proposed design reaches a fixed energy use intensity (EUI) less than or equal to the values in Table PT103, calculated utilizing the energy modeling procedures of Appendix G of ASHRAE 90.1. For *buildings* with multiple occupancy types, the modeled performance target shall be a weighted average of the floor area of each occupancy type.

> **Exception:** Energy used for electric vehicle charging, data centers, and process loads shall be excluded from compliance modeling.

TABLE PT103
PERFORMANCE TARGETS

BUILDING TYPE	PERFORMANCE TARGET (kBTU/ft2)
Multifamily (Occupancy R-2)	32
Office, small (>5,000 ft2)	19
Office, medium (5,000 – 50,000 ft2)	23
Office, large (>50,000 ft2)	28
School, primary	34
School, secondary	31
Warehouse	11

PT104 Renewable Energy. On-site renewable energy generated by a system installed as part of this project that is used by the building shall be subtracted from the proposed design energy consumption prior to calculating the proposed building performance.

PT105 Performance documentation. Documentation to verify compliance with this section shall be provided to the code official.

PT105.1 Projected compliance report. Permit submittals shall include a report documenting the proposed design is projected to meet the EUI target. The compliance report shall include the following specific information beyond the information required in ASHRAE 90.1 Appendix G:

1. Address of the building.
2. An inspection checklist documenting the building component characteristics of the proposed design.
3. Name of individual completing the report.
4. Name and version of compliance software tool.
5. Documentation of the reduction in energy use associated with on-site energy.

PT105.2 Construction plan requirements. Construction plans shall depict all component characteristics of the proposed design utilized for the EUI in accordance with ASHRAE 90.1 Appendix G.

PT105.3 Measured performance report. Projects shall demonstrate compliance with this code by documenting that the building has achieved the EUI performance calculated based on 12 months of metered energy use after occupancy.

PT105.3.1 Demonstration of operating energy use. Metered energy data demonstrating compliance with the EUI target shall be reported to the building official using Energy Star Portfolio Manager and adjusted for the percentage of floor area occupied. While at least 75 percent occupied, the building shall operate at or below its assigned energy use target established in Section PT103 for any recording period of 12 consecutive months that is completed within three years of the date of the Certificate of Occupancy. The owner shall notify the building official when this 12-month period has been successfully completed.

PT106 Energy metering and monitoring. All projects must install submetering or monitoring capabilities to support building energy performance analysis. The project must include capabilities to store and access a 24-month continuous data set on an ongoing basis.

PT106.1 End-use monitoring. Measurement devices shall be installed in new *buildings* to monitor the electric energy use of each of the following separately:

1. Total electric energy.
2. HVAC systems energy use.
3. Interior lighting.
4. Exterior lighting.
5. Receptacle circuits.
6. Data centers representing over 10 percent of total building load or 5 percent of building floor area.
7. Other process loads that represent 10 percent or more of total building energy use based on building energy use modeling.

PT106.2 Independent metering. The following items shall be independently metered. Individual meters used to comply with this section may not serve multiple *buildings*.

1. All fuel sources serving the building.
2. Energy production from on-site renewable energy systems.
3. Electric vehicle (EV) supply equipment.
4. Data centers representing over 10 percent of total building load or 5 percent of building floor area.
5. Other process loads that represent 10 percent or more of total building energy use based on building energy use modeling.
6. Individual tenant energy loads.

6. Section R202 GENERAL DEFINITIONS is amended as follows:

RESIDENTIAL BUILDING. For this code, includes detached one- and two-family dwellings and townhouses, as well as Group R-2 other than for *multifamily*, R-3, and R-4 buildings three stories or less in height above grade plane with separate means of egress.

MULTIFAMILY. Apartments, condominiums, and other similar-type buildings regardless of the number of stories.

INTRODUCED, READ, PASSED ON FIRST READING, AND ORDERED PUBLISHED this 15th day of November, 2022.

Ashley Stolzmann, Mayor

ATTEST:

Meredyth Muth, City Clerk

APPROVED AS TO FORM:

Kelly PC, City Attorney

PASSED AND ADOPTED ON SECOND AND FINAL READING, this 20th day of December, 2022.

Ashley Stolzmann, Mayor

ATTEST:

Meredyth Muth, City Clerk

MOTION: Councilmember Dickinson moved to approve Resolution No. 54, Series 2022; seconded by Councilmember Most.

VOTE: Motion passed by unanimous roll call vote.

ORDINANCE NO. 1845, SERIES 2022 – AN ORDINANCE AMENDING CHAPTER 15.18.030 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING AMENDMENTS AND DELETIONS TO THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE TO INCLUDE REQUIREMENTS FOR COMMERCIAL ENERGY USE INTENSITY PERFORMANCE TARGETS AND RESTRICTIONS OF FOSSIL FUEL SPACE AND WATER HEATING EQUIPMENT – 2nd READING, PUBLIC HEARING (advertised *Daily Camera* 12/2/22) *continued from 12/6/22*

Mayor Stolzmann introduced the item and opened the public hearing.

Community Development Director Zuccaro stated this ordinance would amend chapter 15.18.030 of the Louisville Municipal Code concerning amendments and deletions to the 2021 International Energy Conservation Code. It includes requirements for commercial energy use intensity (EUI) performance targets for specific building types; restricts fossil fuel space and water heating equipment; and applies only to new commercial construction.

This item is a part of the City's Sustainability Action Plan and the City Council's 2023 work plan. He reviewed the work done on energy modeling, policy research, and reviewed the public engagement process.

Director Zuccaro reviewed the proposed ordinance noting it includes energy use intensity (EUI) performance based targets for seven building types; other building types would be required to meet a prescriptive commercial base energy code (IECC 2021 + strengthening amendments); and all building types must meet space and water heating equipment requirements (all-electric). He reviewed the energy use performance targets and the space and water heating exemptions. He reviewed cost comparisons for electric versus mixed fuel uses.

Sustainability Coordinator Kayla Betzold reported on the regional building code cohort (which includes municipalities from across the region) which has completed its phase 2 planning meetings to develop the net zero new construction roadmap. A draft roadmap is currently under review with a final roadmap to be published in early 2023. Plans include stricter EUI targets and demand response capability by 2027 as well as stricter EUI targets and energy storage required by 2030.

Councilmember Dickinson asked if upgrades would be required for remodels. Chad Root, Chief Building Official, stated if the existing systems can meet the needs of the remodel they can be maintained. If they can't meet those needs, new equipment that meets the current code would be required.

Councilmember Dickinson asked why Louisville is not a part of the Cohort. Christine Brinker, SWEEP, stated a group applied to DOLA for a grant for this project and during the time if took the grant to come through Louisville decided to move forward more quickly on its own. It will be a part of the cohort for the phase 2 process.

Public Comments

Christian Dino, Louisville, (pooled time with Peter Geise) stated he was concerned about the costs of these new requirements. He stated he has done a case study on his own home and has found the costs to be much higher than the current code. He stated the metering equipment is costly and hard to get. He added this code requires equipment that has not been proven and may have a long lead time to get. This will keep people from building here or renting vacant spaces if they can build more quickly and cheaper in neighboring communities. He urged a no vote.

Eric Lund, Louisville Chamber of Commerce, stated his restaurant members have many concerns about the cost of refurbishing properties and they have said that clarification on the rules would be helpful. He suggested postponing a decision until clarification can be made. He stated that for Louisville to be competitive with neighbors, our rules should align with the cohort and not be too far ahead.

Matt Berry, Louisville, stated this code is too far in advance to the current technology and will create waste as new technology arrives in just a couple of years. He does not want to have to dispose of technology when something better and easier to use arrives on the market in a few years. He urged a no vote.

Rick Kron, Downtown Business Association, urged a no vote on this ordinance. Louisville should not get ahead of the cohort but rather should act in line with the cohort so we are not ahead of them and businesses then choose to go elsewhere. We don't yet know the real costs or benefits of this change. This ordinance it is not clear what it does in some places and needs additional work.

Jeff Sheets, Koelbel and Company, stated in his other developments there are serious delays in getting equipment and asking for this type of specific equipment will make it even worse. We need to better understand what this ordinance does. It has flaws in how it calculates costs for owners and tenants. This ordinance will make Louisville less competitive for businesses. He urged a no vote.

Tiffany Boyd, Louisville, urged Council to approve this ordinance. She suggested waiting for the cohort is just waiting for the inevitable and Louisville should be at the forefront. We should not kick the can down the road. We need stringent greenhouse gas limits to be put in place.

Tess Weltzin, Lafayette, urged Council to approve the ordinance to address the climate crisis for the next generation. This ordinance will help drive the path for energy efficiency. She stated local action is what is needed.

Ilana Diddams, Louisville, urged a yes vote to support the goals of the City's Sustainability Plan. She stated voting against the ordinance would not be addressing the climate crisis and the sustainability goals.

Mayor Stolzmann ended the first round of public comments noting that she would not take online comments given earlier problems with the system. She noted that she already asked people to attend in person and as presiding officer she can make that determination. She asked the City Attorney to review the Rules of Procedure for this process.

City Attorney Kelly reviewed the Rules of Procedure noting the rules state that if there are technical problems that preclude electronic participation, the in person meeting shall continue if a quorum is present in the room. She added that the Rules state the chair has reasonable discretion to apply the meeting procedures subject to the right of any member of Council to appeal to the Council in which case the matter shall be resolved by a vote of the members.

MOTION: Councilmember Leh moved to override the Mayor's decision to not take electronic comments. He stated he wants to be sure to hear from those online if it is possible. Seconded by Mayor Pro Tem Maloney.

VOTE: Motion passed by 4-3 vote with Mayor Pro Tem Maloney and Councilmembers Fahey, Leh, and Dickinson voting yes.

Larry Donner, Louisville, stated he does not support this ordinance. He feels this ordinance will ensure vacant buildings won't get repurposed and more businesses will leave town. The codes are premature and we don't fully understand the impacts.

Susan Loo, Louisville, stated the previous cost estimates on residential net zero were not accurate and it is likely these estimates for commercial are not accurate as well. There hasn't been a full look at the details of what this ordinance will do.

Councilmember Brown stated this ordinance applies to new construction only. He noted that staff did a great deal of public outreach on this and people were able to give input.

Councilmember Leh asked if the business community was specifically asked for input on this ordinance as presented here. Director Zuccaro stated there was no specific outreach to the business community about the code as drafted and presented here.

Councilmember Leh reviewed the City's sustainability goals as set out in Resolution No. 25, Series 2019 and noted everyone on Council wants to meet those goals. It is just a matter of how we get there and the timing.

Public Comments

Jeff Sheets, Koelbel and Company, stated developers aren't opposed to this but would be looking for very specific costs to build. He suggested taking more time and meeting with developers to look at real costs and understand what this looks like to see it if achievable. He suggested that could be done quickly and brought back in first quarter of next year. He asked Council to delay this a bit.

Tamar Krantz, Louisville, stated she is happy Louisville is on the forefront of this issue. She urged approval to help meet the City's sustainability goals. She does not think it will prevent businesses from coming here. She urged approval.

Josh Cooperman, Louisville, urged approval as a way to reduce greenhouse gases. He stated he wants this in place for new construction, particularly any large projects that are coming through. This code is not a stretch and should be approved.

Rick Kron, Downtown Business Association, stated he is not convinced the cost estimates in the report are not accurate and the ROI on some items are very long. He stated he would have liked the draft ordinance available earlier so that people could have more time to read and understand it before this Council meeting. He stated there are some types of businesses could build here under this ordinance.

Tiffany Boyd, Louisville, stated these changes are inevitable to address the climate crisis. All buildings will need to retrofit when this becomes required so it makes sense to approve this now.

2:34

Councilmember Fahey stated she thinks this is a good compromise and will promote sustainable building in new construction. It does apply only to new construction and has exemptions for hospitals and restaurants. The State is going to be putting very similar regulations in place in a few months and the cohort will be considering even stricter regulations for surrounding communities.

MOTION: Councilmember Fahey moved to approve the ordinance; Councilmember Most seconded the motion.

Mayor Pro Tem Maloney stated he wants more information on the ordinance. He noted all members of council support the sustainability goals, however he has concerns about process and timing. There is a sense of urgency to do this we have to do it soon, however we need to know what is happening at the State and with the cohort.

SUBSTITUTE MOTION: Mayor Pro Tem Maloney moved to table the ordinance to a date uncertain but take action in Q1 or Q2 of 2023 when we have more information. Councilmember Leh seconded the motion.

Councilmember Leh stated everyone agrees we have a serious and urgent climate problem that needs to be addressed. We all agree on our sustainability goals. We all agree on the cohort process that will establish regional standards. He would like staff to get additional public input on this version of the ordinance given there have been so many changes since first reading. He would rather table this until staff could get additional public input and bring it back in first quarter of 2023.

Councilmember Leh made a friendly amendment to table the ordinance to February 21 to allow time for a roundtable with the business community to take input on the ordinance. Mayor Pro Tem Maloney accepted the amendment.

Councilmember Most stated she thinks there has been reasonable public input and additional time is not likely to change any minds or garner more support. She stated this is a good compromise so continuing to keep this open is not an effective use of everyone's time. She understands the desire for more engagement but there is a point we need take action and we can address problems if they arise.

Councilmember Fahey stated she is comfortable the Council took enough input from the two public meetings. Staff did incorporate comments from the business community to get to where we are and allowing specific exceptions. The Council can amend this if we need to and we can look at incentives for new buildings if we want to.

Councilmember Dickinson stated the City has been leading the way in code adoption. He is excited about the cohort bringing this to all communities. This will happen sooner than later regionally. He would prefer moving with the cohort rather than ahead of them. He stated he likes this code as presented but would prefer to do this in conjunction with the cohort or doing it in Q1.

Mayor Stolzmann closed the public hearing.

VOTE ON SUBSTITUTE MOTION: Motion failed on a 4-3 vote with Mayor Stolzmann, and Councilmembers Brown, Councilmember Fahey, Councilmember Most voting no.

VOTE ON ORIGINAL MOTION: Motion carried by unanimous roll call vote.

RESOLUTION NO. 55, SERIES 2022 – A RESOLUTION AMENDING THE 2022 BUDGET BY AMENDING APPROPRIATIONS IN THE SOLID WASTE & RECYCLING FUND AND GOLF COURSE FUND FOR ADDITIONAL APPROPRIATIONS WITHIN SUCH FUNDS – PUBLIC HEARING (advertised *Daily Camera* 12/16/2022)

Energy Code Update Recommandation Report

AUGUST 2022

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Appendix A: Louisville IECC Energy Modeling and Policy Report, Group14

Appendix B: City of Louisville Energy Code Update Public Engagement Report, Lotus

Appendix C: Regional Code Cohort Amendment Fact Sheets, SWEEP

Executive Summary

The City of Louisville (the City) contracted with Group14 Engineering, PBC (Group14) and Lotus Engineering and Sustainability, LLC (Lotus) to explore updates to the City's current commercial energy code that would help the City reach their energy efficiency and greenhouse gas reduction goals. The City and consultant team examined commercial energy code policy options including higher efficiency requirements, all electric requirements, and net zero requirements. The scope of work included:

- Energy modeling of current code compliant heating, ventilation, and air conditioning systems in commercial and industrial building types to evaluate upfront cost, operational cost, and greenhouse gas (GHG) emissions. The energy modeling also included an analysis on the total solar PV required to make code compliant buildings (both mixed-fuel and all-electric) net zero. Finally, energy modeling was conducted to analyze the upfront cost, operational cost, and GHG emissions savings of buildings built to a higher efficiency performance standard.
- Research on existing commercial energy code policies from around the country.
- A public engagement process that solicited feedback on commercial code policy options via two City board meetings, two open-house style community meetings, and an online public engagement survey.

Three main policy options resulted from the project process:

- **Regional Code Cohort Alignment:** Aligning with a regional cohort of communities in and around Boulder County striving for consistent building code updates. Communities are adopting the 2021 International Energy Conservation Code (IECC) as the base code along with several supporting amendments to promote electrification and efficiency. Even though Louisville has already adopted the 2021 IECC, some of the anticipated cohort amendments would strengthen the Louisville code.
- **Policy Option 1:** Setting a minimum energy performance standard (through Energy Use Intensity (EUI) modeling at time of building permit) for commercial buildings. The energy performance standard would vary based on building type. A building owner could utilize onsite renewable energy to help reach the energy performance standard. This policy could include incentives for all building electrification.

- **Policy Option 2A & 2b:** Requiring net zero new commercial construction by adoption of Appendix CC of the 2021 IECC [2A]. The appendix does not require increased building efficiency above the 2021 IECC base code but does require renewable energy offsets to achieve net zero. Amendments to the appendix related to purchase of off-site renewable offsets would be needed to make implementation feasible. The City could also opt to add an all-electric new construction requirement to Appendix CC [2B].

Based on information and insight gleaned from the energy modeling and community input, the project team recommends the City adopt Policy Option 1, to set energy performance goals for commercial and industrial new construction. This option strikes a balance between Louisville's sustainability goals, economic considerations, and community needs.

1. Introduction

Climate change is impacting Colorado and the City of Louisville (the City / Louisville) today. This is evidenced by extreme weather events such as the Marshall Fire, an unusual and out-of-season wildfire exacerbated by a warming climate, long term drought, and statewide average temperature increases.

A press release published in April of 2022 by the Intergovernmental Panel on Climate Change begins with a sentence written in bold text: **"The evidence is clear: the time for action is now. We can halve emissions by 2030."**[i] It is short and demanding, yet hopeful. The press release emphasizes the weight held by choices made in this decade and the power held by decision makers to "secure a livable future" for their communities.

1.1 The City of Louisville's Sustainability Goals

The City of Louisville has recognized the need for climate action, and has made a strong commitment to public health and safety by way of the City's clean energy and carbon emissions reduction goals which are outlined in Resolution 25, Series 2019,[ii]:

1. Meet all of Louisville's municipal electric needs with 100% carbon-free sources by 2025.
2. Reduce core municipal GHG emissions[iii] annually below the 2016 baseline through 2025.
3. Generate 75% of Louisville's residential and commercial/industrial electric needs from carbon-free sources by 2030.
4. Reduce core community GHG emissions[iv] annually below the 2016 baseline through 2030.

As reported in Louisville's Sustainability Action Plan, electricity and natural gas are the City's largest sources of emissions.[v] Therefore, a crucial path forward for achieving these goals involves transforming energy use in the City's residential and commercial building stock. Reducing the energy consumption of buildings and transitioning away from fossil-fuel combustion equipment are effective strategies to decrease emissions and support meeting electricity needs with carbon-free sources. This report focuses on code options for new buildings, but future efforts should address existing build stock to help meet carbon emission reduction goals.

1.2 Current Commercial and Residential Code Standards for New Construction

The lifetime of buildings constructed today ranges from 30 to 130 years.[vi] If not built to a more stringent energy code, new construction can contribute to carbon pollution from less efficient buildings for generations, creating increasingly difficult conditions for climate change

mitigation. Model building codes for new construction present an opportunity for innovation, employing the built environment as a climate action tool, rather than an obstacle, that can support City goals. Building energy codes are an effective policy mechanism local government can utilize to decarbonize new construction, future-proof their building stock, and accelerate clean energy use.

The City of Louisville has already shown a commitment to climate action by adopting the 2021 International Energy Conservation Code (IECC) with amendments outlined in Table 1.

Commercial Buildings	**Residential Buildings***
• Increased insulation levels.	• Increased insulation levels.
• Increased doors and windows efficiency requirements.	• Increased ductwork and piping insulation requirements.
• Increased HVAC efficiency.	• Mandatory heat recovery.
• Electric vehicle charging and infrastructure.**	• Electric vehicle charging and infrastructure.**
• Electric-ready wherever gas appliances are installed.	• Electric-ready wherever gas appliances are installed.
• Solar-ready zone required (Appendix CB).	• Solar-ready provisions required (Appendix RB).
	• Net zero Appendix RC required.

*Marshall Fire rebuilds are exempt.
**Amendment to Municipal Code Chapter 17.20, Off-street Parking and Loading

Table 1: Overview of City of Louisville's current adopted code amendments.

2. Building for The Future: Energy Code Update

2.1 Project Overview

The current adopted code and accompanying amendments encourage energy efficiency and the implementation of future-proofing strategies into new construction. However, these efforts alone will not be enough to fully achieve the City's energy and emissions reduction goals.

In their 2022 Work Plan,[vii] Louisville City Council outlined Phase 2 of the 'Building for the Future' project, directing City Staff to "consider additional measures to code adopted in 2021, which could include the IECC Net Zero Commercial Appendix, other net zero goals and strategic implementation and all-electric construction requirements" specifically for new construction of single-family homes, multifamily buildings, and commercial buildings.

The City contracted with Group14 Engineering, PBC (Group14) and Lotus Engineering and Sustainability, LLC (Lotus) to identify policy options that would encourage higher efficiency, net zero development, and/or all electric development. The scope of work consisted of energy modeling of different building code scenarios, development of policy options based on research and the modeling results, and public engagement on the policy options developed.

A common framework used to create more effective sustainability strategies is consideration of the three pillars of sustainability: economy, environment, and equity. Creating a more sustainable Louisville requires consideration of the whole community, not just environmental impacts of the action being done. Recognizing this, the project team used the three pillars as guiding principles throughout this work.

2.1.1 Energy Modeling

For the first iteration of modeling, Group14 modeled four building types—multifamily, office, retail, and single-family home—with different heating, ventilation, and air conditioning (HVAC) designs that meet current Louisville energy codes. Each building type model consisted of mixed-fuel options that utilize natural gas and electricity, and all-electric options. All other variables such as insulation and lighting were modeled to meet the current code adopted by Louisville and remained constant for each system within each building type. The modeling examined upfront costs and annual costs of each HVAC system per building type, the amount of photovoltaics (PV) required for a building to be net zero with each HVAC system per building type, PV payback periods, and greenhouse gas (GHG) emissions at base code.

Additional modeling was conducted later in the project to investigate the upfront cost, operational cost, and GHG emissions from buildings complying with the finalized policy options.

2.1.2 Policy Research

Group14 examined existing frameworks for all-electric and net zero energy codes from the City of Boulder, several jurisdictions in California, City of Boston, and New York City. This policy landscape review aimed to complement the energy modeling conducted, and the consulting team utilized both resources to best inform the commercial energy code policies recommended to the City of Louisville. For more detail on the on the policy research and initial energy modeling results, see Group14's report in Appendix A.

2.3 Community Outreach

Public input is crucial to building community trust and ensuring feasibility when developing policies. Recognizing this, the consultant teams and City staff presented the project and energy code considerations to the public through multiple engagement opportunities:

1. Two open-house style community meetings.
2. An online survey that was open from June 27, 2022 to August 5, 2022.
3. Presentations to the Louisville Sustainability Advisory Board and the Building Code Board of Appeals.

Feedback from each engagement method was collected, data was cleaned and analyzed, and engagement results were incorporated into the final policy recommendation. For a full description of community outreach conducted and a summary of results, see Appendix B.

3. Project Results and Discussion

3.1 Refining the Project Scope

As the 'Building for the Future' project progressed, the consultant team and City Staff continuously refined the energy modeling and the policy options, carefully considering efficacy and relevance to City Council intent. One result of this iterative process was shifting the focus of the analysis away from single-family home policy, due to the City having already adopted Appendix RC of the 2021 IECC. Consequently, the subsequent sections address policy options for commercial and industrial building types only.

Based on public feedback, improved analyses, and internal conversations, the project team finalized three policy options for the City Council's review, each of which are discussed below.

3.2 Final Policy Options

Note: *All policy options presented are in addition to the current Louisville energy code which includes the following provisions: 2021 IECC base code; Louisville-specific energy efficiency amendments; electric vehicle (EV) ready requirements; the solar-ready Appendix for residential and commercial; and electric-ready requirements for residential and commercial new construction.*

3.2.1 Alignment with Regional Cohort

Policy Description

The City of Louisville could align with an existing regional cohort consisting of communities in and around Boulder County, working in a coordinated effort to adopt a regionally consistent building code (see Box 2). Louisville is a participant in the code cohort, but City Council direction led to an independent pursuit of community-specific options. Based on the City's current code, the primary changes Louisville would need to make are updating the City's current electric preferred standard to align with the cohort, updating the solar-ready appendix language to cover all buildings under the solar-ready requirements, and including additional code language to require cool roofs and high-efficiency horticulture lighting. Group14 did not conduct energy, cost, or greenhouse gas modeling for this code option, but the project team decided to include it due to expressed public interest in regional alignment. Additional detail on the amendments being considered by the Code Cohort are included in Appendix C.

Colorado Department of Local Affairs Code Cohort

Phase 1: Regional adoption of the 2021 IECC and supporting amendments including solar-ready requirements, EV-ready requirements, electric-preferred requirements, and additional efficiency requirements such as cool roofs and horticulture lighting. These amendments are applicable to residential and commercial buildings.

Phase 2: Beginning in August 2022, communities will work together to develop a roadmap to net zero new construction code for the region by 2030.

Participating communities include:

- City of Louisville
- Town of Superior
- Boulder County
- Town of Erie
- City of Lafayette
- City of Northglenn
- City and County of Broomfield
- City of Longmont

The City of Boulder, City of Westminster, and Town of Berthoud did not participate in Phase 1 but will participate in Phase 2.

Box 1: Code cohort overview.

Discussion

Alignment with the regional code cohort's current IECC 2021 supporting amendments, and the future roadmap to net zero new construction would begin a code update process that increases stringency over time, allowing Council to take a stepped approach toward net zero code adoption by 2030. This approach would align Louisville with its neighboring communities and would provide Louisville an opportunity to co-develop a regional plan to get to net zero new construction. It's important to note that while a regional roadmap will be developed with the goal of consistency across the region, compliance, enforcement, and timelines for net zero code adoption may look unique to each community within the Cohort. Alignment with the Phase 1 code recommendations for the Cohort would increase efficiency requirements for mixed-fuel buildings but not all-electric buildings and does not require all-electric or net zero. This option represents the smallest step forward for above code policy options the City could consider and adopt.

3.2.2 Policy Option 1: Energy Performance Standards for Building Types

POLICY DESCRIPTION

New construction projects would be required to meet an energy performance standard that would be dictated by building type. The standards would be set using a metric called energy use intensity (EUI), which models the total energy consumption of a building for one year divided by the total square footage of the building. On-site PV could contribute to a building meeting the EUI target. Builders following a performance pathway for code compliance would need to meet their respective EUI targets and provide a modeling report as part of the building permit submittal.

If the builder were to pursue a prescriptive-based code compliance pathway, additional efficiency measures such as increased insulation levels and reduced lighting power densities would be required to deliver an equivalent level of efficiency as the energy performance standard.

PREDICTED ENERGY PERFORMANCE GOALS

The City of Boulder's building code[viii] and the New Buildings Institute (NBI)[ix] each have example energy performance standards, using site EUI as a metric, for various building types that the City of Louisville could look to (See Table 2). The City of Boulder standards were developed in 2018 off the previous code cycle. The City of Boulder is lowering these EUI targets ever few years to eventually achieve net zero. NBI's Zero Energy Performance Standards are based on the energy performance of best-in-class buildings for each building type. The NBI standards for Zero Energy Performance were developed with an 'efficiency only' lens, and do not consider the cost effectiveness of achieving the efficiency levels for all building types.

Building Type	City of Boulder Performance Standard (kBtu / sqft.)	NBI Zero Energy Performance Standard (kBtu / sqft.)
Medium office (5,000 – 50,000 sf)	23	21
Mid-rise apartment (Type R2)	32	23
Primary school	34	25
Small office (<5,000 sf)	19	17
Secondary school	31	29
Warehouse	11	9
Retail	NA	34

Table 2: Example energy performance goals for specific building types.

Group14 modeled predicted site EUI, upfront costs, and annual energy costs for each building type to achieve the NBI EUI targets (see Table 3) under this policy option. The Group14 model investigated the most cost-effective means of achieving the NBI standards using both efficiency and onsite PV to reach each standard. Note, this differs from the NBI methodology, which only incorporated energy efficiency measures to meet each target.

Building Type	HVAC Fuel Type	EUI targets modeled	Estimated Upfront Cost of HVAC without PV	EUI earned without PV	PV size required to reach EUI Target (kW)	Estimated Upfront Costs with PV	Annual Energy Cost Savings after PV
Multifamily	Mixed-Fuel	23	$206,661	36	111kW	$484,161	$12,432
	All-Electric		$182,500	23	4kW	$192,500	$448
Office	Mixed-Fuel	21	$4,180,608	29	185kW	$4,643,108	$20,720
	All-Electric		$4,353,828	29	177kW	$4,796,328	$19,824
Retail	Mixed-Fuel	34	$1,123,500	103	310kW	$1,898,500	$34,720
	All-Electric		$1,232,200	63	223kW	$1,789,700	$24,976

Table 3: EUI target modeling and associated costs for buildings compliant with Policy Option 1: Energy performance standards.

GREENHOUSE GAS EMISSIONS

To assess how this option might contribute to Louisville's emissions reduction goals, Group14 also modeled GHG emissions resulting from a building achieving its energy performance standard, based on the building type. Energy performance standards help to drive up energy efficiency and drive down building emissions, as illustrated in Figures 1 and 2. In each building type, for mixed fuel and all-electric systems, a building that has achieved its energy performance standard creates less GHG emissions than the same building compliant with current code.

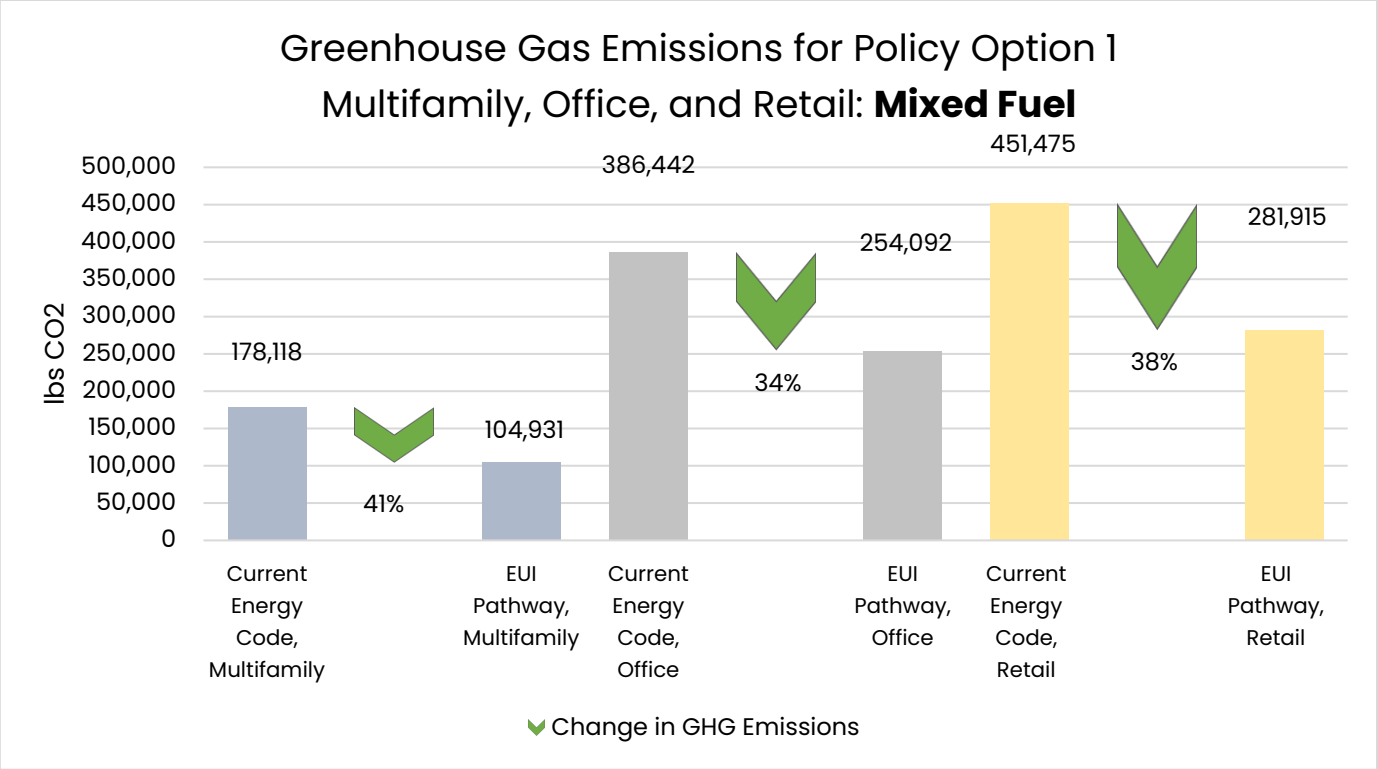

*Figure 1: Annual GHG emissions for **mixed fuel** buildings compliant with current code, compared to GHG emissions for buildings compliant with Policy Option 1: Energy performance standards for building types.*

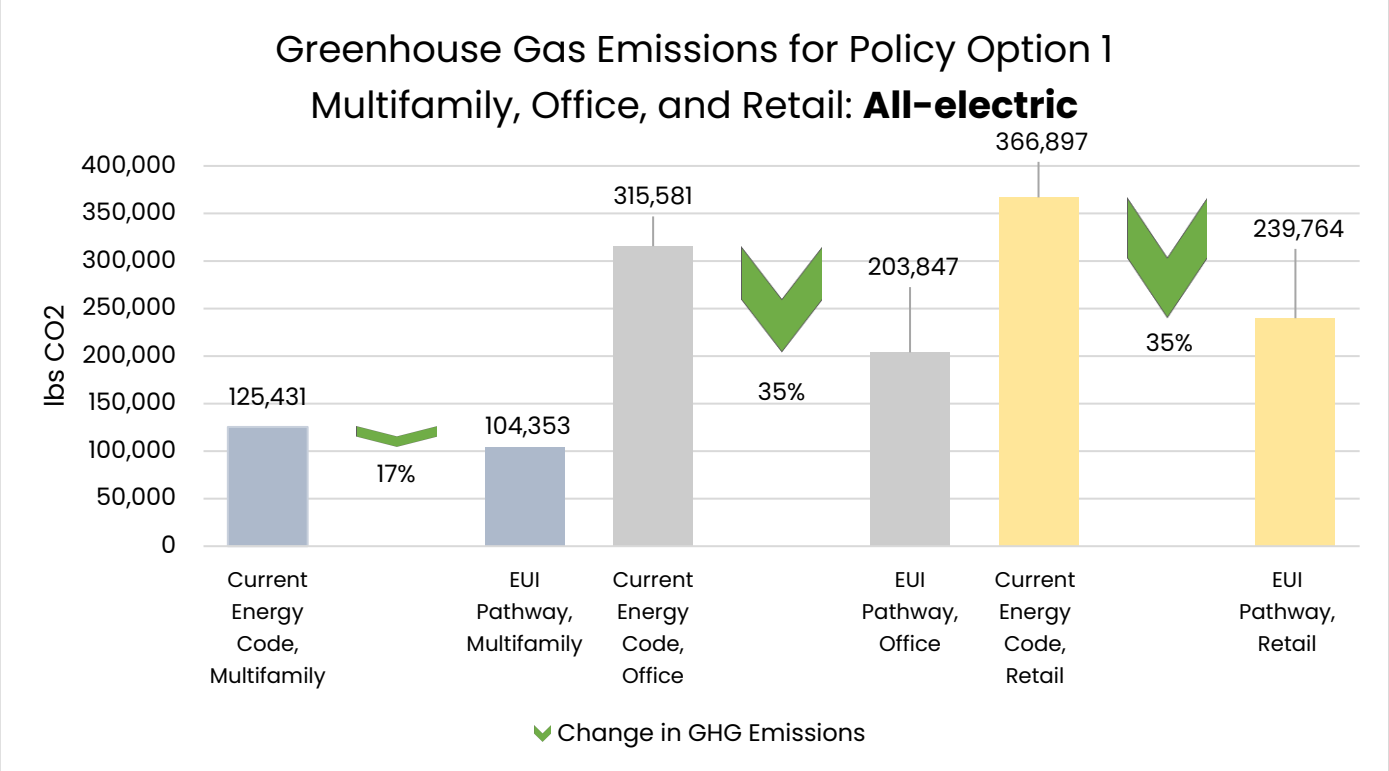

*Figure 2: Annual GHG emissions for **all-electric** buildings compliant with current code, compared to GHG emissions for buildings compliant with Policy Option 1: Energy performance standards for building types.*

DISCUSSION

Policy Option 1 is the most flexible of the code options. Buildings must reach an energy performance standard specific to that property type, but a building owner has options for how they chose to reach their energy performance standard. Onsite renewable energy can also contribute to the building's predicted EUI, adding another option in addition to efficiency to reach the target. This code results in more energy efficient, lower emitting buildings than the code package from the regional cohort and Appendix CC of the 2021 IECC.

All-electric buildings can reach much lower predicted EUIs because electricity has a lower energy density[x] than natural gas. Therefore, lower energy performance goals will naturally lead builders to all-electric options, which will result in lower GHG emissions over time as the electric grid becomes cleaner. This policy option allows the City to limit exemptions from the building code because energy performance standards can be applied to all building types, including those with high energy needs, such as a hospital. Finally, this option does not mandate building owners to invest in on or offsite PV to comply with code but provides building owners the option to use onsite PV to their own financial benefit if they so choose.

The NBI Standards modeled for this project are higher than both the City of Denver and the City of Boulder's standards for building types, making them more aggressive than local large cities surrounding Louisville. If the City chooses to pursue this policy option, additional analysis will be required to determine which targets are the most appropriate for the City of Louisville to adopt. Alignment with the City of Boulder's soon to be updated standards, could be advantageous to Louisville and would promote regional consistency.

Policy option 1 is the consultant and staff recommendation for the City's energy code. See Section 4 for further discussion.

3.2.3 POLICY OPTION 2A AND 2B: APPENDIX CC AND/OR ALL-ELECTRIC REQUIREMENT

POLICY DESCRIPTION

Policy Option 2A mandates compliance with Appendix CC of the 2021 IECC, zero energy commercial building provisions. Policy Option 2B builds upon 2A, adding a requirement that HVAC and plumbing systems must be all-electric. Appendix CC does not require commercial buildings to meet a higher level of efficiency above the base requirements in the IECC 2021. It does, however, require that commercial buildings must, in theory, offset 100% of the energy consumed onsite over a 15-year period using renewable energy. Note, it is likely that every commercial building will require both on and offsite renewable energy to reach the 100% offset requirement of Appendix CC. Procurement of offsite renewable energy to meet the 100% offset requirement is more complicated in practice. Appendix CC penalizes buildings

for procuring offsite renewables as opposed to generating 100% of their energy offset onsite, requiring buildings to procure more offsite renewables than a direct offset would require. These complications are discussed in more detail in the Offsite Procurement Discussion section below.

MODELED COST AND RENEWABLE ENERGY REQUIREMENTS

As noted previously, Group14 examined upfront cost and the annual energy bill costs for HVAC systems in each modeled building type (Office, Retail, Multifamily) that are compliant with current code. Further analysis for this policy option provided the amount of PV a building would be required to invest in, to achieve net zero and earn compliance with Appendix CC, as well as related cost data. It is important to note that in all cases, for commercial buildings that meet 2021 base code efficiency, covering the available roof area with PV did not result in a net zero building. Therefore, it is anticipated that all commercial buildings will need to invest in offsite PV to fulfill the requirements of Appendix CC. The cost of offsite PV procured via 15-year contracts for green retail tariffs and Renewable Energy Certificates (RECs) was also modeled. Results are outlined in Tables 4, 5, and 6. Though results vary by HVAC system, on average, all-electric systems with PV had a quicker payback period due to needing less renewable energy to offset their building energy use than natural gas systems.

Multifamily HVAC System Options	Cost for Code Compliant Building		Costs for Onsite PV					Net Zero Offsite PV – REC Pricing		
	Upfront Cost of HVAC System	Total Annual Energy Bills	PV (kW) required for Net Zero	PV that can fit onsite (kW)	Cost of Onsite PV	Annual Energy Bill with Onsite PV	Total Annual Energy Cost Savings with PV	kW Remaining to Offset	Green Tariff Cost (15 years, purchased in kWhs)[xi]	Unbundled RECs Cost (15 years, purchased in MWhs)[xii]
Mixed Fuel Option 1	$157,321	$40,785	338 kW	98 kW	$245,000	$28,809	$10,976	240 kW	$137,303	$70,482
Mixed Fuel Option 2	$278,321	$25,230	365 kW			$14,254		267 kW	$152,838	$78,457
Mixed Fuel Option 3	$267,321	$38,038	303 kW			$27,062		205 kW	$117,259	$60,193
Mixed Fuel Option 4	$459,821	$27,071	357 kW			$16,095		259 kW	$148,328	$76,142
All-Electric Option 1	$135,000	$40,383	236 kW			$29,407		138 kW	$79,174	$40,643
All-Electric Option 2	$245,000	$40,601	232 kW			$29,625		134 kW	$76,493	$39,266
All-Electric Option 3	$437,500	$28,431	201 kW			$17,455		103 kW	$59,226	$30,402

Table 4: Data detailing costs and PV amounts for a multifamily building under Policy Option 2A and 2B.

Office HVAC System Options	Cost for Code Compliant Building		Net Zero Requirements and Costs for Onsite PV					Net Zero Offsite PV – REC Pricing		
	Upfront Cost of HVAC System	Total Annual Energy Bills	PV (kW) required for Net Zero	PV that can fit onsite (kW)	Cost of Onsite PV	Annual Energy Bill with Onsite PV	Total Annual Energy Cost Savings with PV	kW Remaining to Offset	Green Tariff Cost (15 years, purchased in kWhs)[xi]	Unbundled RECs Cost (15 years, purchased in MWhs)[xii]
Mixed Fuel Option 1	$2,327,633	$104,604	722 kW	250 kW	$625,000	$76,604	$28,000	472 kW	$285,152	$146,378
Mixed Fuel Option 2	$1,786,323	$135,278	777 kW			$107,278		527 kW	$317,602	$163,036
Mixed Fuel Option 3	$4,492,873	$95,077	772 kW			$67,077		522 kW	$315,006	$161,703
All-Electric Option 1	$1,948,716	$131,993	755 kW			$103,393		505 kW	$304,622	$156,373
All-Electric Option 2	$3,789,170	$90,551	544 kW			$62,551		294 kW	$179,548	$92,168
All-Electric Option 3	$3,464,384	$94,324	567 kW			$66,324		317 kW	$192,996	$99,071
All-Electric Option 4	$4,005,694	$103,660	578 kW			$75,660		328 kW	$199,485	$102,403

Table 5: Data detailing costs and PV amounts for an office building under Policy Option 2A and 2B.

Retail	Cost for Code Compliant Building		Net Zero Requirements and Costs for Onsite PV					Net Zero Offsite PV – REC Pricing		
HVAC System Options	Upfront Cost of HVAC System	Total Annual Energy Bills	PV (kW) required for Net Zero	PV that can fit onsite (kW)	Cost of Onsite PV	Total Annual Energy Bill with Onsite PV	Total Annual Energy Cost Savings with PV	kW Remaining to Offset	Green Tariff Cost (15 years, purchased in kWhs)[xi]	Unbundled RECs Cost (15 years, purchased in MWhs)[xii]
Mixed Fuel Option 1	$570,500	$164,492	1741 kW	600 kW	$1,500,000	$97,292	$67,200	1,141 kW	$689,194	$353,786
Mixed Fuel Option 2	$456,000	$182,683	1564 kW			$115,483		964 kW	$584,178	$299,878
Mixed Fuel Option 3	$630,500	$158,096	1566 kW			$90,896		966 kW	$585,261	$300,434
All-Electric Option 1	$660,000	$193,161	1449 kW			$125,961		849 kW	$515,973	$264,866
All-Electric Option 2	$708,000	$185,053	1369 kW			$117,853		769 kW	$468,337	$240,413
All-Electric Option 3	$3,167,500	$156,491	1157 kW			$89,291		557 kW	$342,752	$175,946

Table 6: Data detailing costs and PV amounts for a retail building under Policy Option 2A and 2B.

Offsite Procurement Discussion

To achieve the net zero requirement for both Policy Options 2A and 2B, a typical commercial or industrial building would not be able to fit the necessary PV on the building's available roof space and must supplement by procuring offsite renewable energy. Appendix CC does not require a building to pursue onsite renewable energy before they purchase offsite offsets. To ensure building maximize onsite renewable energy, the City could consider amending Appendix CC to require building to max out their onsite PV potential before pursuing offsite offsets.

Options for offsite procurement include community solar gardens, REC purchases, green retail tariffs, and virtual power purchase agreements (VPPAs). In Appendix CC, offsite renewable energy procurement is penalized based on the type of offsite a building pursues. For any remaining energy that must be offset offsite, a procurement factor must be applied which will increase the offsite renewables a building must procure. The procurement factor is a penalty for opting for offsite purchasing instead of onsite renewable energy generation and is required per the energy offset calculations in Appendix CC.

Appendix CC lists specific offsite offset requirements which mandate that renewable energy must be generated within the utility service territory and the contract must be 15 years in length, among others. As a result, there is a feasibility challenge with this policy option including insufficient onsite roof space to completely offset energy use, limited availability of local offsite renewable resources like community solar gardens, and constraints on open-market REC procurements that meet the requirements of Appendix CC.

Green retail tariffs, which are RECs purchased directly from the electric utility, pose a challenge for Appendix CC compliance. Green retail tariffs cannot be procured on a 15-year contract basis, and they only cover building electricity consumption, not overall building energy consumption.

Community solar gardens are local and can be procured on a 15-year contract basis, however, according to discussions with Xcel Energy, there is limited availability and high demand for these gardens, making it unlikely that a building owner would be able to procure the necessary offsite PV to comply with code.

RECs tend to be low cost and an easy procurement method, making them a popular option for offsetting energy use. However, they likely do not represent local renewable energy generation and there is no 15-year contract option available, thus violating the Appendix CC requirements.

Virtual PPAs can have 15-year contracts, however, like RECs, the renewable energy generation might not be local, making this option potentially invalid according to Appendix CC.

For Policy Options 2A and 2B to be feasible, City staff would need to amend the Appendix CC language to accommodate for the challenges in offsite procurement and to require onsite PV be required ahead of offsite procurement.

Offsite Renewable Energy Procurement

Unbundled Renewable Energy Certificate (REC): a market-based instrument that represents the property rights to the environmental, social, and other non-power attributes of renewable energy generation. A REC is one megawatt-hour of electricity generated and delivered to the grid.

Community solar: an offsite solar installation that a customer can contribute funds to and receive the benefits of via bill credit.

Green retail tariff: a program offered by utilities in which a customer can buy renewable energy credits at an additional charge to cover monthly electric use.

Virtual Power Purchase Agreement (PPA): a method for large commercial entities to purchase offsite renewable energy at a fixed rate for a fixed amount of time.

GREENHOUSE GAS EMISSIONS

The GHG impact of Policy Options 2A and 2B must be viewed through two lenses: GHG reductions from onsite renewable energy and GHG reductions from offsite renewable energy.

If a building utilizes onsite PV to achieve the net zero requirement, that onsite renewable energy generation will create a direct reduction of GHG emissions. This is the same emissions reduction mechanism that occurs from PV installed to comply with the requirements of Policy Option 1.

GHG emission reductions from offsite renewable energy vary due to several factors such as procurement method and location of the renewable energy that was purchased. In addition, Appendix CC penalizes buildings for purchasing offsite energy in the form of RECs, via the procurement factor. For example, purchasing enough RECs in theory could offset all emissions created by the building. However, when a property owner purchases a REC, they are buying the right to a unit of energy from a solar garden or a wind farm that already exists, and would have existed if the building owner did not purchase the REC. Thus, the building owner's purchase is not generating any new renewable energy resources that would offset the emissions produced by the building. This would not be the case for a local community solar garden since the purchase would contribute to the development of new renewable energy resources.

Furthermore, the emissions intensity of the grid (how clean or dirty the power source for the grid is) where the renewable energy is being purchased from impacts GHG reduction. If the grid the building is drawing power from is cleaner than the grid the building owner is buying RECs from, the REC purchase has a larger GHG reduction impact but if the situation were reversed, the REC purchase has a smaller GHG reduction impact.

GHG emission reductions from Policy Options 2A and 2B are outlined below (Figures 3, 4 and 5). Net zero emissions represent a scenario in which the building has installed the maximum amount of PV they can fit on their available roof space. Figure 6 shows the emissions savings resulting from the remaining energy use being offset by RECs, with a procurement factor applied. Code compliant HVAC systems, both mixed fuel and all-electric, were modeled for each building type. Policy Options 2A and 2B have much larger GHG emissions reductions than Policy Option 1, as expected due to the nature of a net zero and/or all-electric building.

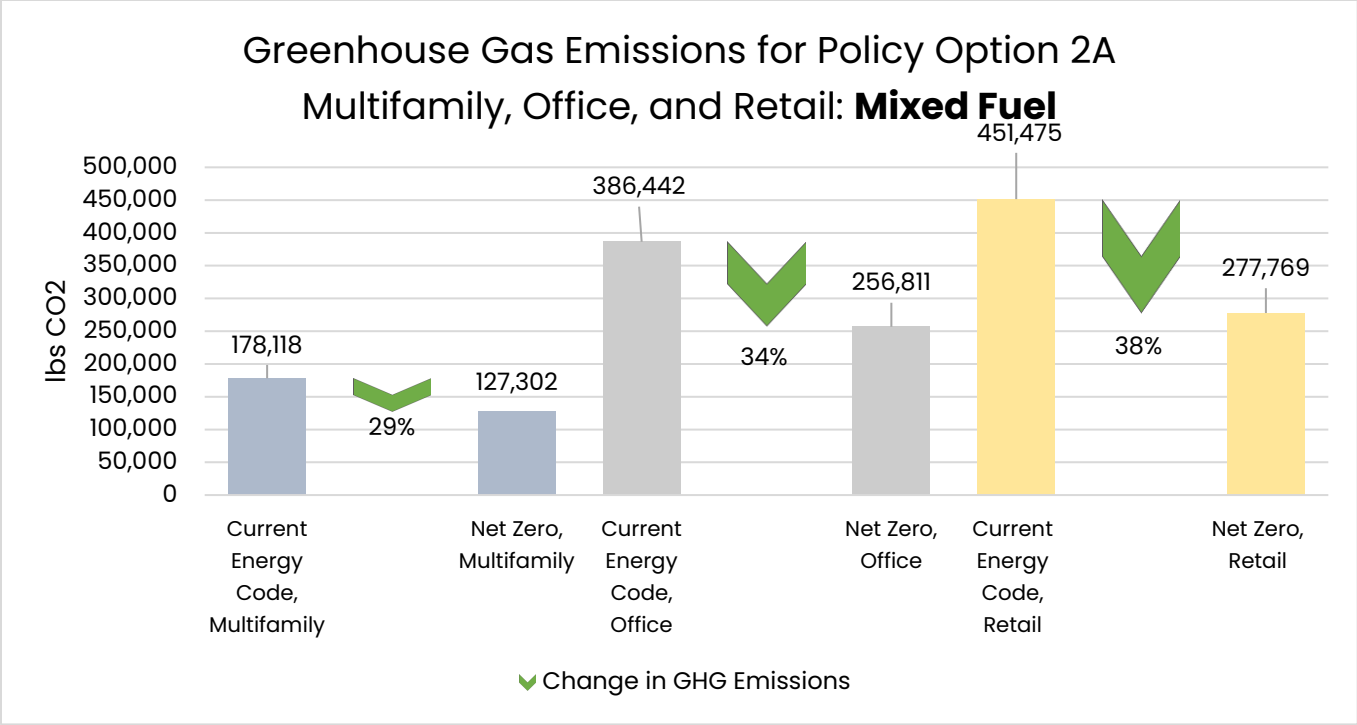

*Figure 3: Annual GHG emissions for **mixed fuel** buildings compliant with current code, compared to GHG emissions for **mixed fuel** buildings compliant with Policy Option 2A: Appendix CC, Net Zero.*

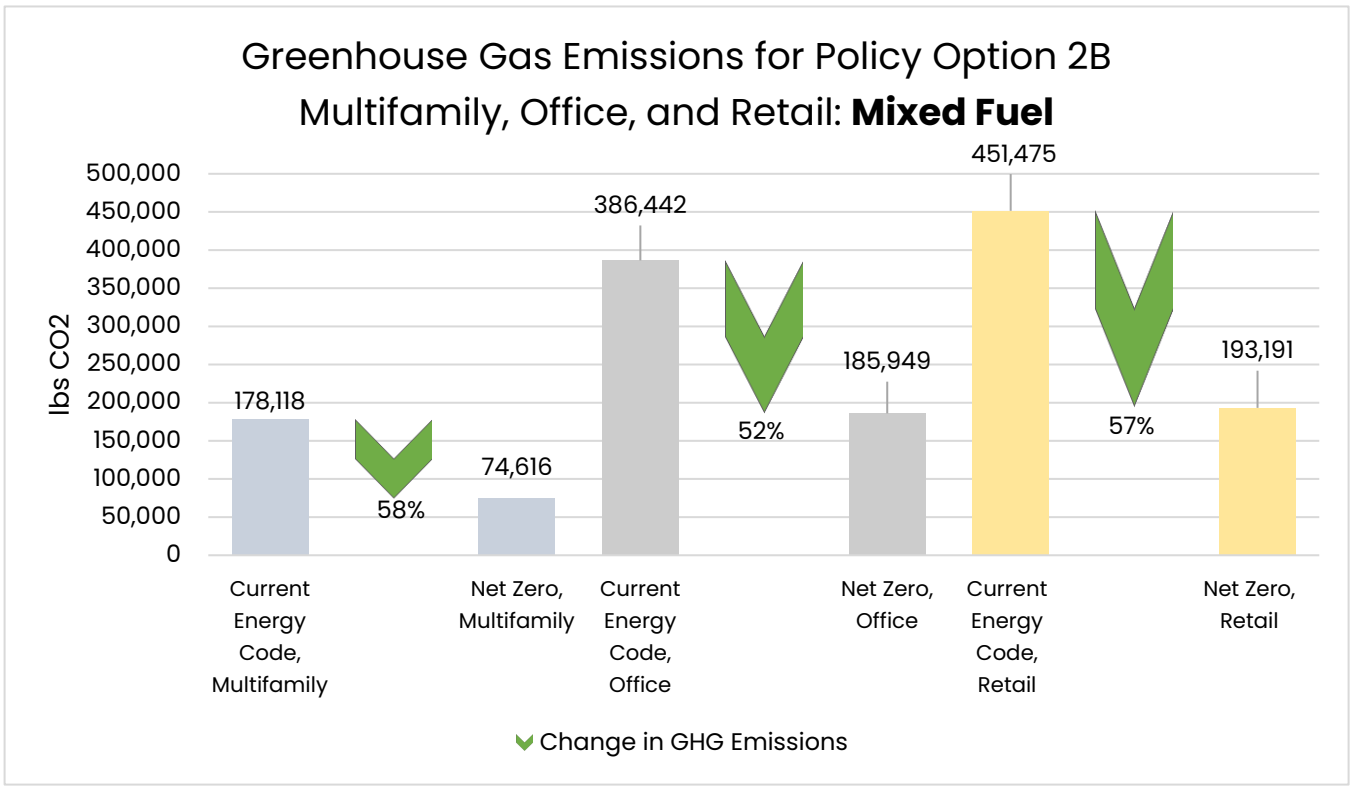

*Figure 4: Annual GHG emissions for **mixed fuel** buildings compliant with current code, compared to GHG emissions for **all-electric** buildings compliant with Policy Option 2B: Appendix CC, Net Zero + all-electric.*

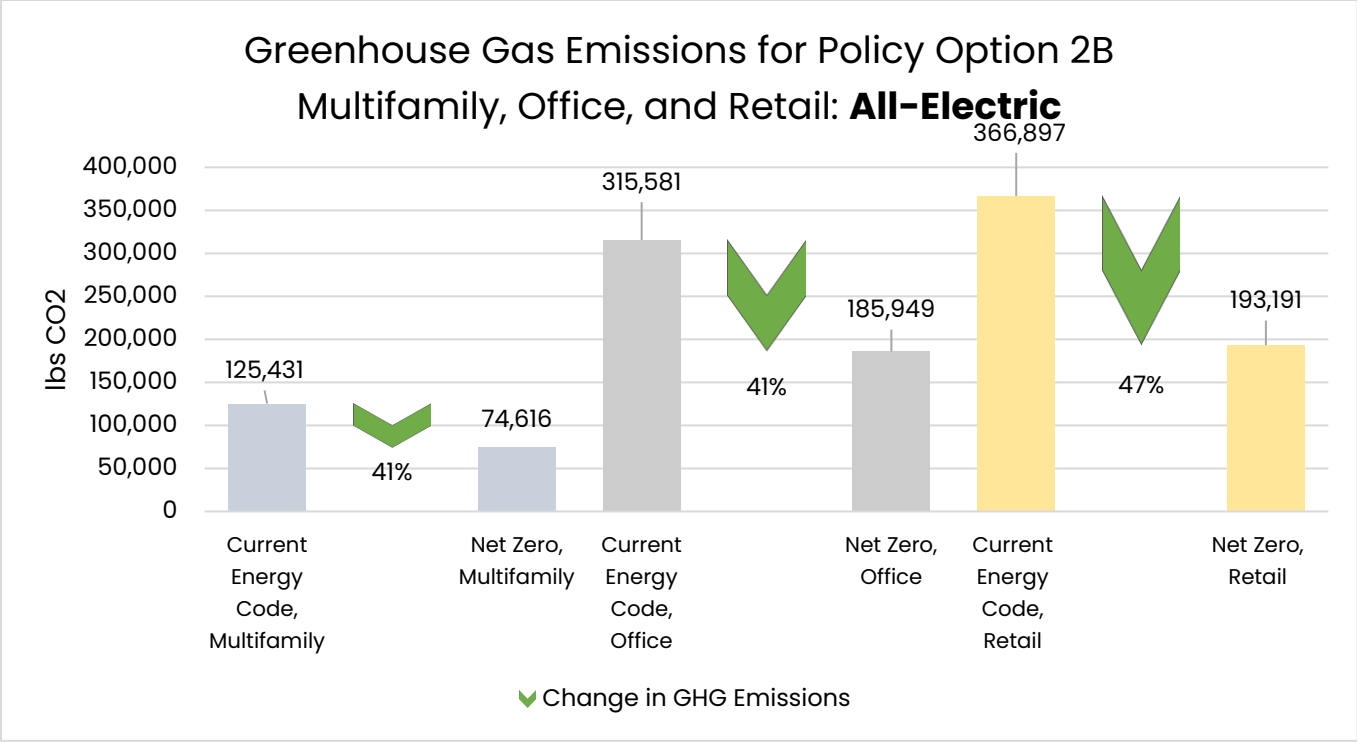

*Figure 4: GHG emissions for **all-electric** buildings compliant with current code, compared to GHG emissions for **all-electric** buildings compliant with Policy Option 2B: Appendix CC, Net Zero + all-electric.*

The GHG emissions modeling for unbundled REC purchasing used the nationwide average electricity emissions intensity, 0.85 lbs/kWh, as reported by the Energy Information Administration. The GHG calculations also included a mandatory application of a procurement factor which requires buildings who offset with RECs to purchase five times the total RECs required for a full offset.

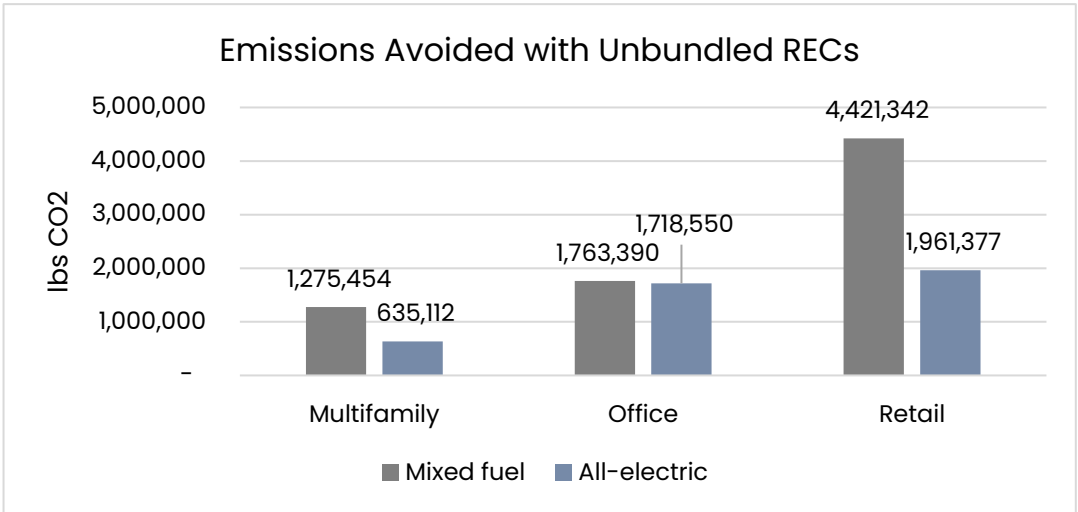

Figure 5: Emissions avoided with unbundled RECs purchased to offset any energy consumption remaining after installing the maximum amount of onsite PV.

DISCUSSION

Policy Options 2A and 2B are most aggressive options in reducing GHG emissions through onsite PV, but do not increase the energy efficiency of the building over base code. Policy Options 2A and 2B require net zero with onsite and offsite PV, and 2B is the only option that also mandates all-electric, disallowing fuel choice. Exemptions for both Policy Options 2A and 2B could be considered for certain building types that contain processes that cannot be net zero or all-electric due to unfeasible cost or lack of technology. These process load exemptions may impact buildings such as laboratories, manufacturing facilities, industrial processing, restaurants, and/or hospitals. If exempted, these process loads, under Policy Options 2A and 2B would be exempt from the net zero or all-electric requirement.

These policy options do come with complications, including the need to amend Appendix CC for offsite procurement and the variability of the potential GHG impacts. Additionally, post hoc modeling revealed that the payback period for PV installation is no less than 22 years for any HVAC system in any of the building types modeled. The upfront investment building owners would need to make in onsite PV will payback overtime, but it's important to note that investments in offsite PV will always be an additional cost and will never represent revenue or financial benefit.

3.3 OVERALL PUBLIC FEEDBACK SUMMARY

The public engagement process was conducted with recognition that an energy code update will impact community members from all sectors. An in-depth review and analysis of the input received can be found in Appendix B.

General feedback from all public outreach methods indicated that the Louisville community does not feel ready for an aggressive approach to energy code updates. This is indicated by levels of support for each of the recommendations (Figures 7, 8, 9, and 10) and by both written and oral comments (Appendix B). While some were supportive of the desire to achieve sustainability goals, many showed concern about the upfront and ongoing costs that the code updates would impose on the community, the capability of the grid to handle electrification pushes, and the very limited access to offsite renewable energy.

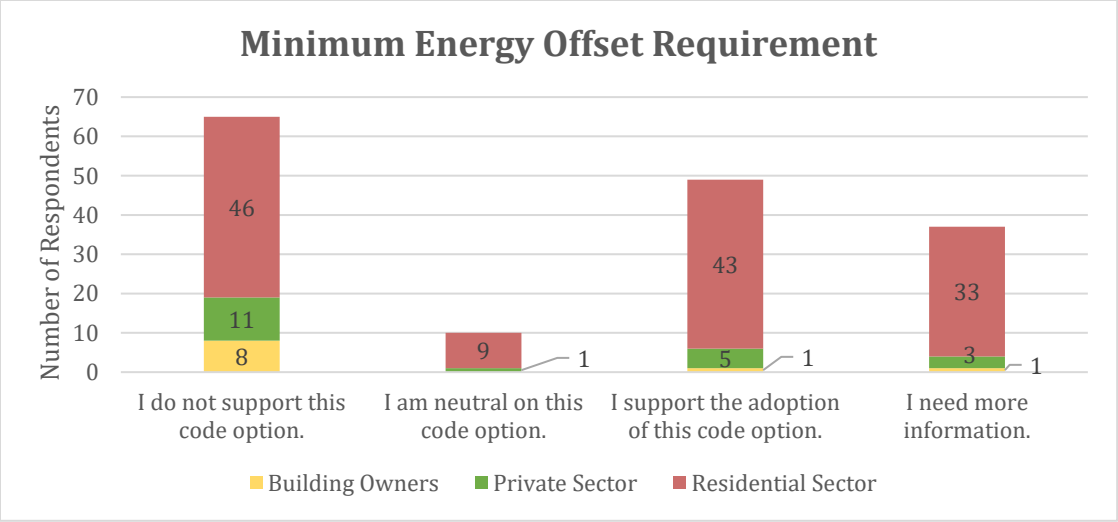

Figure 7: All sector levels of support for Minimum Energy Offset code option. ***How supportive would you be of including a minimum energy offset requirement in addition to the 2021 code, which would require on-site or off-site solar?***

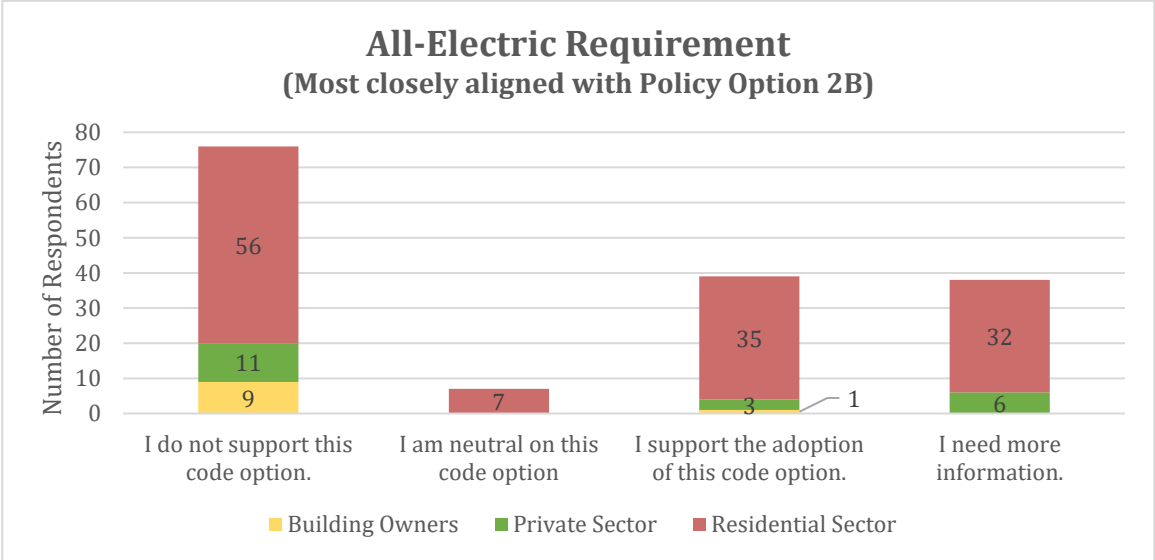

Figure 8: All sector levels of support for All-Electric Requirement code option. ***How supportive would you be if the City were to consider an all-electric requirement for new commercial construction code if industrial processes were exempt?***

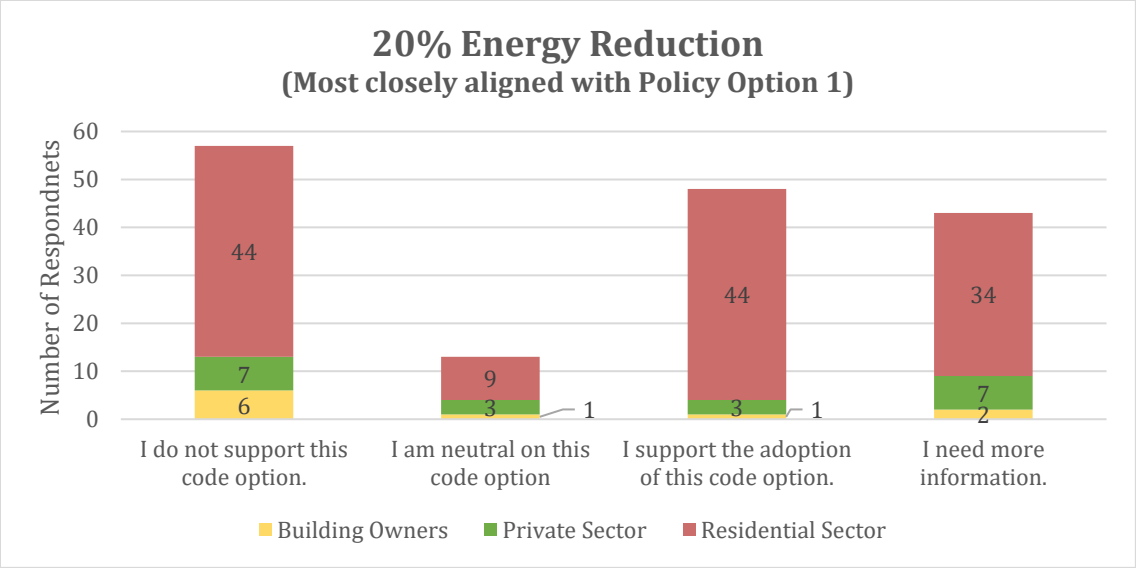

Figure 9: All sector levels of support for 20% Energy Reduction code option. ***How supportive would you be if the City were to consider an energy code that required a 20% reduction in energy use from the 2021 energy code for commercial construction?***

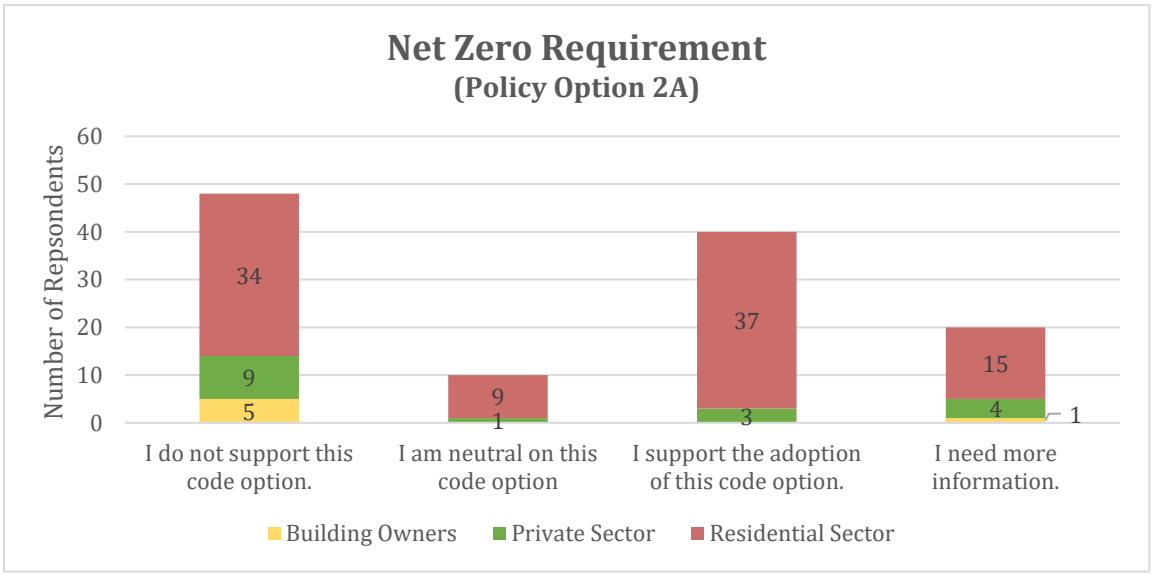

Figure 10: All sector levels of support for Net Zero code option. ***How supportive would you be if the City were to consider a commercial energy code that required net zero energy through efficiency and onsite/off-site renewable energy?***

In the online public engagement survey, the project team asked business and building owners what payback period they would tolerate for the additional upfront costs of installing solar for net zero and all-electric buildings. It is important to note that most respondents indicated that they would not tolerate any increased upfront cost, despite the payback period. Three out of ten building owners selected a payback period of zero-to-5-years, and

only one building owner was comfortable with a 10-20-year timeframe. Six out of 22 business owners would be comfortable with a zero-to-5-year payback timeframe, only two selected payback periods of 10 years or more, and six others were not interested in solar at all. In sum, according to the survey, the tolerance threshold for increasing upfront costs for onsite solar, all-electric construction, and net zero construction is low.

The project team also wanted to use the survey to assess where community values fall as they relate to adopting stricter energy codes. The survey asked, "What's the most important consideration for the City in adopting stricter energy codes for residential and commercial construction?". The results of this question emphasized the need for balance (Figure 11) and reinforced sentiments heard from the other public engagement sessions and shown by the support assessment questions. Overall, the community wants council to carefully consider this ordinance and focus on understanding its potential impacts, rather than rushing to be a leader in the energy code space.

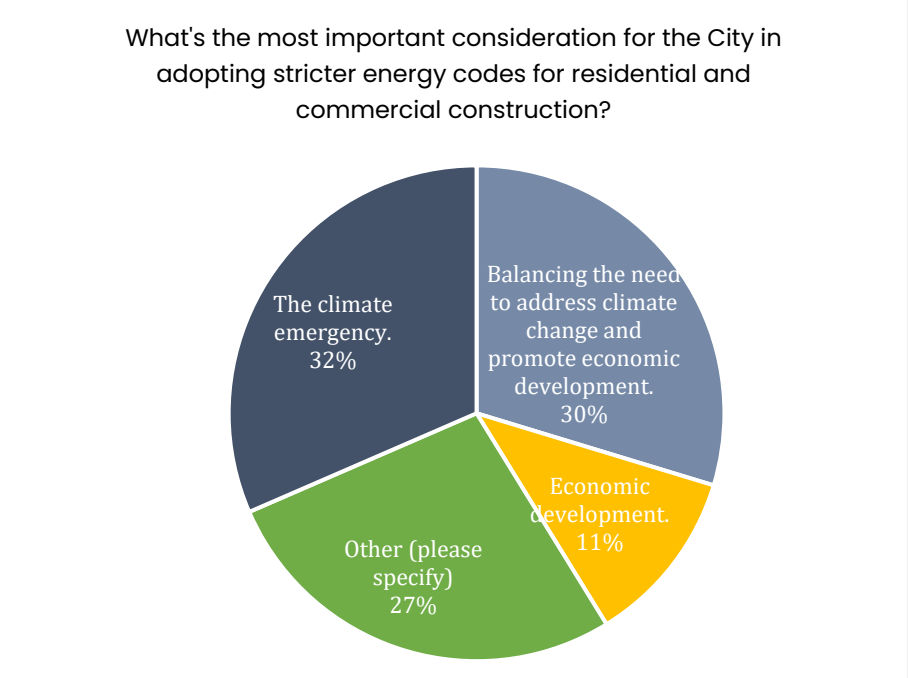

Figure 11: Percentage breakdown of answers for important considerations for stricter energy code.

4. Conclusion

4.1 Final Policy Recommendation

The project team diligently considered the City of Louisville's sustainability goals, the energy modeling and policy research, public feedback, and the estimated GHG impacts of the policies when deliberating a final recommendation for Louisville's energy code. ***Based on a need for balance and feasibility, the project team recommends City Council pursue Policy Option 1: Energy Performance Standards for Building Types.***

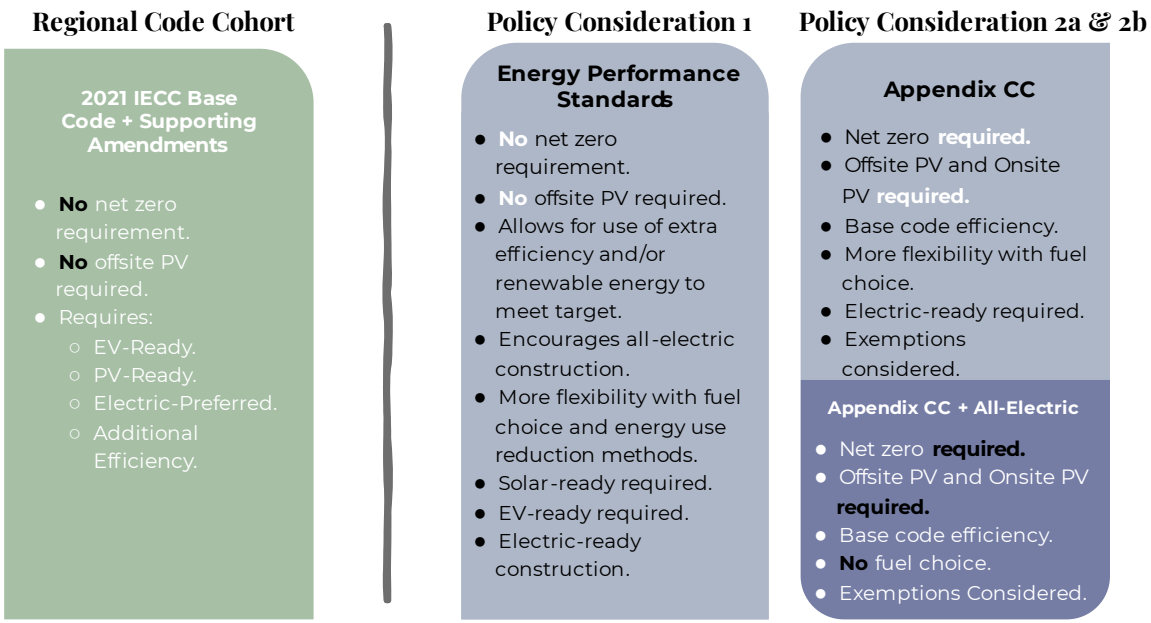

Figure 12: Summary graphic detailing the features of each policy option.

Energy performance standards emphasize energy efficiency and result in lower emitting buildings, thus contributing to Louisville's sustainability goals. There is also no net zero or all-electric requirement, which increases feasibility for building owners, and significantly reduces the upfront cost impacts. While all-electric systems are not mandated in this policy option, energy performance goals, via EUI targets, are more easily achieved with all-electric HVAC and plumbing systems than mixed-fuel systems. Therefore, this code option encourages all-electric new construction while still giving developers and owners choice. Additionally, the code option encourages local renewable energy generation because onsite renewable energy installation can help a building owner achieve the energy performance goal. The last advantage to this code option is that exemptions are not necessary. Buildings with heavy energy loads can still pursue energy use reduction via other efficiency measures.

Policy Option 1 does not create as large of a GHG reduction as Policy Options 2A and 2B, since it is a less aggressive code package. However, the annual energy costs of this policy option were generally lower than those in a building compliant with current code, depending on the building type and system installed. Annual energy costs of Policy Options 2A and 2B are generally lower than both current code compliant buildings and buildings modeled with Policy Option 1 requirements, but PV and offsite renewable energy add significant costs. Under Policy Option 1, a building owner could opt to utilize PV, onsite or offsite, if they would like it to contribute to the building's energy performance standard, but only if they deem it financially beneficial. Thus, Policy Option 1 provides more flexibility with the cost burden a building owner is willing to take on.

4.2 Future Considerations

The project team and the City recognize that stricter building energy codes alone will not achieve the City of Louisville's energy and climate goals. This section captures ideas that were brought forward throughout the project that the City could consider to further support achieving these goals.

First, public engagement brought many questions about how the code updates will impact existing buildings. Current code language says that an addition, alteration, repair, or renovation must be completed to the most up-to-date code for the scope of work intended (if the scope of the project triggers requirements in the code). Any building components not in the intended scope of work do not need to be brought up to code. The project team recommends that council carefully consider how existing buildings will be impacted by the new commercial construction code, including the cost impacts of the code update they choose to enact on these types of existing building projects. Making additions, alterations, repairs and/or renovations too expensive may encourage a property owner to scrape and rebuild rather than renovate. This would create more embodied carbon and obstruct the City's sustainability efforts. Existing buildings can be used as a climate action strategy if additions, alterations, repairs and/or renovations are allowed to pursue a prescriptive pathway to incremental efficiency improvements. The 2021 building code is more efficient than any previous code cycle and consequently, incremental changes to the existing building stock will still be impactful.

Other policy mechanisms also exist to address the existing building stock, that may be more appropriate than new construction code triggers. Benchmarking and building performance standards stand out as the most pursued policy mechanism to address existing building energy use and GHG emissions. The City of Louisville can look to City of Denver[xiii] or City of Boulder's[xiv] benchmarking programs for examples.

For a more holistic approach to increasing the positive environmental impact of new construction, the City can also look into green building codes and certifications. The International Green Construction Code (IgCC)[xv] and LEED[xvi] certifications are two examples of options that address building sustainability more comprehensively, including requirements topic areas like waste, materials management, water use, land use, and connectivity.

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[i] https://www.ipcc.ch/report/ar6/wg3/resources/press/press-release/

[ii] https://www.louisvilleco.gov/home/showpublisheddocument/25430/637114996226870000

[iii] "Core Municipal GHG Emissions" refers to the total GHG emissions from all municipal activity.

iv "Core Community GHG Emissions" refers to the total GHG emissions from the entire City of Louisville including all residential, commercial, and industrial energy consumption.

[v] https://www.louisvilleco.gov/home/showpublisheddocument/28886/637376646025230000

[vi]https://www.mckinsey.com/industries/engineering-construction-and-building-materials/our-insights/call-for-action-seizing-the-decarbonization-opportunity-in-construction

[vii]https://www.google.com/url?q=https://www.louisvilleco.gov/home/showpublisheddocument?id%3D22360&sa=D&source=docs&ust=1660286628507708&usg=AOvVaw1EUGqL2jm5HmMJ3ZUliJzc

[viii] https://bouldercolorado.gov/services/building-performance-ordinance

[ix] https://newbuildings.org/wp-content/uploads/2019/09/ZeroEnergyCommercialBuildingTargets.pdf

[x] https://energyeducation.ca/encyclopedia/Energy_density

[xi] Note, 15-year contracts are not available for Green Retail Tariffs. Green Retail Tariffs can also only be purchased to offset electricity use. Pricing shown here is meant for informative purposes only.

[xii] Note, 15-year contracts are not available for unbundled RECs. Pricing in table reflects REC pricing today.

[xiii]https://www.denvergov.org/Government/Agencies-Departments-Offices/Agencies-Departments-Offices-Directory/Climate-Action-Sustainability-Resiliency/Goals-and-Policies/Energize-Denver-Benchmarking

[xiv] https://bouldercolorado.gov/services/building-performance-ordinance

[xv]https://codes.iccsafe.org/content/IGCC2021P1/preface#:~:text=The%20IgCC%20is%20a%20model,on%20the%20natural%20environment%20and

[xvi] https://www.usgbc.org/leed

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ENERGY CODE ANALYSIS – ENERGY MODELING AND POLICY CONSIDERATIONS

6/24/2022

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LIST OF ABBREVIATIONS

Abbreviation	Definition
ACH	Air Changes per Hour
BTU	British Thermal Unit
CO2	Carbon Dioxide
CSG	Community Solar Garden
DHW	Domestic Hot Water
DOAS	Dedicated Outdoor Air System
ECO	Energy Conservation Opportunity
ECM	Energy Conservation Measure (synonymous to ECO)
EUI	Energy Utilization Index
ERI	Energy Rating Index
ERV	Energy Recovery Ventilator
EV	Electric Vehicle
F	Fahrenheit
FCU	Fan Coil Unit
FY	Fiscal Year
HERS	Home Energy Rating System
HSPF	Heating Seasonal Performance Factor
HVAC	Heating, Ventilation, and Air-Conditioning
HW	Hot Water
IECC	International Energy Conservation Code
IWG	Inches of Water Gauge
kBtu	Thousand British Thermal Units
kW	Kilowatt/Thousand Watts
kWh	Kilowatt Hour
PNNL	Pacific Northwest National Laboratory
PV	Photovoltaic
SEER	Seasonal Energy Efficiency Ratio
SCC	Social Cost of Carbon
Sq. Ft., SF	Square Foot
TBD	To Be Determined
UEF	Uniform Energy Factor

1 INTRODUCTION

1.1 Executive Summary

Group14's scope for this report is to evaluate the current energy codes established in the City of Louisville and to provide recommendations for future all-electric and net zero codes to meet the City's carbon reduction goals. To produce this report, Group14 has modeled four different building types:

1. Multifamily building – 42,000 SF
2. Office building – 110,000 SF
3. Commercial development – 90,000 SF
4. Single family home – 2,820 SF

These energy models were created with feedback from the City's planning department as well as average CBECS data for the mountain west region. Each building type is modeled with different HVAC designs which meet the current Louisville energy codes (both Mixed-Fuel and all-electric). Greenhouse gas emissions and net present value analysis is also provided.

In the policy section of this report, all-electric and net zero energy codes from around the country are analyzed. Recommendations are made to push Louisville's energy codes towards all-electric, net zero new construction, while also considering the upcoming IECC code cycles and codes in surrounding counties.

Out energy modeling results show that the all-electric buildings have much lower carbon emissions than mixed fuel buildings but typically have slightly higher annual energy costs. First costs between both the mixed fuel and all-electric designs are similar, due to the current Louisville requirement for all-electric ready new construction. The cost to install the electric infrastructure drives up the cost of the mixed fuel buildings.

2 ENERGY MODELING RESULTS

2.1 Multifamily Building

The multifamily building modeled is typical of multifamily new construction in the City of Louisville. This design is three stories tall, 42,000 SF, with wood framed walls. The different HVAC system options modeled are:

- Mixed-Fuel options:
  - 1: Packaged terminal heat pumps (9.5 EER and 2.9 COP)
    - Ventilation provided through the unit
    - 95% efficient natural gas water heaters
    - C406 pathway: Efficient fossil fuel water heater, Reduced lighting power
  - 2: Split DX fan coil units (SEER 14) with combined heating and domestic water heating
    - Ventilation provided by exhaust fans running continuously
    - 95% efficient natural gas water heaters
    - C406 pathway: Efficient fossil fuel water heater, Reduced lighting power
  - 3: Split heat pumps (SEER 14, 9.2 HSPF)
    - Ventilation provided by exhaust fans running continuously
    - 95% efficient natural gas water heaters
    - C406 pathway: Efficient fossil fuel water heater, Reduced lighting power
  - 4: Water source heat pumps (13 EER, 4.3 COP)
    - Supplemental 80% efficient boiler
    - Variable speed cooling tower
    - Ventilation provided by exhaust fans running continuously
    - 95% efficient natural gas water heaters
    - C406 pathway: Efficient fossil fuel water heater, Reduced lighting power
- All-Electric Options:
  - 1: Packaged terminal heat pumps (10.0 EER, 3.2 COP)
    - Ventilation provided by exhaust fans running continuously
    - Heat pump domestic water heater with supplementary electric heat (3.0 UEF)
    - C406 pathway: 5% cooling improvement, 10% heating improvement, reduced lighting power, heat pump water heater
  - 2: Split heat pumps (SEER 14.7, 9.0 HSPF)
    - Ventilation provided by exhaust fans running continuously
    - Heat pump domestic water heater with supplementary electric heat (3.0 UEF)
    - C406 pathway: 5% cooling improvement, 10% heating improvement, reduced lighting power, heat pump water heater
  - 3: Water source heat pumps (13.6 EER, 4.3 COP)
    - Supplemental electric boiler
    - Ventilation provided by exhaust fans running continuously
    - Heat pump domestic water heater with supplementary electric heat (3.0 UEF) with condenser water heat recovery
    - C406 pathway: 5% cooling improvement, 10% heating improvement, reduced lighting power, heat pump water heater

All other inputs to the energy models meet the existing Louisville energy code (2021 IECC with amendments), including insulation and glazing values. The options comply with the code via the prescriptive path, which includes compliance with Section C406. Each design reflects the most cost-effective compliance pathway. All energy

modeling for the multifamily building assumer commercial utility rates – the building is on a master electrical utility meter with submeters serving each unit.

Multifamily - System Type	*Annual Energy Cost*	*First Cost*	*Annual Energy Cost with PV Required for Net Zero Energy*	*First Cost with PV Required for Net Zero Energy*
Mixed Fuel Option1	$40,785	$157,321	$4,329	$1,001,660
Mixed Fuel Option 2	$25,230	$278,321	$8,461	$1,190,470
Mixed Fuel Option 3	$38,038	$267,321	$4,131	$1,024,164
Mixed Fuel Option 4	$27,071	$459,821	$7,578	$1,352,283
All-Electric Option1	$40,383	$135,000	$13,924	$725,600
All-Electric Option 2	$40,601	$245,000	$14,667	$823,897
All-Electric Option 3	$28,431	$437,500	$5,873	$941,024

The first cost analysis for the multifamily building show that the mixed fuel options are similar first costs to the all-electric option due to the electric-ready infrastructure required under the current Louisville energy code.

Our energy modeling results show that the multifamily buildings with gas heating have lower annual energy costs than those that are all-electric. When photovoltaics are considered to make the buildings net zero, however, we found that the all-electric options require less PV and have a positive net present value. This positive net present value is calculated over a period of 20 years, with a 3% energy escalation rate. Each net present value option is evaluated against Mixed Fuel Option 1. A positive net present value means that the investment in the estimated initial construction investment is paid off before the end of the 20-year period.

Multifamily	*PV Size Required for Net Zero Energy (kW)*
Mixed Fuel Option1	338
Mixed Fuel Option 2	365
Mixed Fuel Option 3	303
Mixed Fuel Option 4	357
All-Electric Option1	236
All-Electric Option 2	232

All-Electric Option 3	201

Multifamily	Payback, No PV Included (years)	Payback, Net Zero (years)
Mixed Fuel Option1		
Mixed Fuel Option 2	9	>50
Mixed Fuel Option 3	>50	>50
Mixed Fuel Option 4	37	>50
All-Electric Option1	1	1
All-Electric Option 2	>50	1
All-Electric Option 3	39	1

Another important note is the greenhouse gas emissions created by each system type. Using NREL's Cambium tool, Group14 calculated the hourly greenhouse gas emissions throughout the year based on the average emissions expected in the entire State of Colorado. With Xcel Energy's goal to be 79% carbon neutral by 2035, we expect that the greenhouse gas emissions of these design options will be much lower in 2035, rather than the values shown in our analysis.

Without PV, the mixed fuel options have average emissions of 170,000 lbs CO2 in 2022 as compared to 110,000 lbs CO2 for the all-electric options. In 2035, the average carbon emissions drop to 95,000 lbs CO2 for the mixed fuel options and 67,000 lbs CO2 for the all-electric options.

2.2 Office Building

The office building is a 110,000 SF, 3-story building with metal-framed walls and is 40% glazed. To select the size of this building, we used information from the 2018 CBECS data for the average size of an office building in the mountain west region. The different HVAC options modeled are as follows:

- Mixed-Fuel options:
    - 1: Packaged VAV with hot water reheat (10.3 EER)
        - Condensing boilers (94% efficient)
        - 80% efficient natural gas water heaters
        - C406 pathway: 5% cooling efficiency improvement, reduced lighting power
    - 2: Packaged VAV with gas heat and electric reheat (10.3 EER)
        - 80% efficient natural gas water heater
        - C406 pathway: 5% cooling efficiency improvement, reduced lighting power

    - 3: Four pipe fan coil units
        - Ventilation is provided by a DOAS with gas heat and DX cooling (80% efficient and 9.8 EER, 3.3 COP)
        - Chilled water is provided by air cooled chiller (9.7 FL | 16.1 IPLV)
        - Heating water is provided by 94% efficient central boilers
        - 80% efficient natural gas water heater
        - C406 pathway: Dedicated outdoor air system, reduced lighting power

- All Electric Options:

    - 1: Packaged VAV with heat pump and electric reheat (10.3 EER)
        - Energy recovery ventilation (0.5 effectiveness)
        - Electric water heating
        - C406 pathway: 5% cooling efficiency improvement, reduced lighting power

    - 2: Water source heat pumps (13 EER, 4.3 COP)
        - Condenser water loop is served by variable speed cooling tower and electric boiler
        - Ventilation is provided by a heat pump DOAS (9.8 EER, 3.3 COP)
        - Energy recovery ventilation (0.5 effectiveness)
        - Electric water heating
        - C406 pathway: Dedicated outdoor air system, reduced lighting power

    - 3: Variable refrigerant flow (SEER 13, 7.7 HSPF)
        - Ventilation is provided by a heat pump DOAS (9.8 EER, 3.3 COP)
        - Energy recovery ventilation (0.5 effectiveness)
        - Electric water heating
        - C406 pathway: Dedicated outdoor air system, reduced lighting power

    - 4: Two pipe fan coil units with chilled water cooling and electric heating coils
        - Ventilation is provided by a DOAS with gas heat and DX cooling (80% efficient and 9.8 EER, 3.3 COP) with energy recovery ventilation (0.5 effectiveness)
        - Chilled water is provided by air cooled chiller (9.7 FL | 16.1 IPLV)
        - Electric water heating
        - C406 pathway: Dedicated outdoor air system, reduced lighting power

Our analysis of the different office buildings shows that the annual energy costs of an all-electric office building are comparative to that of a Mixed-Fuel building. Heating energy use in offices is relatively small and is primarily for heating outdoor air for ventilation.

Office - System Type	*Annual Energy Cost*	*First Cost*	*Annual Energy Cost with PV Required for Net Zero Energy*	*First Cost with PV Required for Net Zero Energy*
Mixed Fuel Option 1	$104,604	$2,327,633	$23,730	$4,132,873
Mixed Fuel Option 2	$135,278	$1,786,323	$48,276	$3,728,323
Mixed Fuel Option 3	$95,077	$4,492,873	$8,835	$6,423,932
All-Electric Option 1	$131,993	$1,948,716	$47,442	$3,836,012
All-Electric Option 2	$90,551	$3,789,170	$29,616	$5,149,336
All-Electric Option 3	$94,324	$3,464,384	$30,850	$4,881,224
All-Electric Option 4	$103,660	$4,005,694	$38,960	$5,449,886

The predicted energy use of the modeled office buildings is lower than actual building performance due to how office buildings are operated. Often, building owners will increase the operational hours of their building for cleaning crews or early/late workers, and even operate them 24/7 to maintain a single zone at a prescribed temperature. The analysis assumes a standard 7 AM – 6 PM, Monday through Friday, occupancy schedule. In addition, control settings are often overridden to limit economizer operation and hold the supply air temperature at 50-55 F rather than allowing the supply temperature to reset upwards when the outside air is cooler.

To meet net zero, the photovoltaic systems sizes predicted are too large to fit on the roof of the example building. The buildings would be required to purchase off-site PV to fully offset the building's energy use.

Office	*PV Size Required for Net Zero Energy (kW)*	*Estimated PV Area (SF)*
Mixed Fuel Option 1	722	103,157
Mixed Fuel Option 2	777	110,971
Mixed Fuel Option 3	772	110,346
All-Electric Option 1	755	107,845
All-Electric Option 2	544	77,724
All-Electric Option 3	567	80,962
All-Electric Option 4	578	82,525

The net present value analysis for the office buildings shows that the buildings will not pay back within the expected life of the equipment for most of the options. Each net present value option is evaluated against Mixed Fuel Option 1. The two most cost-effective options, Mixed-Fuel options 1 and 2 without PV, are the cheapest first cost options that were analyzed, as expected. With PV, Mixed Fuel Option 2 and All-Electric Option 1 are more cost-effective than Mixed Fuel Option 1.

Office	Payback, No PV Included (years)	Payback, Net Zero (years)
Mixed Fuel Option 1		
Mixed Fuel Option 2	1	1
Mixed Fuel Option 3	>50	>50
All-Electric Option 1	1	1
All-Electric Option 2	>50	>50
All-Electric Option 3	>50	>50
All-Electric Option 4	>50	>50

The carbon emissions analysis shows that the all-electric designs show much lower emissions than the Mixed-Fuel options. In 2022, the mixed-fuel buildings have an average carbon emissions of 380,000 lbs CO2. In 2035, they have a predicted emissions of 215,000 lbs CO2. The all-electric buildings have an average carbon emissions of 315,000 lbs CO2 in 2022 and 170,000 lbs CO2 in 2035.

2.3 Commercial Development

The commercial development is assumed to be a strip mall with two food service anchors – a café and a quick-service restaurant. The building is 90.000 SF with concrete block walls and is one story. The building size was determined via the 2018 CBECS data for the mountain west region. The different HVAC options modeled are as follows:

- Mixed-Fuel options:
    - 1: Packaged single-zone rooftop units with DX cooling (SEER 14) and gas heat (80% efficient)
        - Café and food service: 80% efficient natural gas water heaters
        - Retail: electric water heating
        - C406 pathway: Reduced lighting power
    - 2: Packaged single-zone rooftop units with heat pump and back-up electric heat (SEER 14, 8.0 HSPF)
        - Café and food service: 80% efficient natural gas water heaters
        - Retail: electric water heating
        - C406 pathway: Reduced lighting power

  - 3: Packaged variable volume single-zone rooftop units with DX cooling (SEER 14) and gas heat (80% efficient)
    - Café and food service: 80% efficient natural gas water heaters
    - Retail: electric water heating
    - C406 pathway: Reduced lighting power

- All-Electric Options:
  - 1: Packaged single-zone rooftop units with heat pump and back-up electric heat (SEER 14, 8.0 HSPF)
    - Energy recovery ventilation (0.5 effectiveness)
    - Electric water heating
    - C406 pathway: Reduced lighting power
  - 2: Packaged single zone rooftop units with heat pump and back-up electric heat (SEER 14, 8.0 HSPF)
    - Energy recovery ventilation (0.5 effectiveness)
    - Electric water heating
    - C406 pathway: Reduced lighting power
  - 3: Water source heat pumps (13 EER, 4.3 COP)
    - Loop is served by electric boiler and variable speed cooling tower
    - Ventilation is provided by a heat pump DOAS (9.8 EER, 3.3 COP) with energy recovery ventilation (0.5 effectiveness)
    - Café and food service: Electric water heating
    - Retail: electric water heating
    - C406 pathway: Reduced lighting power

In the commercial development models, due to the high service water heating and plug load requirements, the annual energy costs of the mixed fuel buildings are, on average, slightly lower than the all-electric energy costs.

Commercial Development - System Type	*Annual Energy Cost*	*First Cost*	*Annual Energy Cost with PV Required for Net Zero Energy*	*First Cost with PV Required for Net Zero Energy*
Mixed Fuel Option 1	$164,492	$570,500	$23,730	$4,923,423
Mixed Fuel Option 2	$182,683	$456,000	$48,276	$4,366,330
Mixed Fuel Option 3	$158,096	$630,500	$8,835	$4,545,393
All-Electric Option 1	$193,161	$660,000	$47,442	$4,282,873
All-Electric Option 2	$185,053	$708,000	$29,616	$4,130,109
All-Electric Option 3	$156,491	$3,167,500	$30,850	$6,060,323

The high internal loads drive up the amount of PV energy required to make the building net zero energy. The predicted size of the PV systems will not fit on the roof of the building off-site PV would need to be purchased to achieve net zero energy.

Commercial Development	*PV Size Required for Net Zero Energy (kW)*	*Estimated PV Area (SF)*
Mixed Fuel Option 1	1741	248,738
Mixed Fuel Option 2	1564	223,447
Mixed Fuel Option 3	1566	223,708
All-Electric Option 1	1449	207,021
All-Electric Option 2	1369	195,549
All-Electric Option 3	1157	165,304

While the net present value of the options without renewables is mostly negative, the net present value of the designs including renewables is mostly positive. Each net present value option is evaluated against Mixed Fuel Option 1. This assumes that the building will be paid for all of the electricity generated by the PV. However, as noted, the buildings do not have space for all of the onsite solar. Systems of this size are not often available in community solar gardens. With Xcel Energy's goal of net zero energy production by 2035, the requirement for photovoltaics to offset energy use would be greatly reduced in the coming years, as the electricity provided to these buildings moves closer to meeting the net zero carbon emissions goal.

Commercial Development	Payback, No PV Included (years)	Payback, Net Zero (years)
Mixed Fuel Option 1		
Mixed Fuel Option 2	1	1
Mixed Fuel Option 3	12	1
All-Electric Option 1	>50	1
All-Electric Option 2	>50	1
All-Electric Option 3	>50	>50

The carbon emissions analysis, like those above, show that carbon emissions for the all-electric buildings are much lower than those of the mixed fuel buildings. This is due to the high amount of service water required by the food service tenants. The average emissions for a mixed-fuel retail building in 2022 is 850,000 lbs C02. In 2035,

the mixed-fuel buildings are expected to have an average emissions of 470,000 lbs CO2. The all-electric design options have an expected average emissions of 680,000 lbs CO2 in 2022 and 380,000 lbs C02 in 2035.

2.4 Single-Family Home

The single-family home is a 2,820 SF 2-story home with a finished basement. The different HVAC options modeled are as follows:

- Mixed-Fuel options:
  - 1: 96% efficient gas furnace with SEER 16 split DX cooling
    - 0.92 UEF water heater
  - 2: Split heat pump with back-up gas heat (SEER 16, HSPF 10, 96% efficient gas back-up)
    - 0.92 UEF water heater
- All Electric Options:
  - 1: Split heat pump with back-up gas heat (SEER 16, HSPF 10, 96% efficient gas back-up)
    - 3.0 UEF heat pump water heater with supplementary electric resistance heat
  - 2: Ground source heat pump (18 EER, 3.7 COP)
    - 3.0 UEF heat pump water heater with supplementary electric resistance heat
- Appendix RC Options
  - Mixed Fuel Option: 96% efficient furnace with SEER 21 cooling
    - 0.94 UEF water heater
  - All-Electric Option: Cold climate heat pump
    - 3.48 UEF heat pump water heater

In our analysis of the single-family home options, we found that the annual energy costs of the all-electric homes are only slightly higher than the lowest cost option. This is due to the highly efficient and cost-effective all-electric design options available to residential consumers. The design options compliant with Appendix RC have the lowest annual energy costs.

Single-Family Home - System Type	*Annual Energy Cost*	*First Cost*	*Annual Energy Cost with PV Required for Net Zero Energy*	*First Cost with PV Required for Net Zero Energy*
Mixed Fuel Option 1	$2,375	$4,040	$386	$51,775
Mixed Fuel Option 2	$2,388	$4,540	$371	$51,135
All-Electric Option 1	$2,511	$3,255	$966	$37,738
All-Electric Option 2	$2,026	$22,405	$807	$49,621

Mixed Fuel Option - Appendix RC	$1,946	19805	$302	$61,128
All-Electric Option - Appendix RC	$1,795	21750	$519	$50,249

The PV system sizes required for each option are shown below. The all-electric options require the smallest PV sizes to reach net zero energy. The mixed-fuel system options and the Appendix RC compliant mixed-fuel system option require a much larger PV size when compared to the all-electric system options.

Single-Family Home	*PV Size Required for Net Zero Energy (kW)*
Mixed Fuel Option 1	19
Mixed Fuel Option 2	19
All-Electric Option 1	14
All-Electric Option 2	11
Mixed Fuel Option - Appendix RC	17
All-Electric Option - Appendix RC	11

To achieve net zero energy, the PV will only fit on a home that has optimal sun exposure and a large enough roof to fit the PV. This will not be feasible on most homes, which will require enrollment in a community solar program to meet the net zero requirement. COSSA has stated that there will be enough community solar available for homeowners in the City of Louisville. The cost of community solar will not increase utility bills or have an enrollment cost.

Single-Family Home	Payback, No PV Included (years)	Payback, Net Zero (years)
Mixed Fuel Option 1		
Mixed Fuel Option 2	>50	1
All-Electric Option 1	1	1
All-Electric Option 2	>50	1
Mixed Fuel Option - Appendix RC	>50	>50

All-Electric Option - Appendix RC	>50	1

The net present value analysis shows that most of the options have a negative net present value without on-site PV. Each net present value option is evaluated against Mixed Fuel Option 1. This means that the systems will not pay back within the system life span, mainly due to the high cost of electricity in comparison to the mixed fuel baseline. When on-site PV is added, however, the net present values become positive, meaning they will pay back before the end of the 20-year analysis period.

Consistent with the analysis above, the carbon emissions of the all-electric options have much lower greenhouse gas emissions than the Mixed-Fuel options. The design option compliant with Appendix RC that has natural gas use has more carbon emissions than the all-electric new construction options that do not comply with Appendix RC. The average carbon emissions of the mixed-fuel options is 9,000 lbs CO2 in 2022 and 5,000 lbs CO2 in 2035. The all-electric options have an estimated average carbon emissions of 6,000 lbs CO2 in 2022 and 3,500 lbs in 2035.

3 POLICY CONSIDERATIONS

Across the country, from Seattle to Boston, cities are establishing building energy codes to reduce carbon emissions for new construction. The City of Louisville has a goal to create a new construction energy code that will set them on a path towards net zero energy buildings. Louisville's current amendments to the 2021 IECC require some additional energy savings and all-electric ready construction items:

Commercial New Construction

- Increased insulation levels
- Increased fenestration efficiency requirements
- Increased HVAC efficiency
- Electric vehicle charging and infrastructure
- Electric-ready wherever gas appliances are installed
- Solar-ready zone required

Residential New Construction

- Increased insulation levels
- Increased ductwork and piping insulation requirements
- Mandatory heat recovery
- Electric vehicle charging and infrastructure
- Electric-ready wherever gas appliances are installed
- Net zero Appendix RC required

To further increase the energy savings and carbon reduction potential of Louisville's energy code, this report discusses different advanced energy codes across the country and makes recommendations on the future cycles of Louisville's energy code development.

Background

Throughout California, multiple cities require all-electric new construction. In colder climate zones, such as Boston and New York City, jurisdictions have adopted their states' optional stretch codes. These codes require additional energy savings such as mandatory energy recovery, electric vehicle charging, or in some cases a net zero new construction provision that requires electric-ready new construction.

In Colorado, a new bill (HB 22-1362) recently passed that requires jurisdictions to update their energy code to the 2021 version of the IECC when one or more of their building codes are updated. Beginning in July 2023, jurisdictions will also be required to adopt electric and solar-ready requirements and begin enforcing a low energy and carbon code when one or more of their building codes are updated. This sets a great precedent for increasing the energy efficiency requirements of Louisville's energy code.

In the 2021 IECC, there are two appendices, Appendix CC and RC which require net zero commercial and residential new construction, respectively. Appendix CC gives two options for net zero new construction: 1- for buildings complying with the prescriptive pathway energy use intensities are established for each building type and must be offset by either on-site or off-site renewables, or 2- for buildings complying with the performance pathway, they must offset their predicted energy use shown by an energy model with on-site or off-site renewables. Appendix RC, which is currently adopted by the City of Louisville, requires that new construction homes have an ERI rating of 47 or less and the predicted energy use must be offset by on-site or off-site renewables.

Another code to consider in this discussion is Boulder's energy code. In this code, buildings with an estimated construction cost of $500,000 or greater are required to comply with the performance path. This path prescribes maximum Energy Use Intensities (EUIs) that the building design must meet, shown through an energy model. After construction, building owners must reserve funds in escrow to cover the cost to reduce the building's energy use if the building does not meet the maximum allowed EUI.

In addition to these existing codes, there are amendments to the 2024 IECC that have passed preliminary committee approval which will further increase the energy savings of the base code. The all-electric-ready new construction amendment requires that anytime a natural gas appliance will be installed that appropriately sized electric infrastructure will be installed to accommodate a future electrical appliance. The on-site renewable energy amendment will require 0.75 W/sf gross floor area, not to exceed the combined gross conditioned floor area of the three largest floors on all new-construction commercial buildings. These addendums to the 2024 IECC will reduce the carbon emissions of new construction buildings and will encourage all-electric new construction. The IECC will continue to push towards net zero new construction with each code cycle, which will provide a framework for jurisdictions also hoping to require net zero new construction.

There are hurdles to providing all-electric new construction for commercial buildings. In comparison to all-electric space heating and domestic water heating, annual heating costs with natural gas are lower. In Louisville's climate specifically, we find that heat pump systems will have to utilize electric resistance heating during very cold times, further driving up annual energy costs. Additionally, demand response controls for reducing peak energy use and costs are not yet widely supported by Xcel Energy in large commercial buildings. We expect that this hurdle will be overcome in the coming years.

In addition to these climate and utility hurdles, we have found that industrial, laboratory, and manufacturing buildings all have systems that currently cannot be electrified. In Louisville there are major food, machinery, and plastics manufacturers, with specialized processes that use natural gas and cannot currently be replicated with electricity. In the energy codes discussed above, these processes are exempt from the electrification requirement, including the all-electric ready new construction requirement.

Resiliency is another factor to consider in this decision-making process. The Marshall Fire has highlighted concerns on how to make sure Louisville is a safe, resilient place to live and work. Through the energy codes, resiliency can be increased by requiring on-site solar and peak shifting controls to reduce demand and therefore peak loads on the grid.

Considerations

For the City of Louisville, we are recommending three different pathways for commercial energy code adoption:

- Option 1: Require all-electric-ready new construction as an addendum to the 2021 IECC, with on-site or off-site PV required to match the 2024 IECC on-site renewable amendment.
- Option 2: Require projects above a certain construction cost (or size) to meet a maximum-allowed EUI that is low enough that an all-electric design will comply more easily than a Mixed-Fuel building. Provide a prescriptive pathway that requires an equivalent amount of energy efficiency as the performance pathway. All new construction will be required to be electric-ready.
- Option 3: Require all-electric ready, net-zero new construction for all buildings and utilize Appendix CC from the 2021 IECC for buildings that do not pursue the performance path for compliance.
- Option 3B: Require all-electric net zero new construction for all buildings and utilize Appendix CC from the 2021 IECC for buildings that do not pursue the performance path for compliance.

For residential energy code adoption, Louisville has already adopted Appendix RC as a mandatory measure for all new construction buildings. Our recommendation is to amend Appendix RC to allow HERS ratings in lieu of ERI scores. This appendix maintains that buildings can comply with the code with or without natural gas; however, the appendix greatly incentivizes all-electric new construction to meet the energy scores calculated during design. Appendix RC also requires homes to offset their energy use with on-site or off-site renewables.

Discussion

Option 1

This option, seen as the least stringent of the three policies listed above, also requires the least number of amendments for the City of Louisville. This simple code can easily be automatically updated as each new version of the IECC is released.

This code would have the following main items:

- 2021 IECC adopted as the base code (currently adopted in Louisville)
- Electric vehicle charging and electric vehicle ready spaces amended (currently adopted in Louisville)
- All-electric or all-electric ready construction required (currently adopted in Louisville)
- On-site or off-site PV required to match the amendment to the 2024 IECC, alternatively, PV could be provided as required to offset any carbon emissions by natural gas systems used on site.
- Automatic update to the newest version of the IECC upon release

There are many benefits to this code pathway – primarily that the energy code for Louisville will continue to be updated as the code is updated. This also allows for engineers, architects, and building owners to navigate code updates and expectations.

Option 2

In this option, Louisville would use the City of Boulder's Energy Code as a framework for their efficiency code. Boulder's code has additional energy efficiency requirements above the 2018 IECC base code and is estimated to provide 20% additional energy efficiency. The additional energy savings are through mandatory and prescriptive compliance items such as:

- Air barrier testing
- Additional insulation levels
- Additional HVAC controls
- Reduced lighting power densities and additional lighting controls
- Electric vehicle charging
- Solar-ready zone
- Site energy Use Intensity (EUI) targets for the performance pathway

There are many benefits to aligning Louisville's energy code with the City of Boulder. Firstly, creating a unified energy code throughout the area would be beneficial for potential building owners and developers. A consistent energy code will set expectations and establish cost estimates and investments for new construction in the region. In addition, the EUI approach simplifies performance modeling by eliminating a baseline model to compare to.

If Louisville wishes to create a similar code based on the 2021 IECC, analysis could be performed to customize a set of EUIs for performance compliance. City of Boulder mandatory measures could be adopted along with additional mandatory measures, including:

Electric vehicle charging and electric vehicle ready spaces amended (currently adopted in Louisville)

All-electric or all-electric ready construction required (currently adopted in Louisville)

Along with this approach, all-electric buildings could be provided with a simpler path to code compliance and mixed-fuel buildings could require additional energy savings to above the base code to show compliance. For example, an all-electric building would solely have to meet the mandatory requirements in the base code,

however a mixed-fuel building would have to show 10% additional energy savings above the base code. This encourages designers and owners to build all-electric buildings without requiring all-electric new construction for all buildings.

The code maximum EUIs would be difficult to achieve via a Mixed-Fuel building and easier to meet for an all-electric building. As seen in our energy modeling results, the all-electric buildings that comply with Louisville's current energy code have lower energy use intensities than their mixed-use equivalents.

In this pathway, industrial and laboratory occupancies would use a traditional performance modeling compliance pathway and show energy savings. This allows industrial and laboratory occupancies to exclude process energy use from the energy savings calculation, including those processes that utilize natural gas. This results in energy-efficient envelope, lighting and HVAC systems having to offset increased heating and cooling loads from the process equipment.

In addition to this pathway, we recommend that on-site PV is incentivized by Louisville for buildings where PV is best suited, for example buildings with large, open roof spaces and sites that are optimized for solar production. Xcel Energy is targeting 2035 for zero carbon electricity production. There are benefits to buildings with on-site photovoltaics; however, utility-scale photovoltaics are generally better maintained than smaller systems.

Option 3

Under this option, Appendix CC of the 2021 IECC would be made mandatory for new construction commercial buildings. This appendix requires that buildings complying prescriptively provide a set amount of photovoltaics to offset their building's energy use based on their occupancy type. Performance compliance pathways are required to offset their building's estimated energy use shown through an energy model. This net zero requirement can be met through on-site or off-site photovoltaics.

The benefit to this pathway is that the Appendix will continue to be updated to be more effective at each iteration of code amendments at the national level until, hopefully, it is codified in the energy code. While this pathway is the most energy efficient and effective at reducing operational carbon, net zero construction has the highest first cost of all three pathways. The pathway also needs a post-construction performance assessment, such as benchmarking, to confirm net-zero achievement.

Option 3B

Under this option, Appendix CC of the 2021 IECC would be mandatory, with an additional requirement for all-electric new construction. No combustion systems would be allowed, except for the following occupancy types:

- Industrial
- Laboratories
- Manufacturing

In these building types, HVAC and plumbing systems would be required to be all-electric, however processes requiring natural gas would not be. For example, a steam industrial process that requires a large amount of steam would not be required to be electrified.

Future Work

Based on the desired pathway that City Council selects for their energy code, future work will include development of a set of mandatory, prescriptive, and performance measures to ensure that each pathway provides equivalent levels of energy efficiency requirements. Additional work is needed to ensure that resiliency considerations are made for renewable energy systems required, including battery back-up for both peak shifting and emergency power when possible. Any prescriptive pathway set by the city should encourage all-electric new construction and reduce use of natural gas.

4 CONCLUSION

The City of Louisville goals to reduce energy use and greenhouse gas emissions are important steps in addressing our climate crisis. Louisville relies on Xcel Energy for their electricity. Xcel Energy's goal to deliver carbon-free electricity by 2035 is realistic and results in Louisville having access to much cleaner power than the power provided to the rest of the state. Our recommendation is to leverage Xcel Energy's goal to deliver carbon-free electricity by 2035, and focus the energy code on energy efficiency, all-electric buildings, and renewables to offset gas use.

Louisville is surrounded by other counties that also have goals to reduce emissions and increase the efficiency required by the energy code. Creating an energy code that is similar and consistent across the region lets business developers and homeowners know what to expect when looking for a place to build, and helps contractors and engineers find the most cost-effective and energy efficient ways to meet the code. This will improve the efficiency of commercial and residential buildings across the region and encourage designers to find the most cost-effective solutions to the code.

City of Louisville Energy Code Update

Public Engagement Summary

August 2022

LOTUS
Engineering & Sustainability

City of Louisville

Background

In 2021, the City of Louisville adopted the 2021 International Energy Conservation Code (IECC) with specific amendments that included more stringent efficiency requirements, and a requirement for electric-readiness and EV-readiness for all new construction. The City also adopted the Zero Energy Appendix (Appendix RC) that requires net zero energy construction for all new single-family homes in the City.

Now, the City is considering additional code options that would encourage higher efficiency, net zero, and/or all electric for multi-family and commercial new construction. Energy modeling was conducted to evaluate the City's current energy codes and other code development options. The modeling also investigated the up-front cost, annual cost, and lifetime cost of building to the new potential standards.

Public input is critical to the investigation and development of these new multi-family and commercial code options. Code changes impact multiple sectors of the community, from building developers to businesses to tenants and homeowners. City staff engaged the broader public through an online survey and two community meetings. In addition, the City staff engaged with two of the City's boards, the Louisville Sustainability Advisory Board, and the Building Code Board of Appeals, to present code options for feedback. The feedback received from this outreach will support City staff in identifying unforeseen barriers or challenges with new building code policy and will help inform where the opportunity is to drive more efficiency and climate protection in the building code.

City of Louisville Energy Code Update Public Engagement Survey

Survey Methodology

The survey questions were designed with the goal of capturing feedback and assessing support levels for potential code options for the Louisville community, as well as to gain an understanding of the perceived impacts of the code update. This was gathered through a combination of multiple choice and open-ended response questions. The open-ended questions were included to give respondents sufficient opportunity to provide comments. Demographics information was collected to understand what sectors and communities responded to the survey, and which might require additional outreach. Choice logic was used to tailor questions to three main groups: Group 1, Building Owners/Developers, Group 2, Business and Tradespersons, and Group 3, Residential. The survey was designed using SurveyMonkey software and was distributed via publication on the EngageLouisville

website, email listservs, and advertised during the two community meetings. The survey was open from June 27, 2022 to August 5, 2022.

Results of the survey were analyzed to find and remove duplicate responses and to determine whether incomplete responses should be included. Multiple choice question results were summarized and converted into sector-specific charts. Open-ended responses were categorized and summarized.

Survey Results

Key Takeaways	
The survey had a total of 206 responses. *Note: the total number of answers per question may vary from the total number of respondents due to incomplete surveys.*	
Nearly ¾ of survey takers were homeowners, with the remaining ¼ representing building owners and industry professionals.	
Generally, survey takers tended to lean toward opposing each of the code policy considerations. However, the number of survey takers who supported each of the code policy considerations was still significant.	
Survey takers perceived the largest barriers to energy code updates to be additional cost burdens and creating a hostile environment for businesses.	
Survey takers saw the largest benefits to energy code updates to be greenhouse gas reductions and public health improvements (i.e., air quality).	
Survey takers expressed themselves in a wide variety of open responses. Some expressed staunch support for code updates, others expressed staunch opposition. A few of these comments are highlighted below.	
Example responses from those opposing the energy code updates:	Example responses from those supporting the energy code updates:
"Louisville is already not attracting new businesses like surrounding communities are. I want a vibrant economy here and I want to help businesses, not create barriers."	"If we work together (industry and government) to GREATLY reduce the GHG emissions of homes and buildings in the Denver metropolitan area, then we have addressed one of the largest sectors of emissions in CO. This would give upcoming generations a foothold to fight the omnipresent climate crisis. We must invest NOW to help future generations, it's not about us."

"Cost. I am supportive of #'s 21-24, but I think the considerations need a very careful approach with financial implications well laid out in either case studies or similar programs in the U.S. Its tough to for a smaller town, like Louisville, to be on the bleeding edge of the change without a City like Denver helping to lead the way."	"Commercial buildings consume large quantities of power - often 24/7. Since they consume large amounts of power, addressing their electricity consumption should have a real benefit from a climate change perspective."
"1) Addressing climate change while promoting economic development is a prime concern. 2) However, many people will not be able to afford the upgrades!"	"While the impacts to the environment are obvious, I think what these codes can represent is the start of a workforce that is trained in building to higher standards. Codes like these are the future of buildings and it has to start somewhere, so let's start that here!"

DEMOGRAPHICS

The survey asked for race/ethnicity, sector represented, and whether the respondent lives and/or works in the City of Louisville.

RACE/ETHNICITY

- White (83%)
- Hispanic or Latino (3%)
- Multiracial or Biracial (2%)
- Native American or Alaskan Native (1%)
- Asian or Pacific Islander (1%).
- The remaining were write-in responses with many failing to specify.

90% of survey respondents live in Louisville and 42% of respondents work in Louisville.

Most survey respondents were homeowners (74%). The breakdown of the remaining sectors is illustrated in Figure 1. Sector selection determined which questions the respondent would receive. Building Owner and Building Developer selectors were placed in the Building Owner/Developer Group. Business Owner / Manager, Energy Efficiency Expert, Engineer, Architect, or Designer, General Contractor, and Other business were placed in the Business and Tradespersons Group. Those who selected Home Owner,

Affordable Housing Representative, or Residential Tenant or Occupant were placed in the Residential Group.

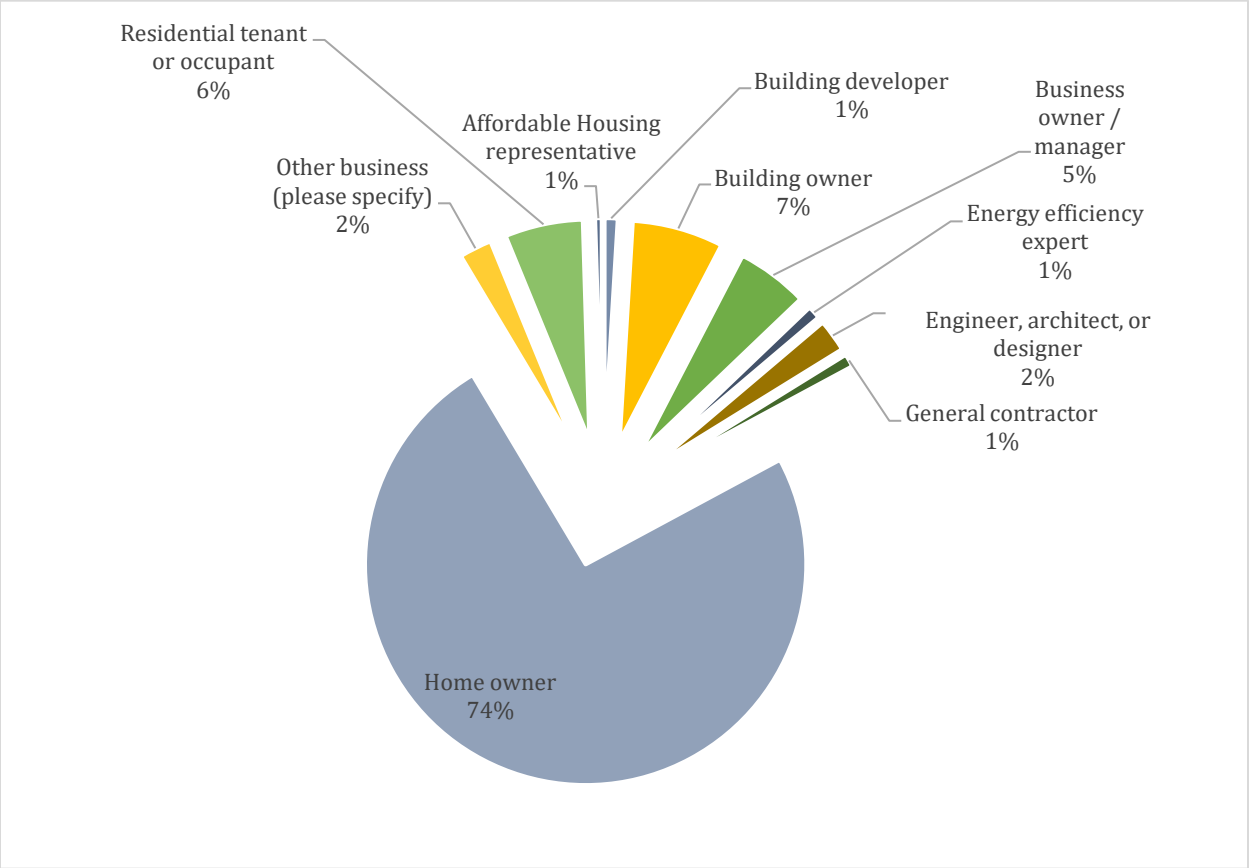


Figure 1: Breakdown of sectors represented in online survey.

Summary of Survey Results from All Groups

Important Considerations for Adopting Code Updates

What's the most important consideration for the City in adopting stricter energy codes for residential and commercial construction?

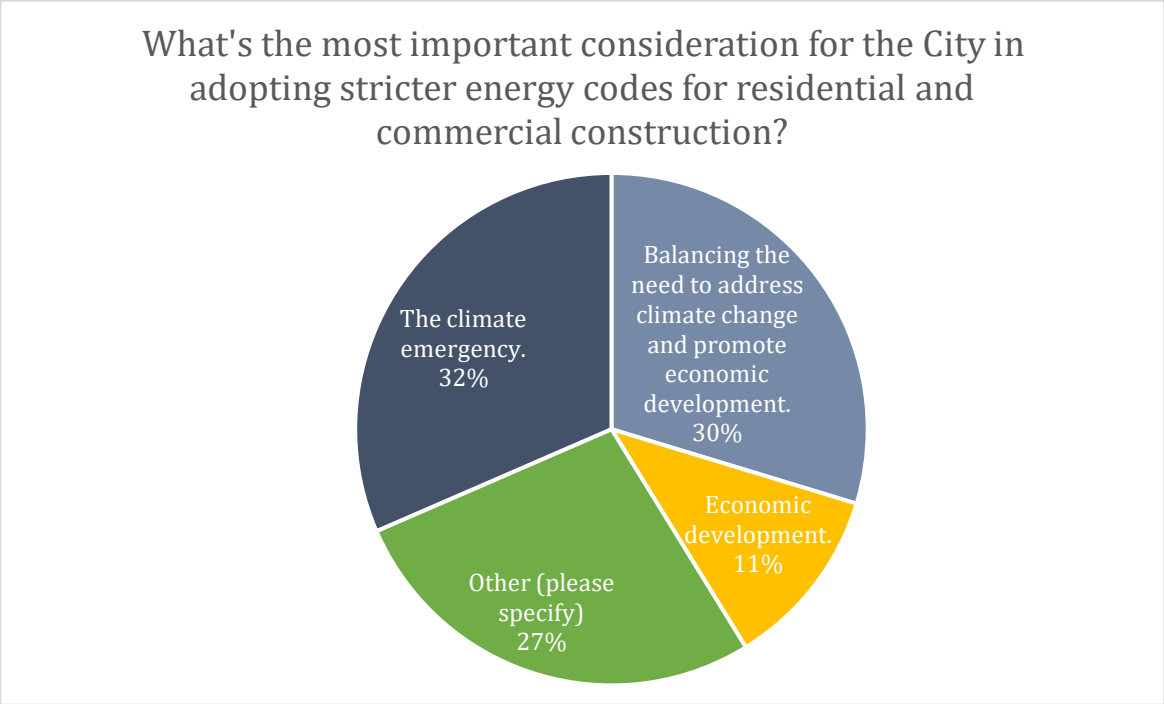


Figure 2: Percentage breakdown of answers for important considerations for stricter energy code.

To evaluate how survey respondents' values may influence their support of code updates or other sustainability measures, the survey asked respondents "What's the most important consideration for the City in adopting stricter energy codes for residential and commercial construction?" See Figure 2 for a breakdown of the results.

'Other' answers included responses expressing the need for cost/benefit analyses, desires for less government interference, and cost concerns. (See Appendix A for open-ended responses.)

Support for Code Considerations

Survey takers were given questions describing potential City code considerations and asked to indicate their level of support via a 3-point Likert scale ranging from opposition to full support, with a fourth answer choice allowing respondents to indicate if they need more information to decide. Results are illustrated in Figures 3-6.

HOW SUPPORTIVE WOULD YOU BE OF INCLUDING A MINIMUM ENERGY OFFSET REQUIREMENT IN ADDITION TO THE 2021 CODE, WHICH WOULD REQUIRE ON-SITE OR OFF-SITE SOLAR?

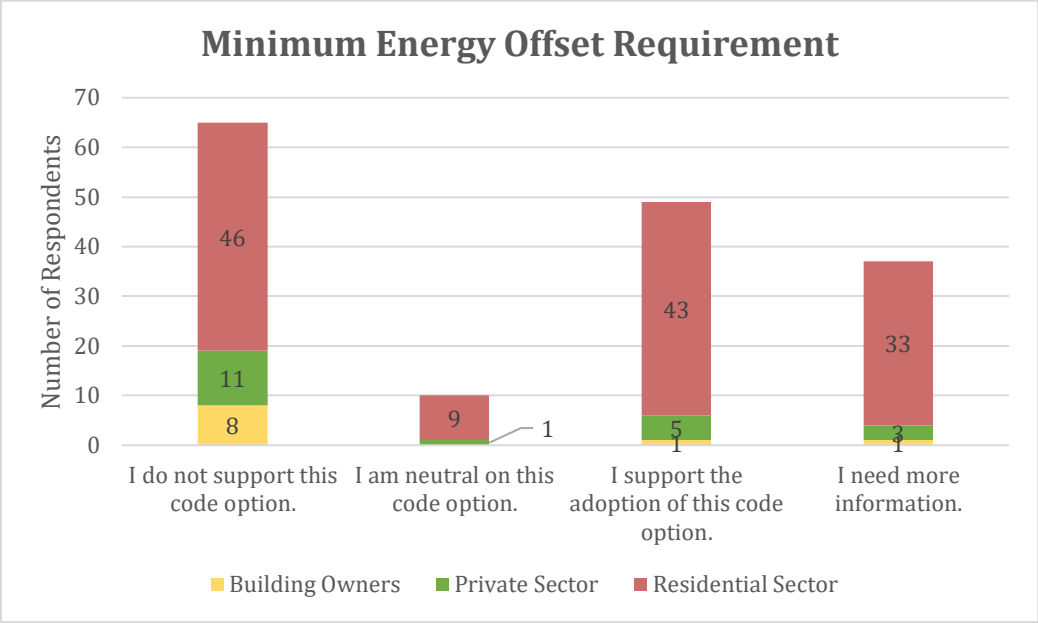


Figure 3: All sector levels of support for Minimum Energy Offset code option.

HOW SUPPORTIVE WOULD YOU BE IF THE CITY WERE TO CONSIDER AN ALL-ELECTRIC REQUIREMENT FOR NEW COMMERCIAL CONSTRUCTION CODE IF INDUSTRIAL PROCESSES WERE EXEMPT?

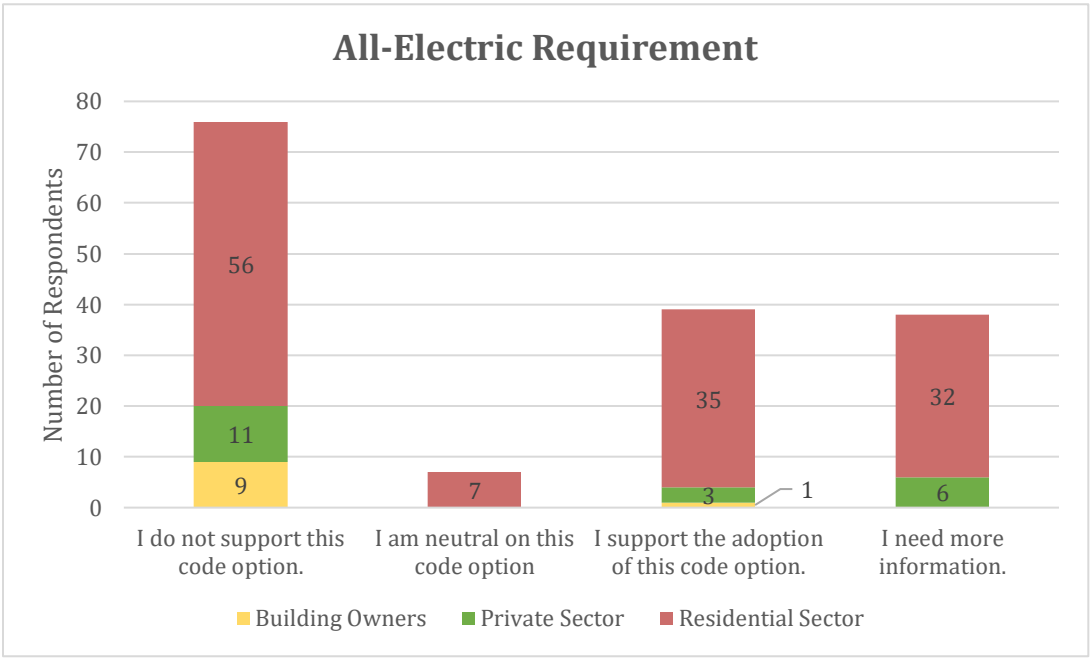


Figure 4: All sector levels of support for All-Electric Requirement code option.

How supportive would you be if the City were to consider an energy code that required a 20% reduction in energy use from the 2021 energy code for commercial construction?

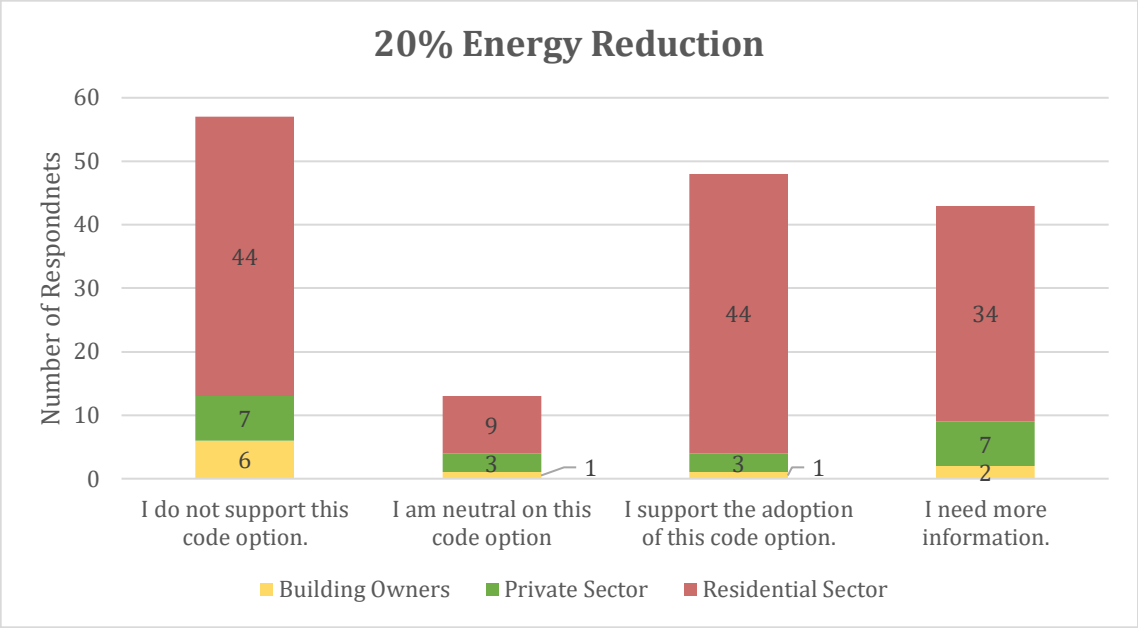


Figure 5: All sector levels of support for 20% Energy Reduction code option.

How supportive would you be if the City were to consider a commercial energy code that required net zero energy through efficiency and onsite/off-site renewable energy?

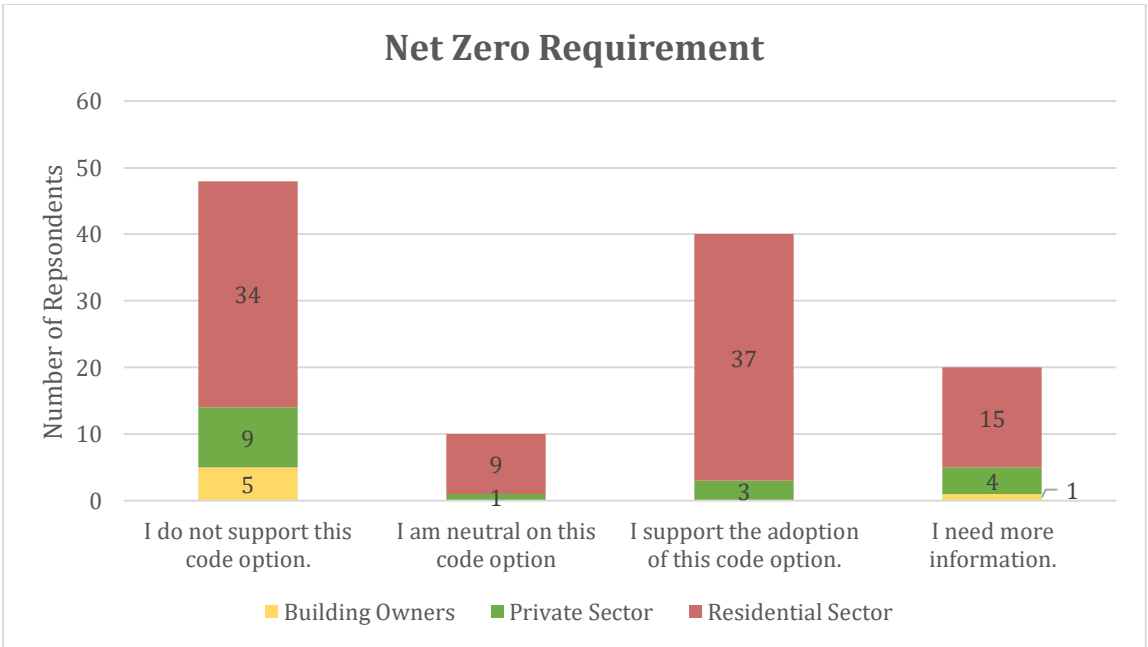


Figure 6: All sector levels of support for Net Zero code option.

Barriers and Benefits

The survey asked open-ended questions to assess what respondents' perceived barriers and benefits were to the code considerations presented to them. The following provides a summary of the open-response comments received in the survey.

Summarized Barriers:

- Cost burdens for builders and tenants alike.
- The code considerations will make the City of Louisville a hostile environment for businesses.
- Residents and builders have a lack of knowledge and education regarding the benefits of code upgrades.

Summarized Benefits:

- Cleaner air.
- Clean energy use and greenhouse gas reductions.
- Increased energy efficiency in buildings.

See Appendix A for a complete list of responses.

Equity Considerations

All participants were asked the open-ended question: "Are there any considerations to address equity for low-income residents or disproportionately impacted communities that the City of Louisville should consider for any of the three commercial code scenarios considered above?"

Common themes resulting from survey responses included:

- Ensuring affordable/inclusionary housing is not unduly burdened by cost because of implementing these energy codes.
- Suggestions that the City provide grants and financial mechanisms for those who qualify.

See Appendix A for a complete list of responses.

Building Owners & Developer Group Responses

The Building Owner / Developer Group had 16 total responses, however, not everyone answered each question.

One survey taker expressed great enthusiasm and support for energy code upgrades. The rest were at the opposite end of the spectrum, showing opposition to all code considerations.

Does your company have sustainability or climate related goals?

5 respondents have started or are fully implementing sustainability/climate goals at their company, while 6 do not have any goals.

Would you prefer energy code requirements that:

- (Performance approach). Set an energy consumption performance target and allow for flexibility in how a building meets that requirement which can include onsite PV if needed to meet the performance target.
- (Performance + prescriptive approach). Set an energy consumption performance target that specifies an efficiency standards for equipment that must be met and requires mandatory PV on all new buildings.

7 building owners selected the performance approach and 3 selected the performance + prescriptive approach.

Support for Code Considerations

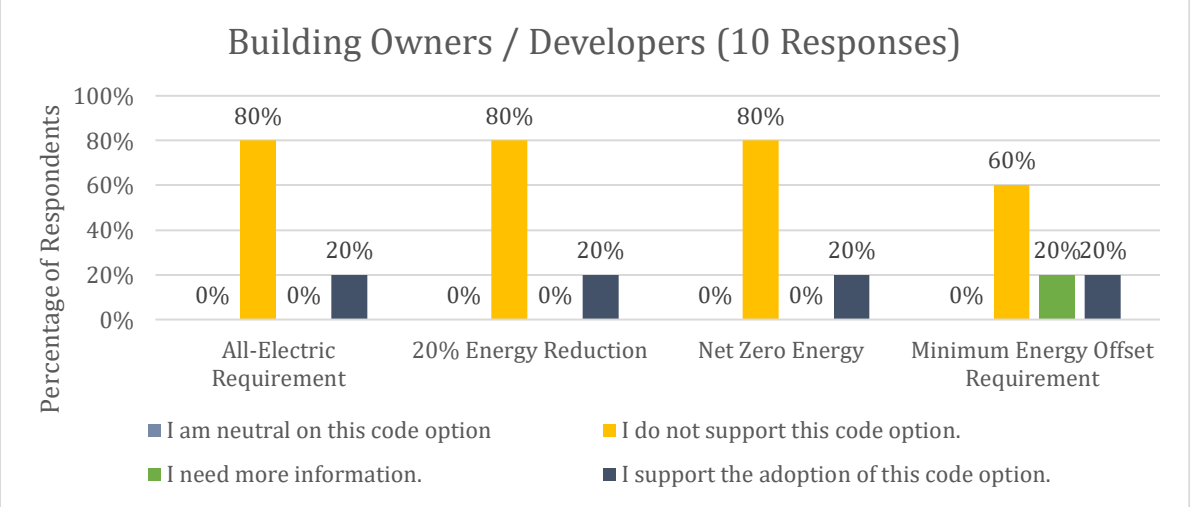


Figure 7: Building Owners / Developers sector levels of support for code options.

Business + Tradespersons Group Responses

The Business + Tradespersons Group had 25 total responses, however, not everyone answered each question.

The survey asked about location of their workspaces.

- 5 own their office/workspace in the City of Louisville.
- 7 rent their office/workspace in the City of Louisville.
- 10 do not have an office/workspace in the City of Louisville.

Does your company have sustainability or climate related goals?

9 respondents do not have sustainability goals, plans, or programs in place. 13 have either begun efforts or have established sustainability plans and/or programs and goals at their company.

Support for Code Considerations

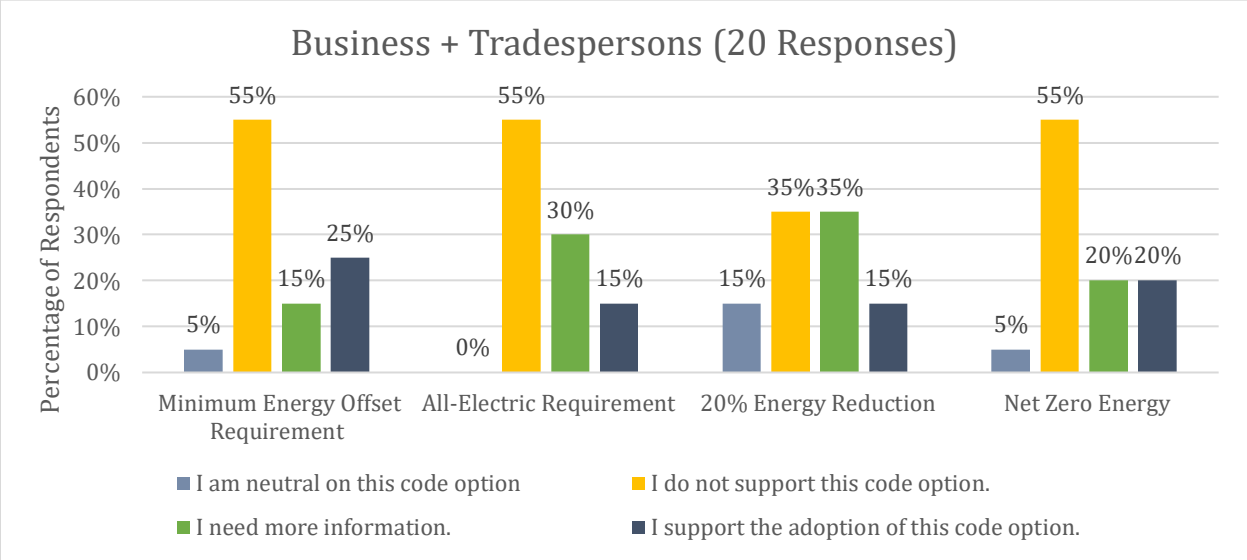


Figure 8: Business + Tradespersons sector levels of support for code options.

Residential Group Responses

The Residential Group had 169 total responses, however, not everyone answered each question.

Outside of the Marshall Fire rebuild efforts, do you plan to build a new home or undergo a major retrofit on your home in the next 1-3 years?

- 31 respondents' homes are part of the Marshall Fire rebuild effort.

- 19 are planning a major retrofit in the next 1-3 years.
- 81 are not planning any major retrofits.

DO YOU CURRENTLY LIVE IN AN ALL-ELECTRIC AND/OR NET ZERO HOME OR HAVE YOU TAKEN STEPS TO START TO ELECTRIFY YOUR HOME?

- 22 respondents are working on electrifying their home.
- 21 are working on making their home net zero.
- 88 are not doing either.

SUPPORT FOR CODE CONSIDERATIONS

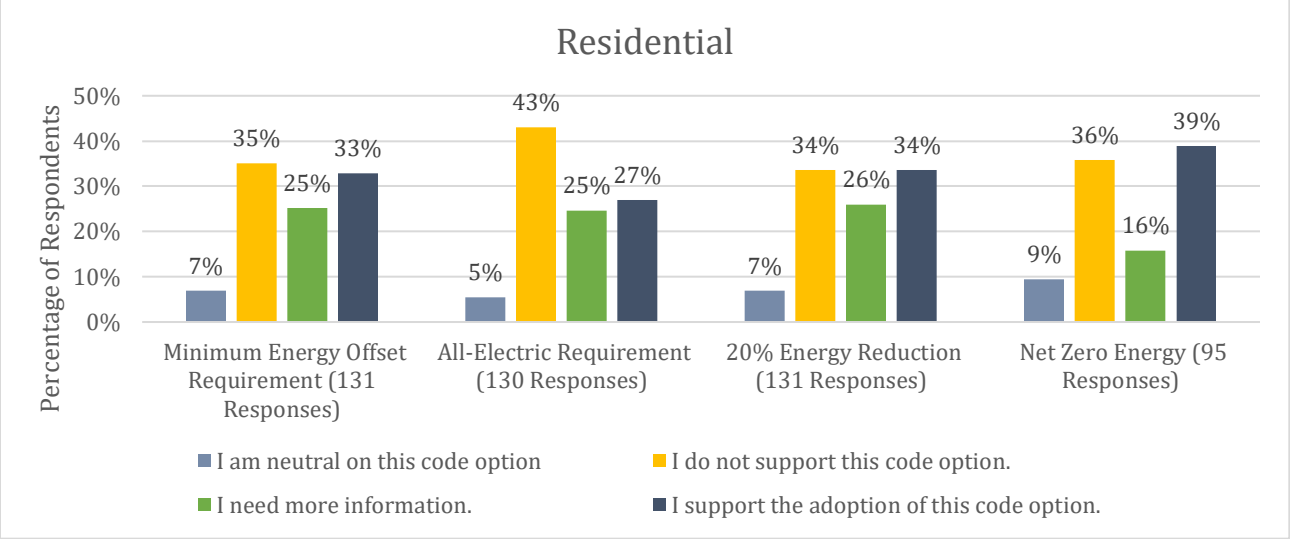


Figure 9: Residential sector levels of support for code options.

Community Meetings

The City of Louisville held two community meetings. The first was June 29th, 2022 from 6:00pm to 8:00pm. The second was July 28th, 2022 from 11:30am to 1:30pm. The meetings were held in open-house format, with a presentation outlining the code modeling and policy considerations, followed by time for participants to ask questions and make comments.

In both meetings, similar concerns to those brought up in the online survey were expressed. Questions and comments included (summarized, not direct quotes):

- Concern that businesses are leaving Louisville.
- Concern about costs imposed by these policy considerations.
- Concern of the electric grid not being able to handle energy code update impacts and Xcel not delivering on their stated renewable energy goals.
- Emphasis on building types that would qualify for exemptions.

- Curiosity and questions about alignment with regional code update efforts.
- A desire for the City to look closely at code for existing buildings.
- Emphasis on pushing energy efficiency before pushing electrification of building systems.
- The City should take its time developing the ordinance, rather than rushing to be a leader in this space. Careful consideration of impacts needs to be made.

Board Meetings

Louisville Sustainability Advisory Board

The energy code update modeling, policy considerations, and preliminary survey results were presented to the Louisville Sustainability Advisory Board (LSAB) Meeting on July 20th, 2022. This was an information session. Throughout the presentation, opportunity was given for board members to comment, as well as the public to give comment during designated public comment periods. Summarized comments and questions included:

- There is a need to push Xcel to implement resiliency measures and redundancy if we are going to electrify our systems.
- How does this project relate to existing buildings?
- Expressed need to emphasize greenhouse gas emissions benefits of the code updates.
- Concern about procuring offsite solar: lack of information available, lack of available offsite solar, and lack of funding to create more offsite solar.
- Exemptions for certain building types from code updates could create a loophole and could hinder Louisville's progress toward sustainability goals.
- How will small businesses be impacted by the code updates?
- There needs to be a scale of options ranging from a code update that is easy, a code update that is balanced, and a code update that is high impact but difficult to implement.

Building Code Board of Appeals

A similar presentation to the one given to LSAB was given to the Louisville Building Code Board of Appeals on July 21st, 2022, also as an information and feedback collection session. Summarized comments and questions included:

- Louisville has limited access to offsite renewable energy.
- Several questions related to the feasibility of limiting commercial energy consumption via Site Energy Use Intensity targets, and how successful City of Boulder's efforts were with energy performance targets.

- Board members sought confirmation that the modeling would apply to building types that exist in the City of Louisville.
- Concern regarding the capability of the electric grid to handle buildings built to stricter commercial energy codes and/or built to be all-electric, and the reliability of Xcel's renewable energy goals.
- Curiosity about other regional code efforts and whether the 2021 IECC has been implemented elsewhere.

Appendix A: Open-ended Responses from Online Survey

**Click the page number in the Table of Contents above to navigate to the open-ended responses for the following questions.*

What is your biggest concern or perceived barrier to the commercial code considerations presented? 15In your opinion, what is the biggest benefit to the commercial code considerations presented? 23Are there any considerations to address equity for low-income residents or disproportionately impacted communities that the City of Louisville should consider for any of the three commercial code scenarios considered above? 33What's the most important consideration for the City in adopting stricter energy codes for residential and commercial construction? 39

WHAT IS YOUR BIGGEST CONCERN OR PERCEIVED BARRIER TO THE COMMERCIAL CODE CONSIDERATIONS PRESENTED?

The impact to current businesses in the market and attracting new businesses as costs to implement such an aggressive code would unfairly impact business - need to be implemented slowly over a long time.
Perception that we cannot afford efficiency improvements and businesses will locate elsewhere.
There needs to be a clear presentation of the cost to builders and potential tenants. Each measure needs a cost and how long it will take to see a return on their investment. In addition what are the incentives for their participation in the plan.
Cost. You put the burden on these companies and they won't build here. That impacts locals who then don't have opportunity to work there. Let the free market do its thing. Companies have to have a good reason to take all the economic risks they do to build. Putting restrictions just makes them go elsewhere.
I think there is a very big loophole for industrial buildings. We need to look more closely at what we could require of industrial builds. I would support natural gas for emergency backup but not for processes.
Cost. We also have quite a few unoccupied buildings
Violation of owners rights to their own property.
The market needs time to process this type of change
Unreasonable cost with no clear benefit Business owners will gk elsewhere
Economic hardships for new businesses
Discouraging busisness development in Louisville.

It may be difficult to guarantee clean-energy sources when weather reduces solar and when commercial operations continue after dark. (Battery storage systems may not be ready to scale up, or may cost too mucy.)
COST vs payback / benefit
I would like to first read comments from the existing commercial business and building owners. We don't want to drive away business. We want to retain and attract business.
We need more businesses in the area. The city will be relying only on homeowners taxes for funding at the rate we are losing businesses.
We need to make the City attractive to potential investors and not become too expensive. That said, Redtail Ridge, because it's an entirely new development at this point, should be held to the highest standards. In addition, I would like to see large parking lots replaced by garages to reduce the amount of pavement and increase natural landscape. Commercial properties need to include charging stations for EVs
Cost and the effect of not considering any balance toward economic development of our city - it's lifeblood.
I am all for lowering emissions and energy efficiency but I believe the cities "net zero" approach is ill advised, expensive and another elitist move that will increase the cost of housing for a minimal real world benefit.
Businesses and developers will fight this tooth and nail
Pushing cost to business owners
Will it keep business away being cost prohibitive?
Cost, added lead time on construction.
Cost
Business leaving and not choosing Louisville to build
Some commercial occupants might have specialized needs that could necessitate gas/ fossil fuels. We will need fossil fuels for decades.
This will increase cost for businesses in Louisville. We have already lost most of our cornerstone businesses to neighboring communities l. This will continue to occur until there are no businesses left if we continue to make it more expensive for them to operate here.
Overreach by the city Government and costs. There is already a huge vacancy of commercial space in Louisville and this would prohibit businesses from moving to Louisville.
Companies will not consider Louisville as viable option for building their business.
Not enough valid, non political info

You are very focused on the wrong thing. There are so many empty buildings in the city... all this will do is raise the construction cost which will raise the rent which means that that we have more buildings to this new code with no value other than sitting empty. There should not be a mandate that should be an option if a developer wants to do it.
Louisville is already driving businesses out.
Fear of costs, fear of regualtions
Ability of small local businesses to absorb costs
Ignorant people
The City already is perceived as business unfriendly.
That it will turn away business from louisville. But we already have so much vacant buildings I am not concerned. They can use those first
Causing businesses to move. Money is the driver for all businesses. Tax incentives, subsidies, or loans may reduce this risk.
Louisville is already not attracting new businesses like surrounding communities are. I want a vibrant economy here and I want to help businesses, not create barriers.
It will make Louisville even less desirable as a place for new commercial buildings.
Inability to recoup costs.
I would be forced out of business
Louisville has already driven large businesses from here, I can't imagine that they will like the new requirement. Why do you think businesses (especially in the building industry) do not want to be in Boulder County and specifically Boulder.
Developers might be entrenched in traditional construction designs and methods
costs, impractical, no impact on climate change
You drive business out of Louisville when you create building requirements that drive the cost of commercial build out so much higher than surrounding cities. We are loosing commerical along the McCaslin corridor left and right. We should be focusing on how to bring companies here rather than giving them another reason to go to Lafayette or Superior.
Think the city needs to focus on sustaining homes and businesses. Not sustainability.
silly government hand outs to companies to reduce their risk to almost negligible for the promise that they'll follow the rules
We believe that it will hurt the economy of Louisville. Costs in construction are at an all time high with the limited supply chain. Adding code that will increase cost will only deter business and residents from moving into Louisville. I also fear that if

businesses need to expand they will look to our neighboring cities that offer lower rent, tax breaks, and less restrictions (lower cost) in construction.
Loss of potential and existing businesses
Potential upfront costs and how that might affect tenants
Increased costs will drive away business
The elimination of businesses using natural gas. This would severely impact many small businesses in Louisville - restaurants, for example.
The city already has an anti-business climate. By issuing more mandates that raise costs it will just drive potential businesses to neighboring communities.
question whether what is considered sustainable today will be supported by facts in the future
Louisville is already seen as being anti-business. Why would we make it harder to attract new businesses?
Cost
A lack of real financial analysis of current cost of future certainty of costs.
Lead times for equipment
Unjustified and will not bring interest to Louisville. These actions will chase more business out.
That the costs will drive businesses away from the city and prevent new businesses from opening.
Driving businesses away. Need to balance the energy requirements with other incentives
Companies wanting to maximize profit.
They are greedy and wanted to do their own way. They will try to bypass this code by saying oh we cannot do this due to lack of technology higher cost or infeasible with current energy needs. Do not give them any incentives because if you do, we the city of Louisville will be on the hook.
Efficiency is great. Will this draw or discourage small businesses? We already have lost many businesses to neighboring communities. Where will the off-sight collectors be placed? What will that do to Open Space? Have long-term health effects been studied? Will more staff need to be hired to regulate and oversee this change? Has research been done to see the actual energy savings?
Business choosing to locate elsewhere
Cost. I am supportive of #'s 21-24, but I think the considerations need a very careful approach with financial implications well laid out in either case studies or similar programs in the U.S. Its tough to for a smaller town, like Louisville, to be on the bleeding edge of the change without a City like Denver helping to lead the way.
Lack of understanding is probably the biggest barrier.

I'd want to know more about upfront costs and whether this was being done in concert with nearby municipalities. I like the requirement to reduce energy use/become more efficient better than any specific code requirement.
N/A, I am unfamiliar with commercial building codes.
I am ignorant of the processes used in commercial buildings that are sufficiently energy intensive to require using gas. That said, I think ASHP or GSHP is the only way to go for both commercial and residential, going forward. If we cannot eliminate gas entirely, we should strive to significantly reduce it where ever possible. Heat Pump technology is sufficiently advanced that heating and cooling can use it effectively. Same for Water heating. In Commercial environments, the time horizons are longer (then some residential), so ROI should be easily achievable.
The fact that there is a lot of commercial tenants moving out of Louisville recently - Kohls, Lowes, Sams Club, etc
If the building envelope is not enhanced even beyond what is proposed. The biggest energy losses in buildings is through a lack of air tightness, then lack of glazing performance and then thermal performance. All three of these areas should be addressed before electrification. By reducing energy loads HVAC and ventilation equipment can be properly sized to meet the lower energy demand and offset costs would be much smaller and easier to manage financially.
Louisville is already business hostile. Look at all the stores leaving town of all sizes. The last thing we need is another barrier.
Just electric requirements aren't enough, we need to be sure that all energy in from renewable sources
Same as residential - lack of contractors with experience
Until the industry knows how to do this, it would likely leave us stuck with old, inefficient buildings for a long time.
Louisville continues do drive businesses out of town. This will accelerate the trend.
Reduction in number of companies wanting to build in Louisville, which means higher costs for new home owners.N/
General opinion: Corporations will always resist increased financial of their operations, regardless of the impact on the environment.
cost
Reduces business opportunities in the city. Drives businesses to surrounding cities.
Top down approach is not good.
I wonder what the specific downsides to this would be.
Too restrictive

Big concern is if higher construction costs will make Louisville less desirable for future commercial growth.
Cost, heavy-handed mandate
Disproportionate impact on small local businesses, who already have a hard time getting off the ground relative to national chains.
businesses moving out elsewhere...
Expense and reduced demand for businesses to locate in Louisville due to cost (energy and rent)
Cost to businesses that could deter them from investment in Louisville.
I need to understand the cost impacts and the impact on businesses deciding to reside in Louisville. What is the balance 'goal' to increase businesses in Louisville especially since our town hasn't had any noticeable growth in years. Especially in the McCaslin corridor. We are falling behind our neighboring towns. If it is now or in the future a result of too many regulations or cost similar to Boulder then it is an economic issue for the town and its tax paying residents that have to pick up the revenue shortage.
Massive extra cost, making the business uncompetitive. Better to operate outside Louisville
I worry that the same thing that happened with the residential code will happen with the commercial code: builders convincing people/companies that it can't be done, or can't be done affordably. Perhaps incentives for builders to get training for building to new standards could help with that (I believe EMU Systems is doing something like this).
Cost
It is none of government's business. You have enough trouble doing what you ARE supposed to do.
State wide adoption and regional cooperation.
People don't want to have to pay more, despite the climate crisis.
Incentivizing companies to go down this path
Added cost for no benefit.
Cost and efficiency for the company
Need more info
Companies will relocate to a cheaper city.
If it's too expensive to operate a business here they will go elsewhere.
It might deter new businesses coming into the city.
Cost
Businesses in Louisville cannot afford to convert to electric. It's best for restaurants to remain on gas. That's how good is made.

Ability for our tenants to operate their businesses.
They would hamstring an already suffering business community and will drive potential new businesses to surrounding communities.
Louisville has already become a more business-hostile environment, and we have a lot of empty commercial space that needs to be addressed. I'd hope the city would pay more attention to fixing this issue instead of possibly making it even more difficult to do business in Louisville.
Businesses will look elsewhere to build. City Council of Louisville would appear to be anti-business.
This will backfire by encouraging businesses to claim false exemptions and go outside the permitting process in order to get their projects completed and online. This will result in a less efficient product then leaving the current code as-is. (Again I'm not even going into the bigger economic risks of being so far ahead of the pack, energy wise)
companies would elect not to be in Louisville
Upfront costs, willingness of commercial businesses to adopt
cost
Cost
Cost of doing business becomes too high; the code is implemented without staging and/or enough advance warning.
No!
Lots of technical details in these code questions. Is the technology realistically available to be aggressive in the commercial code? Much of the commercial buildings are already built. How will these buildings be included in the commercial code? This needs to be considered now. If the new code requirements only apply to new commercial construction, it will be a "feel good" action that doesn't accomplish much except make new commercial impractical.
I think there are others with legitimate needs for gas during the transition to 100% electric . For example, a hospital needs a way to generate power for patients hooked up to oxygen and other life saving equipment. Similarly, people with certain medical conditions may have the legitimate needs. I don't know.
No flexiblity.
Louisville has a lot of empty commercial buildings today. Why would a company whose goal is to make money and stay in business want to pay extra to build or pay extra for monthly bills. Maybe put more effort into water conservation and bringing businesses back to our community

That commercial interests will find a way to get less stringent codes than the residents are required to meet, resulting in the smallest burden being placed on those with the most amount of money.
The cost that will be past down to the buy of goods. There is no free, taxes and fees must be passed on. Everyone is living pay check to pay check, City needs to figure out how to reduce fees and taxes so business come in and pay property tax.
cost to the business; property taxes are already too high
I'm sure they are also concerned about the upfront costs and payback period
May drive business away
Businesses not wanting to do business in Louisville
I have lived in Louisville for 37 years. I have watched Superior, Broomfield, Lafayette and even Erie grow their commercial presence while Louisville continues to lose both retail and non-retail (with the exception fo the Colorado Tech Center). Adding cost burdens that make building -- and operating a business, since those costs have to be passed on to the tenants -- in Louisville even less competitive does not seem like a smart thing to do right now.
Cost, short term
It may drive some wharehouse and pot greenghouse operations outside of the code affected areas (boo-hoo to that) and it may require increases in electrical generation capabilities that would require additional peaker natural gas turbines until alternative electric supplie comes online. In other words it could be short term disruptive to lectrical energy capacity if a large amount of natural gas heating capacity were suddenly required to be all electric resitive heaters. Best to pay outside consultants to model these complex issues before adopting potentially disruptive new codes.
The significant increase in cost to businesses who would move to a more energy friendly city. Louisville could lose a lot of business by these plans.
That the wrong actions are being mandated to really improve our community environment. We have bad air all too often. Minimize commuting. Maximize use of public transportation to enter and leave our business community corridors. Not allowing large commuting populations nor businesses utilizing such into our community. Not allowing any more green spaces to be covered with concrete and asphalt. Having rigidly strict emission standards and elimination of diesel vehicles in our community. Having a zero tolerance and high penalties and fines for idling diesel trucks and vehicles unnecessarily in our community. Encouraging all existing businesses to develop solar panels on their large roof expenses as well as encouraging the same for residents. Creating for provisions that replace solar panels after hail events without having the residents have to pay out of pocket

removal and reinstallation fees. Do not let Xcel energy limit the amount of solar production per resident or per business we should be able to produce all that we want and contribute it to the grid without penalties from Excel energy.
Uncertain; need more information
net zero energy should be mandatory
It could discourage commercial development
None because I believe it will help keep out some of the worst area developers
Additional cost and pollution required by current means of production, which means dirty fuels to produce the amount of electricity you propose.
Driving business away from Louisville
availability of contractors with sufficient expertise
commercial buildings have too many complications. unlike residential, the users are often not the owners. sometimes there are multiple users within on energy meter.

IN YOUR OPINION, WHAT IS THE BIGGEST BENEFIT TO THE COMMERCIAL CODE CONSIDERATIONS PRESENTED?

none, based on the current requirement - it is not feasible with today's technology and can't be afforded.
Climate change action.
If done with attention to detail, it will reduce green house gas emissions. But we need to pay attention to the bottom line. We need to find ways to attract and promote those businesses that are climate change conscious. Offer them ongoing incentives and showcase them as leaders meeting the stated goals.
none. if and when it becomes feasible to build in this way, then companies will naturally do so when the technology is available at affordable costs.
It will be a great foundation for the future--let's not work incrementally on these codes, it's important to get this done.
Way less emissions
Not sure I see a benefit
This could lead to a large drop in carbon-based energy use in the energy-intensive commercial sector.
The 2021 codes continues to improve the energy usage of commercial buildings and is broadly understood and interpreted.
More efficient use of power
Cleaner air
Addressing climate change

Making some individual's in the city management feel like they are saving the world. Unfortunately they are shifting the financial impact to residents.
Reducing Louisville's carbon footprint
Environmental impacts, forward thinking community
I don't see a benefit for businesses.
Energy efficiency
Meeting the agenda of the city is all it's benefiting
Smaller footprint
There are none you are breaking our community.
Climate change impacts
I see no benefit at all
Future of the planet
Environmental impact
The environment, not worrying about the environment being able to support my future possible children
sustainability
Clean energy use. Lower carbon emissions
Be responsible beyond an individual's $.
None
Climate
We have to make these changes but it must provide resilient solutions, particularly in the face of climate change, I am particularly interested in subsidies for on-site or community solar solutions. If the grid has challenges, our proposals should provide resilient solutions.
Investing in the community where your business resides
Virtue signaling.
Commercial buildings likely have a much larger environmental footprint than residential buildings
I think it is a detractor and one of the reasons I sold my business in town.
encouraging companies to blend in with the culture of energy independence
It has the potential to save energy.
Non. I guess the council and mayor can feel like they have made a difference.. when in fact the city is becoming blighted (business). Maybe more efforts should be placed on business retention and promotion for new businesses
Savings in the long-run, plus client support due to the energy saving practices
No benefit, companies will select options that meet their needs at a reasonable cost.

While I'm all for doing all we can to lessen the impact buildings have on the environment, the main cause of global warming is vehicle exhaust. Why is the city not addressing this, rather than considering a code that might severely impact small businesses while failing to address the major causes of global warming.
Marginal impacts on overall climate
energy savings, but the savings must offset actual cost in a reasonable amount of time (5 years)
Don't see one
Incremental improvements are good if done in a more thoughtful way in cooperation with businesses and property owners. Louisville is no longer friendly to homeowers or businesses. This proposal makes that worse.
We have to get to decarbonized buildings & policy is the only way it will happen.
There are none that would justify these actions.
Better energy efficiency for new structures.
It is necessary.
The energy saving being cost effective in both short and long terms.
Saving our planet
Building better buildings.
These proposals sound good in theory. Educating Louisville residents and businesses about what these all mean and how you decided on them would be great. For example, I'm wondering why a 20% reduction? Why not more?
Reduction in overall emissions of GHGs.
N/A, I am unfamiliar with commercial building codes.
N/A for this question. However, perhaps a consideration for luring commercial customers - if they perceive the cost of building too high, they may take a pass on Louisville. They would need to be shown when the ROI is realized.
Stringency. You presented the proposals at a high level (20% reduction, net zero) but there is a lot of information still needed to make any kind of decision on the proposal at this time. How compliance is shown and differences based on building types and end-use.
Creating the conversation around what it means to be energy efficient.
Using renewable energy sources!
A livable planet
Until the industry knows how to do this, it would likely leave us stuck with old, inefficient buildings for a long time.
Should free up parking with lots of empty parking lots.
Need more information
pretty questionable as to any benefit

Makes city leadership appear effective
Let businesses decide for themselves.
lower energy costs and help towards reducing the effects of climate change
Too restrictive
This will reduce the carbon footprint for new-construction commercial properties.
Reducing reliance on fossil fuels and their emissions.
none at this moment
Insulation improvement is ok.
Impact on climate change
I'm all for residential and commercial to build to the latest standards but need to balance against cost and the ability to meet those requirements as they are a moving target (trained installers, rebates, etc)
While the impacts to the environment are obvious, I think what these codes can represent is the start of a workforce that is trained in building to higher standards. Codes like these are the future of buildings and it has to start somewhere, so let's start that here!
If we work together (industry and government) to GREATLY reduce the GHG emissions of homes and buildings in the Denver metropolitan area, then we have addressed one of the largest sectors of emissions in CO. This would give upcoming generations a foothold to fight the omnipresent climate crisis. We must invest NOW to help future generations, it's not about us.
They will help combat global warming and benefit the environment.
Less energy usage, more sustainability
There are none. Again, add incentives for different areas you want to increase.
Unsure, one community is a start but unless the world changes, not sure there is a benefit to justify forcing the cost on business since there are empty buildings here already
Need more info
Greatly reducing or eliminating direct fossil fuel consumption.
Benefit to the climate and setting an example to other communities of what is possible.
Some energy savings
Better for the environment
Zero
The general idea of being more energy efficient.
There would be a marginal benefit to the environment but without wide geographic support, it would be drop in the bucket at the expense of the local business community.

Increased energy efficiency is a really good thing, but it cannot be so expensive that it makes Louisville too expensive a place to do business.
none
Please don't lump me into the "Non-Environmentalist" category, but the answer is none. I think the current IECC without the additional code considerations will make more of an impact than adding additional modifications because you will have greater compliance.
There is no benefit
Environmental impact / Sustainability
Long term benefits
environmental
Climate
Climate change
If they actually have a positive environmental effect, that's good. But I'm concerned that this is just greenwashing.
Nothing!
Addresses climate change. But there are many options to accomplish this including better site design and addressing urban heat island effects. Why were mature trees removed from former Sam's Club parking lot? Actions like these also affect the energy use of existing buildings.
It will make surrounding cities more attractive for commercial investment. That's a benefit, right?
Commercial building consume large quantities of power - often 24/7. Since they consume large amounts of power, addressing their electricity consumption should have a real benefit from a climate change perspective.
Some kind of offset.
Solar is a good option for everyone to help offset carbon at least in the summer with a/c running via electricity. Won't help alot in the winter.
It'll save our planet and keep our home livable.
Business will just go to other places to setup business.
environment
I wonder if there could be a way to requiring commercial entities greater than a certain size to adopt stricter codes. Offer incentives for smaller sized businesses?
Image/marketing
A cleaner environment and help to balance who has to follow the codes
Same as residential... climate friendly, and -- not including the amortized cost of building to the new codes -- potentially less expensive to operate.

Even more important for longer term commercial buildings - should invest the money upfront for longer term payback.
Adopting new all electric codes would potentailly drive out low ccost industry and help a more expensive office and high tech client driven workspace. It would force developers to seek a higher paying end user rather than low cost warehouse space tenants that would likely site their operations along the I25 corridor.
We need to make sure businesses are not causing further environmental harm to our community or our world.
None
You are missing the point when you allow large expanses of concrete and asphalt to be installed, when you allow thousands of cars to enter and leave and traverse the community, when you are not limiting the types of emissions a vehicle such as diesel vehicles and not encouraging more electric vehicles, when you allow Xcel energy to limit the amount of solar production and not reimburse anyone who super produces power, when you don't even consider developing a solar farm in our community but rather have thousands of vehicles bringing in pollution and covering up green space with heat producing buildings in parking lots.
Uncertain; need more information
net zero energy should be mandatory
Climate impact reduction
Louisville will finally be taking real steps to address the global climate emergency
Not at this time. Look into the future with your crystal ball and see when we can have "clean electricity production".
Making sure that the upgrades can be achieved through cost savings that the city can bring.
reduction in greenhouse gas emissions
Louisville would feel good when meeting with other local communities.

What HVAC systems, process loads, other appliances, or specific building types do you think would need to be exempted from the commercial code options presented? (The rationale for exemptions could be prohibitively higher cost to operate, infeasible with current energy needs, technology does not exist, etc.)

all retail and industrial uses need to be exempt - maybe office building is a place to start with it occurring over a long timeframe.
Backup storage and generation where technology is emerging.
Where ever there is a trade off in the profit margin that can not be justified by incentives or tax breaks.

All
I think we need to be careful about making exemptions--with the rate that technology is progressing, it is extremely likely that more accessible paths toward a more stringent commercial code. I don't agree with exempting industrial from the commercial codes in a blanket fashion. Also there needs to be a way to update the requirements as new technology becomes available.
The policy should not be enacted.
Not sure at this point
I don’t support the requirement for full electrification for businesses.
Industry specific would be things related to food production. I am sure their are many more industry specific needs for the use of gas.
Tax subsidies, perhaps at the Federal level, to encourage self-sufficiency with solar and newer technologies
This is way too technical a question to pose to residents. Come on.
There should not be exemptions, the law should not have prohibitively higher costs for any resident or business and absolutely should not be based on technology that does not exist.
Heat for industrial processes - no electrical options for some, excessive cost, lower reliability.
I don't know enough about this to offer any informed comment.
We should not adopt this code!
All of them. Let the owner decide.
All should be exempted. Costs in reality are always prohibited. Costs in your studies are always lower than actual. You need to present a realistic costs not just from advocates for net zero.
Backup heat sources for very low temp and emergency backup to electrical heat.
Don’t know
Manufacturing, R&D, small business in non-tech sectors
Cooking, industrial uses, backup power.
coffee roasters
ALL of them- this needs to be optional
I don't feel qualified to respond
For new commercial spaces, there should be NO exemptions. All new commercial businesses should adhere to a net zero energy code.
there should be no exemptions based solely on the code affecting the company's profit. that is, if being all electric means their profits are 50% less than if they used gas, that is not a good enough reason for the exemption. i.e., if they are profitable,

but will be more profitable with the exemption, then that would not realize the benefit the code is trying to achieve
Without gas it would be impossible for a restaurant to operate. Electric equipment is nearly double the cost of gas.
the commercial codes are burdensome
Gas fired cooking equipment (restaurants), gas fired boil kettles (breweries), etc. Disallowing the use of natural gas would be infeasible and prohibitively costly to achieve for many small businesses in Louisville.
system requirements that are more stringent than the prevailing local codes in the State of Colorado
I do not support the proposed requirements in any form
Acute healthcare (like new Avista Buildings)
All
Older and historic structures, restaurants and breweries (all use gas appliances).
None, they can afford the requirement changes and should follow the commercial code to the "T". it is not fair to give them exemptions and while we the residents have to suffer.
Are there enough choices in all electric HVAC systems to make this reasonable?
All of the above
Hot water heating, which is currently more difficult through an air-source heat pump due to the larger scale of hot water use in Commercial buildings. Historic Preservation projects should be exempt on some level.
Again, I'd rather see a requirement to build to reduce energy use and emissions to a defined lower level than a requirement to use/not use any particular appliance or technology.
N/A, I am unfamiliar with commercial building codes.
HVAC and water: I think all electric should be used here. Stove: induction has been shown to be a good alternative by chefs, though it takes some getting used to. N/A for other areas. If you leave it to the builder or client to figure out how to be successful, it may not happen. I suggest having some strategies already worked out and available for builders/clients to review/modify.
Not my expertise so cannot say with any kind of knowledge base. I imagine cooking equipment would be one type of equipment. As for HVAC, that can easily be electrified with cold climate heat pump technology.
Frankly, I don't think any building type or industry should be exempt. There are examples all over the world of rec centers, Hostipal, manufacturing buildings, restaurants, etc. already using significantly less energy
None

The city should allow enough gas heat to keep vacant buildings from freezing up in the winter.
All of the above.
Need more information
Business that use natural gas as part of their product or services delivered
I don't recommend adopting the codes in the first place.
I don't know how to answer this question.
As with residential, make these code changes optional vs. mandatory
all of them; make it a choice
RTUs, water heaters, stove.
I don't have enough background to make an informed opinion on this.
ALL
I'm not sure I know enough about commercial building sciences to answer this question at the moment.
technology does not exist
all should be exempt
Let's obtain grants to help industry have the MOST efficient and low GHG emission options available to them! This is essential!
I'm not familiar enough with these to comment.
depends on the type of building
Commercial HVAC
Need more info
Restaurants
not sure
New builds and restaurants
Warehouse heaters, processing/production equipment, water heaters.
I think it is premature to adopt this code so exemptions become irrelevant.
High costs.
It is already clear that restaurants can't operate. Any electric heat pump systems are too high of a risk. I have not had any projects that were striving to be close to net zero have their mechanical systems in place for very long because they are such un-tested technology. The waste in removing and disposing those systems when the next generation comes along simply negates any perceived benefit.
Not sure
don't know
Non profits, depends on type of business.
Let us build what we want! Stop controlling us!

All of them. This is all pointless and stupid.
Hospitals would need flexibility.
Furnace
Heating. There is not enough electrical power nor the infrastructure to support the load. It will take 50 years to provide the power and infrastructure to support all electric. Batteries and not here yet so extra solar energy can't be stored for night usage. City should be listening to electrical engineers that understand the real physics of going all electric. I had a hybrid and the batteries were almost gone in 7 years.
ones that make cost prohibitive
Higher operating costs
Don't know enough to weigh in on this.
None - there are biofuel based fireplaces in lieu of gas and with homes becoming substantially more efficient who needs to burn a precious resource for ambience
Obvious potential exemptions for many existing businesses who have insufficient insulatinion to afford an all electric forced air heating system. Natural gas direct vent heaters are also extremely efficient as 100 percent of the heat from natural gas combustion is forced into the building airspace but at the expense of air qaulity and worker pulmonary health. Buildigs that use DV forced air heaters often run with open rollup doors in wintertime and have almost no insulation in a metal framed and sided warehouse structure.
All electric will significantly increase the cost for doing business in Louisville. Even if all lights are LED, higher insulation requirements, etc.
Do not allow Excel energy to limit solar panel production on any warehouse or building. You're missing the problem you're using the wrong solutions and so many of your standards that you're trying to adopt. You are destroying the community by allowing a super large development for business and commuting. You are making solar intolerable with Exel energy limits and standards. A lot of these standards seem to be a smoke screen for bigger problems and that is what is so upsetting to this business oriented person. Why do you let the big guy destroy our environment and expect all of us small guys to do some minuscule and expensive compensation. The big climate change pollution elephant in the corner is your big Red Tail ridge Project.
Uncertain; need more information
no exemptions, please
None
See above.
None, Exempt them all!

retail, restaurant, industrial, and office. easier to implement on hospitality, event space, big box retail,

ARE THERE ANY CONSIDERATIONS TO ADDRESS EQUITY FOR LOW-INCOME RESIDENTS OR DISPROPORTIONATELY IMPACTED COMMUNITIES THAT THE CITY OF LOUISVILLE SHOULD CONSIDER FOR ANY OF THE THREE COMMERCIAL CODE SCENARIOS CONSIDERED ABOVE?

don't understand the question
Low income housing when residents are faced with rent increases.
Address the issues through small business loans and grants. Provide consulting services to assist with application of the best solution for their business need.
Yeah...don't increase cost and make it even harder to live here or hav a business here
There's a tradeoff between higher building costs now and lower energy costs over time. I don't think we should modify the code to help with affordability. we need to require 30% affordable housing in new builds. that's a better way to take care of this.
Construction prices will increase and low income families will be less likely to live in Louisville.
There needs to be an option in this area
I don't support the requirement for full electrification for businesses.
Apply tiered rates that are low for low-income residents--these would be offset by higher rates for heavier users of energy (e.g., large homes).
No additional subsidies of politically chosen groups should not be increased due to the additional requirements placed by the City, the City should first exempt them.
Affordable housing needs to include standards for energy efficiency to reduce the level of HVAC needs, plus subsidies, as appropriate
Certainly - when I hear city council talk about affordable housing, but then consider cliff legislation on net zero, the former comes off purely as a political, hollow gesture a la the CAC.
Yes, stop with the elitist environmental laws that hurt low income residents and place unnecessary burden on higher income families by covering those costs through additional fees and taxes.
I imagine there would be
You shouldn't force this on anyone
Providing grants/scholarships for businesses of low-income residents in order for them to comply with new standards and allow them to remain valuable productive members of our community.

Again I don't know.
If we lose all of our businesses the entire tax burden for our community will need to be supported by the remaking residents including the low income residents
No, you should not even be considering this change.
Low income is relative! It's very expensive to live here even if you are middle class
We are being pushed out of our community by all these extra mandates that end up costing me a lot more money. My family is a fourth generation in this community and it's sad to see mandates pushing us out
Yes, allowing for rebates and incentives. Both UPFRONT and post building
City/county needs to build affordable housing following all these environment code
Care for them with full explanation of their long term work and needs. They need to meet our new codes.
Absolutely! Please make decisions that don't hurt people financially.
Yes, lower income demographic always bears the brunt. Subsidies and grants may be an option.
grants, incentives, financing
What low-income residents? The City has long since driven them out of town with prohibitive costs and burdensome regulations.
All of this makes it harder to provide low-income housing. Allow increased density.
If you force me out of business I expect to be compensated. You approved this equipment in 2019
Construction incentives, and awareness of any exemptions that disproportionately impact certain communities
louisville appears fairly uniform with respect to race/economics except for artificial affordable housing occupants
Yes, especially for low to middle income families rebuilding after the fire.
government assistance for people not for companies. not sure if that makes sense, but the government is of the people, by the people, and for the people. any code should more greatly affect / benefit the people before _any_ company's profits. Not saying revenue ... profits.
Equity for low income. What a joke of a question. What low income resident can come to or even live in Louisville at this time?
This may be too off-topic to this code, but make sure that all low-income housing is required to to provide recycling AND composting for all residents.
Consideration should be made for any person living, working, or doing business in Louisville as to the feasibility and reality of requiring something that could both cost and impact these people in a very negative way. Consideration should also

be given for the economic impact of these codes and how the city could lessen that impact. Making a code requirement like this may be noble and desirous, but there needs to be a balance.
No - if the city recognizes there is an impact then it should waive that impact for everyone.
No. If you adopt them, everyone should have to pay the cost.
Yes. Provide support for non-profit groups and low-income renters.
A fund to provide onsite/ offsite solar.
Yes, these groups should be considered for all scenarios or it will significantly reduce diversity in an already minimally diverse area.
How to lower the cost of entry for low income residents.
It is in the Xcel rebates for leap, Xcel should provide more options for those who are living low income/impacted communities.
Are you creating a system that automatically needs to be subsidized? How difficult is it to apply and receive subsidies? Will this eliminate or reduce businesses owned by those for whom English is a second language? Are you willing to burden your citizens even more than the current rates?
No. Upfront costs will be paid for in energy savings
Incentivize inclusionary housing projects to reach certain levels of energy efficiency or energy independence with their projects.
I don't know.
Yes, criteria for considering equity and providing the subsidies or exemptions to achieve equity should be built into any ordinance.
N/A, I am unfamiliar with commercial building codes.
Absolutely - I think the only way to address this is through grants or some kind of funding from the city
Again, it is actually easier to make multi family homes more energy efficient than stand along buildings. If anything affordable housing should be held to a higher standard. It has greater long term benefits for the occupants than typical code built structures.
Set and meet these code requirements for everyone. Be sure to confer with these communities for the best solutions to meet their needs. Low-income residents and disproportionately impacted communities should be eligible for city grants to meet this code, we must invest in these communities.
Louisville is virtually uniformly white, so not really relevant
There should be free community solar and subsidized retrofits available for low incomes

The city should hire staff to pretend to care about low income residents. Boulder has used this scam for decades.
Low income residents would have a difficult time living in Louisville because the cost of living here is becoming prohibitive for lower and middle class residents.
Need more information
Don’t raise costs for any residents or businesses
I don't recommend adopting the codes in the first place.
Yes, I wonder how all of these changes affect the poor. Are these changes that only the wealthy can handle? Does this make this area even less affordable? How does this affect diversity and equality?
Yes, there should be income-based subsidies rather than exemptions. Poorer communities of color are disproportionately affected by dirty air, water, and other environmental issues, yet we are all part of their cause. We should prioritize community-wide change toward electrification, and support those who cannot afford it with subsidies.
for all residents!
Energy costs will be higher.
Just concerns about cost impacts.
DO NOT negatively impact any of the residents
Yeah, they shouldn't have to pay a dime of it. Tax the rich. :)
Yes, white people need to pay a privileged levy that pays the difference for all new buildings to meet the new codes and not the business themselves.
Only if they are not paying for it.
Yes, low income residents should get the most support. Education, funding, and follow through from local government and industry should center those most impacted. Grants should be centered on supporting these communities FIRST!
Perhaps give them subsidies.
I'm not familiar with good solutions. I recently learned of bonds like https://nlihc.org/resource/field-atlanta-passes-homeless-opportunity-bond and https://ballotpedia.org/California_Proposition_84,_Housing_and_Homeless_Bond_Measure_(1988)
We need to build low-income housing and subsidize energy bill costs for low-income residents.
There should be.
No.
Yes.
The city already doesn't have a balanced budget so to damage the business community - a major revenue source for the city - and then try to come up with

the money to make up for the damage is a downward spiral. The correct approach is to build the business community up first and then look at code updates when the community can absorb them.
No. The CC needs to help the Marshall Fire rebuild victims first before addressing "equity" of commercial builds for low-income residents or disproportionately impacted communities.
You cannot have this conversation and have a conversation about equity and low income at the same time. The only businesses that would choose to move forward under the proposed codes would be doing so by spending extra funds to make a statement. They will not simply absorb those costs. They will be passed along further creating a divide.
Businesses that help people/families shouldn't be scared away by all of these codes
Control control control
How about treating all residents equally instead of trying to foment class warfare?
There should be incentives or grants for low income citizens and public facilities primarily servicing low income citizens.
Low income can't afford to build in Louisville so no it is not needed
Generally low income residents are exposed to more pollution because they live in lower income areas, closer to higher commercial pollutants. Requiring new commercial construction to do better and be better, should arguably improve the health and quality of life for those living in low income areas. In fact, it'll eventually be better for all of us.
Why have anyone paying the high costs?
No specifics, but I do think there should be considerations for these type of residents.
Would like incentives for prior home owners/businesses especially if new construction is getting
I do not understand the question
Yes. We need to make some accommodations to allow for affordable housing. One of the key attributes Louisville had going for it was its focus on community (for lack of a better word). I wonder how much this counts any more as I look at some of the decisions/rules/requirements coming out of the Louisville City Council.
Build government sponsored low income housing
How many low income qualifying businesses operate within Louisville City limits. Can the be expempted if their numbers are very low?
Equity should be top of mind. Ideally, grants would be available rather than exceptions to the code.

Low income would be impacted the most by the increased costs for all electric homes.
Exchanging homes into LED lights is a significant savings at minimal cost. No diesel vehicles be allowed in the community. You must allow natural gas options for heating. Electric heating and clothes drying can be exorbitantly more expensive. Quit preserving historic outmoded homes as if they are some kind of sacred cow. We must stop having to preserve old miners shacks and kit homes for some kind of aesthetic. Allow new and more efficient structures to replace them. Encourage all warehouse structures and residences to produce all the solar power that they want to contribute without penalties and without limits into our grid. If you don't limit what larger building surfaces can produce you'll have plenty of extra energy to help out with programs to contribute to disadvantaged or low income homes. Community Solar Farm. Whether affluent or financially struggling it is horrible to mandate more appliances such as heat pumps and electric furnaces and electric heating elements in a home where Xcel energy also has the ability to limit how much solar is produced per unit of residential and commercial space. Shame on you for your plans and financial obligations to buy these electric utilities for our homes and businesses when you allow the electricity company to maintain high prices and not reward those who can super produce more electricity. You are allowing Xcel energy to torture us and some of us are not dumb enough to fall for it.
Uncertain; need more information
all people benefit from all-renewable, net zero codes
Some short term break should be given up front.
Yes. I don't have enough info to comment in specifics, but the City should always consider low-income/disproportionately impacted communities in everything it does. That's part of being an inclusive and equitable community.
Don't impose any more silly restrictions upon any of us at this time. It makes no sense. Encourage a 10-20% reduction and incentives but don't impoverish anyone for a silly goal of all-electric before everyone can afford it. Remember that you're trying to be inclusive. On the other hand I do not entirely approve of incentives-which is only another word for taking tax dollars from some to give to others. That has to be done carefully for deserving people who can prove they need help which I do support.
Dont adopt them and low income residents will be able to live in Louisville.
The effects of climate change already impact such communities more severely, providing further motivation for the adoption of stronger building codes.

If you make residential and commercial properties more expensive to build, you are going to continue to push lower income residents and business' out of Louisville.

WHAT'S THE MOST IMPORTANT CONSIDERATION FOR THE CITY IN ADOPTING STRICTER ENERGY CODES FOR RESIDENTIAL AND COMMERCIAL CONSTRUCTION? ('OTHER' ANSWERS)

Be aware of the cost and burden this places on residents and the assumption that these costly requirements and rules have no proof to help alter any human impact on the environment
Energy codes for construction are a violation the property rights of residential and commercial property owners. Regulations take away the ability of the property owner to use their property as they see fit and decrease the value. Each individual is in the best position to decide how to best built their property to suit their needs.
City cannot be unreasonable with building code demands. Turning into Boulder will drive away residents like me.
We almost had to move our 42 year old business out of Louisville because of costs. With Boulder, Broomfield and now Erie pulling the larger businesses away from Louisville we should be a safe haven for small businesses and need to be careful policies do not price them/us out of 80027.
The city should not adopt stricter energy requirements we are already losing businesses and can not afford to lose more
Affordability impact on culture, making it affordable for mid-class and fixed income households
This isn't important at all
I disagree with stricter energy codes
HONESTLY balancing the need to address energy efficiency and promote economic development.
how about making this optional!
should not be mandated if has no meaningful impact on climate and is impractical for multiple reasons
I don't think they should
Stricter codes well hurt economic development
reasonable cost benefit analysis
I don't believe the city should make stricter codes at this time
Cost to residents and building owners
You ignore residential costs. Balance climate change with reasonable costs to business and residential owners and renters.
Don't enforce any of these.

all of above. also City of Louisville should provide electric bike rebates Denver is beating us to the punch and they are effective and ahead of us. we need to step up our game
Research from various sources, don't just go with the trend. What are the long-term costs from creation to post-use of materials? What is the true gain of efficiency? The difference between the 2018 and 2021 codes are not gigantic, yet the cost differences are huge.
Cost/benefit analysis
Priceing out people who are not "true believers."
Stop making it astronomically impossible for our children to live here!!!!!
none of the above; sensible and based on citizens' afordability and needs
NOT imposing extra costs on the homeownwers
COST
Less government interference with construction.
Impact on economic development and growth
1) Addressing climate change while promoting economic development is a prime concerns. 2) However, many people will not be able to afford the upgrades!!!! While my husband and I are able to afford them, the installation of solar panels, for instance, is tricky given the amount of hail storms we have here in Louisville wherein the solar panels break. It takes an extremely long time to get them replaced. The hail storm of 2018 was a prime example wherein pretty much everyone in Louisville had to replace their roofs. Those with solar panels waited as long as a year to have them replaced. How much product will be available given the decrease of a plethora of products due to the Covid-19 pandemic?
Businesses and residences need to recover from a massive fire and a possible redesign. We do not need to spend money on unsustainable programs. Louisville residents need to recover and rebuild before we go green unnecessarily.
The city council implemented building codes to conform to their political agenda. They "thought they would have time to figure it out".
Does it actually support your goals
Codes should not be stricter. The city will be making it more difficult to afford updating homes or building new
Diversity of residents, can’t price some people out with this
There is no climate emergency, it’s all about control! I should be able to have what I want in my house, not what the government says I should have! Are you going to pay my bills?
Why don't you stop imposing stupid regulations that make the city a less affordable and less desirable place to live?

I do not support all electric. Doesn't it still require coal or some other gas emitting resources to create electricity? Xcel will only allow so electricity for solar panels. Electric heat is not as warm or affordable as gas.
The economic development and climate change issues *do* need to be balanced in order for fixes to the climate emergency to work, which means that both the climate emergency and economic development must be number 1 priorities.
High cost of electricity and infrastructure to provided power, unlike CA with rolling blackouts.
Traffic congestion and smog. Bad air quality days.
I'm all for all-electric but it is not feasible at this time. We can barely produce or afford it. The grid is not adequate for the additional load and the price is going to increase, not decrease-am I correct?
costs are ultimately passed onto users of the building. if its too difficult/expensive in louisville, they will go to erie, longmont, lafayette, etc. it will only hurt Louisville is they do not maintain competitiveness with the nearby communities.

Appendix B: Survey Questions

Demographic Questions:

1) Name & email
2) Would you like to be updated by email on the energy code development process?
    a) Yes
    b) No
3) Which of the following best describes you (check all that apply)? (*optional*)
    a) Asian or Pacific Islander
    b) Black or African American
    c) Hispanic or Latino
    d) Native American or Alaskan Native
    e) Native Hawaiian or Other Pacific Islander
    f) White
    g) Multiracial or Biracial
    h) A race/ethnicity not listed here (write-in)
4) What sector do you primarily represent (select one):
    a) Building owner
    b) Building Developer
    c) Business owner/manager
    d) Tradesperson (electrician, plumber, etc.)
    e) Energy efficiency expert
    f) Energy or facility manager
    g) Engineer, Architect or Designer
    h) General Contractor

i) Affordable Housing representative

j) Residential tenant or occupant

k) Home owner

l) Other Business (Write-in)

5) Are you currently operating a business or considering owning/operating a business within the City of Louisville?

a) Already owns or operates in a business located in Louisville.

b) Already owns or operates in a business that conducts business in Louisville but is not located in the City.

c) Considering starting or expanding a business in Louisville.

d) No I am not.

6) Do you work within the City of Louisville?

a) Yes

b) No

7) Do you live within the City of Louisville?

a) Yes

b) No

8) How would you rate your knowledge/understanding of the City of Louisville's current energy code?
a) (Scale 1-10)

Group 1: Building Owner / Building Developer

Note: For all open-response questions, if you don't know or do not have feedback, please write-in NA.

Page 1 Group 1

9) Does your company have sustainability or climate related goals?

a) Yes, we have a sustainability plan/program and goals.

b) Yes, we have started small efforts to be more sustainable but no official plan/program or goals.

c) No, we've discussed internally but don't have climate or sustainability goals, plans, or programs.

d) No, we don't have climate or sustainability goals, plans or programs.

10) If so, please provide a high-level overview of your sustainability/climate related goals, plans, or programs.

a) [open-ended / optional]

11) Are you planning any major building or tenant space retrofits within the next 1-3 years?

a) Yes.

b) Yes after 3+ years.

c) No.

12) Do you have plans to build or acquire new property(ies) within the City of Louisville in the next 1-3 years?

a) Yes.

b) Yes after 3+ years.

c) No.

13) What are your main considerations when operating and/or working in Louisville? (check all that apply)

a) Cost of doing business

b) Comfort

c) Environmental impact / Sustainability

d) Culture/community

e) Rules/regulations

f) Other (write-in)

14) How would you rate your experience installing/maintaining heat-pumps and other efficient all-electric HVAC systems?

    a) [scale 1-10]

15) Do any of your current buildings or tenant spaces utilize heat-pumps or other efficient all-electric HVAC systems?

    a) Yes, more than one.

    b) Yes, just one.

    c) No.

16) How often do you currently design/build/install all-electric HVAC systems in new construction projects?

    a) Never.

    b) Minority of projects.

    c) Approximately half of all projects.

    d) Majority of the projects.

17) What's the most important consideration for the City in adopting stricter energy codes for residential and commercial construction?

    a) The climate emergency.

    b) Economic development.

    c) Balancing the need to address climate change and promote economic development.

    d) Other [write-in].

Group 1 Page 2

Intro:

Current Energy Code:

The City of Louisville has adopted the 2021 IECC, as well as additional amendments requiring further energy savings and all-electric construction items:

Commercial New Construction

- Increased insulation levels
- Increased fenestration efficiency requirements
- Increased HVAC efficiency
- Electric vehicle charging and infrastructure
- Electric-ready wherever gas appliances are installed
- Solar-ready zone required

Residential New Construction

- Increased insulation levels
- Increased ductwork and piping insulation requirements
- Mandatory heat recovery
- Electric vehicle charging and infrastructure
- Electric-ready wherever gas appliances are installed
- Net zero Appendix RC required

Commercial Code Scenarios for Consideration:

The City of Louisville is considering updates to the commercial energy code to improve the environmental and operational performance of new commercial buildings. These updates could include, but are not limited to, all-electric new construction, stricter efficiency requirements, energy offset requirements using solar, or net zero requirements, such as those found in Appendix CC of the current IECC 2021 code.

Residential Code Scenarios for Consideration:

For residential energy code adoption, Louisville has already adopted Appendix RC as a mandatory measure for all new construction buildings. The Appendix RC requires new single-family residential homes to meet a specific energy efficiency criteria and offset their energy use with onsite or offsite solar. Future residential code scenarios could include all-electric construction requirements.

Note, for all open response questions, if you don't know or do not have feedback, please write in NA.

Questions Page 2 Group 1

18) How do you perceive the new considerations for energy code would impact your ability to develop/design/build housing affordably in the City of Louisville?

a) [open ended]

19) How do you perceive the new considerations for energy code would impact your ability to develop/design/build commercial buildings in the City of Louisville?

   a) [open ended]

20) Do you need/want training on the current energy code?

   a) Yes

   b) No

21) Would you need/want training on the proposed codes/policies if enacted?

   a) Yes

   b) No

22) What data or information do you need to better understand the potential impacts of energy code options on your business and operations?

   a) [open-ended]

23) Would you prefer energy code requirements that:

   a) Set an energy consumption performance target and allow for flexibility in how a building meets that requirement which can include onsite PV if needed to meet the performance target. (Performance approach).

   b) Set an energy consumption performance target that specifies an efficiency standards for equipment that must be met and requires mandatory solar on all new buildings. (Performance + prescriptive approach).

24) How much flexibility in building design would you prefer to achieve code/policy requirements?

   a) The more flexibility the better.

   b) Some flexibility but some clear expectations/rules.

   c) Set prescriptive standards (equipment efficiency, envelope requirements, mandatory solar, etc).

25) Would you be willing to pay more upfront for all-electric new construction with onsite solar if the payback was longer in order to reduce the carbon/environmental impact of the building?

a) Not willing

b) Somewhat not willing

c) Undecided

d) Somewhat willing

e) Willing

26) What is the payback time frame that you would be comfortable with, for additional upfront costs that support carbon reduction, all-electric, or net zero construction?

a) 0-5 years

b) 5-10 years

c) 10-20 years

d) 20-30 years

e) 30+ years

f) I am not interested in increasing upfront construction costs for carbon reduction.

27) What payback period would be your minimum threshold to consider solar onsite for a mixed-fuel building if it represented a higher up-front cost?

a) 0-5 years

b) 5-10 years

c) 10-20 years

d) 20-30 years

e) 30+ years

f) I am not interested in increasing upfront construction costs for solar.

28) What payback period would be your minimum threshold to consider solar onsite for an all-electric building if it represented a higher up-front cost?

a) 0-5 years

b) 5-10 years

c) 10-20 years

d) 20-30 years

e) 30+ years

f) I am not interested in increasing upfront construction costs for solar.

29) The City has in place the IECC 2021 code along with some efficiency strengthening amendments. How supportive would you be of including a minimum energy offset requirement in addition to the 2021 code, which would require on-site or off-site solar?

a) I do not support this code option.

b) I am neutral on this code option.

c) I support the adoption of this code option.

d) I need more information.

30) How supportive would you be if the City were to consider an all-electric requirement for new commercial construction code if industrial processes were exempt?

a) I do not support this code option.

b) I am neutral on this code option.

c) I support the adoption of this code option.

d) I need more information.

31) How supportive would you be if the City were to consider an energy code that required a 20% reduction in energy use from the 2021 energy code for commercial construction?

a) I do not support this code option.

b) I am neutral on this code option.

c) I support the adoption of this code option.

d) I need more information.

32) How supportive would you be if the City were to consider a commercial energy code that required net zero energy through efficiency and onsite/off-site renewable energy?

a) I do not support this code option.

b) I am neutral on this code option.

c) I support the adoption of this code option.

d) I need more information.

33) What is your biggest concern or perceived barrier to the commercial code considerations presented?

a) [open-ended question]

34) In your opinion, what is the biggest benefit to the commercial code considerations presented?

a) [open-ended question / optional]

35) What HVAC systems, process loads, other appliances, or specific building types do you think would need to be exempted from the commercial code options presented? (The rationale for exemptions could be prohibitively higher cost to operate, infeasible with current energy needs, technology does not exist, etc.)

a) [open-ended question / optional]

36) Are there any considerations to address equity for low-income residents or disproportionately impacted communities that the City of Louisville should consider for any of the three commercial code scenarios considered above?

a) [open-ended question / optional]

37) If the City provides incentives for energy efficiency or electrification upgrades, would you be more likely to support this code adoption?

a) I already support this code option.

b) Not likely to change my support.

c) Somewhat likely to change my support.

d) Yes, it would change my support.

Group 2: Business Owner, Tradesperson (electrician, plumber, etc), Energy Efficiency Expert, Energy or Facility Manager, Engineer, Architect, Designer, General Contractor and Other Business.

Group 2 Page 1

Note, for all open response questions, if you don't know or do not have feedback, please write in NA.

38) Does your business rent or own your office/workplace in the City of Louisville?

a) Rent.

b) Own.

c) Don't have an office/workplace in the City of Louisville.

39) Does your company have sustainability or climate related goals?

a) Yes, we have a sustainability plan/program and goals.

b) Yes, we have started small efforts to be more sustainable but no official plan/program or goals.

c) No, we've discussed internally but don't have climate or sustainability goals, plans, or programs.

d) No, we don't have climate or sustainability goals, plans or programs.

40) If so, please provide a high-level overview of your sustainability/climate related goals, plans, or programs.

a) [open-ended]

41) Do you have plans to build new or retrofit existing office space within the City of Louisville in the next 1-3 years?

a) Yes

b) Yes after 3+ years

c) No

42) What payback period would be your minimum threshold to consider solar onsite for your business?

a) 0-5 years

b) 5-10 years

c) 10-20 years

d) 20-30 years

e) 30+ years

f) I am not interested in solar for my business.

g) I already have solar onsite for my business.

43) What are your main considerations when operating and/or working in Louisville? (check all that apply)

a) Cost

b) Comfort

c) Environmental impact / Sustainability

d) Culture/community

e) Rules/regulations

f) Other (write-in)

44) How would you rate your experience designing/building/installing heat-pumps and other efficient all-electric HVAC systems?

a) [scale 1-10 or Not Applicable]

45) What's the most important consideration for the City in adopting stricter energy codes for residential and commercial construction?

a) The climate emergency.

b) Economic development.

c) Balancing the need to address climate change and promote economic development.

d) Other [write-in].

Group 2 Page 2

Intro:

Current Energy Code:

The City of Louisville has adopted the 2021 IECC, as well as additional amendments requiring further energy savings and all-electric construction items:

Commercial New Construction

- Increased insulation levels
- Increased fenestration efficiency requirements
- Increased HVAC efficiency
- Electric vehicle charging and infrastructure
- Electric-ready wherever gas appliances are installed
- Solar-ready zone required

Residential New Construction

- Increased insulation levels
- Increased ductwork and piping insulation requirements
- Mandatory heat recovery
- Electric vehicle charging and infrastructure
- Electric-ready wherever gas appliances are installed
- Net zero Appendix RC required

Commercial Code Scenarios for Consideration:

The City of Louisville is considering updates to the commercial energy code to improve the environmental and operational performance of new commercial buildings. These updates could include, but are not limited to, all-electric new construction, stricter efficiency requirements, energy offset requirements using solar, or net zero requirements, such as those found in Appendix CC of the current IECC 2021 code.

Residential Code Scenarios for Consideration:

For residential energy code adoption, Louisville has already adopted Appendix RC as a mandatory measure for all new construction buildings. The Appendix RC requires new single-family residential homes to meet a specific energy efficiency criteria and offset their energy use with onsite or offsite solar. Future residential code scenarios could include all-electric construction requirements.

Note, for all open response questions, if you don't know or do not have feedback, please write in NA.

Questions Page 2 Group 2:

46) How do you perceive the new considerations for energy code would impact your ability to maintain or expand your current business in the City of Louisville?

a) [open ended]

47) Do you need/want training on the current energy code?

a) Yes

b) No

48) Would you need/want training on the proposed codes/policies if enacted?

a) Yes

b) No

49) What data or information do you need to better understand the potential impacts of energy code options on your business and operations?

a) [open-ended]

50) The City has in place the IECC 2021 code along with some efficiency strengthening amendments. How supportive would you be of including a minimum energy offset requirement in addition to the 2021 code, which would require on-site or off-site solar?

a) I do not support this code option.

b) I am neutral on this code option.

c) I support the adoption of this code option.

d) I need more information.

51) How supportive would you be if the City were to consider an all-electric requirement for new commercial construction code if industrial processes were exempt?

a) I do not support this code option.

b) I am neutral on this code option.

c) I support the adoption of this code option.

d) I need more information.

52) How supportive would you be if the City were to consider an energy code that required a 20% reduction in energy use from the 2021 energy code for commercial construction?

a) I do not support this code option.

b) I am neutral on this code option.

c) I support the adoption of this code option.

d) I need more information.

53) How supportive would you be if the City were to consider a commercial energy code that required net zero energy through efficiency and onsite/off-site renewable energy?

a) I do not support this code option.

b) I am neutral on this code option.

c) I support the adoption of this code option.

d) I need more information.

54) What is your biggest concern or perceived barrier to the commercial code considerations presented?

a) [open-ended question]

55) In your opinion, what is the biggest benefit to the commercial code considerations presented?

a) [open-ended question / optional]

56) What HVAC systems, process loads, other appliances, or specific building types do you think would need to be exempted from the commercial code options presented? (The rationale for exemptions could be prohibitively higher

cost to operate, infeasible with current energy needs, technology does not exist, etc.)

a) [open-ended question / optional]

57) Are there any considerations to address equity for low-income residents or disproportionately impacted communities that the City of Louisville should consider for any of the three commercial code scenarios considered above?

a) [open-ended question / optional]

58) If the City provides incentives for energy efficiency or electrification upgrades, would you be more likely to support this code adoption?

a) I already support this code option.

b) Not likely to change my support.

c) Somewhat likely to change my support.

d) Yes, it would change my support.

Group 3: Residential Section

Group 3, Page 1

Intro:

Current Energy Code:

The City of Louisville has adopted the 2021 IECC, as well as additional amendments requiring further energy savings and all-electric construction items:

Commercial New Construction

- Increased insulation levels
- Increased fenestration efficiency requirements
- Increased HVAC efficiency
- Electric vehicle charging and infrastructure

Residential New Construction

- Increased insulation levels
- Increased ductwork and piping insulation requirements
- Mandatory heat recovery
- Electric vehicle charging and infrastructure

- Electric-ready wherever gas appliances are installed
- Solar-ready zone required

- Electric-ready wherever gas appliances are installed
- Net zero Appendix RC required

Commercial Code Scenarios for Consideration:

The City of Louisville is considering updates to the commercial energy code to improve the environmental and operational performance of new commercial buildings. These updates could include, but are not limited to, all-electric new construction, stricter efficiency requirements, energy offset requirements using solar, or net zero requirements, such as those found in Appendix CC of the current IECC 2021 code.

Residential Code Scenarios for Consideration:

For residential energy code adoption, Louisville has already adopted Appendix RC as a mandatory measure for all new construction buildings. The Appendix RC requires new single-family residential homes to meet a specific energy efficiency criteria and offset their energy use with onsite or offsite solar. Future residential code scenarios could include all-electric construction requirements.

Note, for all open response questions, if you don't know or do not have feedback, please write in NA.

Page 1 Group 3 Questions:

59) What are your main considerations for choosing to live in Louisville? (check all that apply)

a) Cost

b) Comfort

c) Environmental impact / Sustainability

d) Culture/community

e) Rules/regulations

f) Other (write-in)

60) Outside the Marshall Fire rebuild efforts, do you plan to build a new home or undergo a major retrofit on your home in the next 1-3 years

a) Yes

b) No

c) My home is part of the Marshall Fire rebuild effort.

61) Do you currently live in an all-electric and/or net zero home OR have you taken steps to start to electrify your home?

a) Yes, I live in an all-electric home.

b) Yes, I live in a net-zero home.

c) Yes, I am working on electrifying my home.

d) Yes, I am working on making my home net zero energy.

e) No.

62) Do you currently have solar installed on your home?

a) Yes.

b) No.

63) What's the most important consideration for the City in adopting stricter energy codes for residential and commercial construction?

a) The climate emergency.

b) Economic development.

c) Balancing the need to address climate change and promote economic development.

d) Other [write-in].

The City has adopted the Zero Energy Appendix (Appendix RC) for all new single-family home construction:

64) Do you have a clear understanding of the City of Louisville's current residential new construction code requirements?

a) [Sliding scale 1-5]

65) How do you perceive that Louisville's residential building code standards impact affordability of housing in the City?

a) Positively impact housing by reducing energy costs for residents and tenants.

b) Negatively impact housing by increasing upfront costs.

c) I don't see there being an impact.

d) Other [write-in].

66) What is your biggest concern or perceived barrier to building new homes to the Zero Energy Appendix?

a) [open-ended question]

67) In your opinion, what is the biggest benefit to building new homes to the Zero Energy Appendix?

a) [open-ended question / optional]

68) If the City were to consider an all-electric requirement for new single-family home construction:

69) What is your biggest concern or perceived barrier to building all-electric new homes?

a) [open-ended question]

70) In your opinion, what is the biggest benefit to building all-electric new homes?

a) [open-ended question / optional]

71) Should there be an exemption or flexibility granted for certain community members to allow them to build with natural gas?

a) [open-ended question / optional]

72) If the City provides incentives for electrification, would you be more likely to support an all-electric code requirement for new single-family home construction?

a) I already support this code option.

b) Not likely to change my support.

c) Somewhat likely to change my support.

d) Yes, it would change my support.

Optional Commercial Code Questions for Group 3:

The City of Louisville is considering updates to the commercial energy code to improve the environmental and operational performance of new commercial buildings. These updates could include, but are not limited to, all-electric new construction, stricter efficiency requirements, energy offset requirements using solar, or net zero requirements, such as those found in Appendix CC of the current IECC 2021 code.

73) The City has in place the IECC 2021 code along with some efficiency strengthening amendments. How supportive would you be of including a minimum energy offset requirement in addition to the 2021 code, which would require on-site or off-site solar?

a) I do not support this code option.

b) I am neutral on this code option.

c) I support the adoption of this code option.

d) I need more information.

74) How supportive would you be if the City were to consider an all-electric requirement for new commercial construction code if industrial processes were exempt?

a) I do not support this code option.

b) I am neutral on this code option.

c) I support the adoption of this code option.

d) I need more information.

75) How supportive would you be if the City were to consider an energy code that required a 20% reduction in energy use from the 2021 energy code for commercial construction?

a) I do not support this code option.

b) I am neutral on this code option.

c) I support the adoption of this code option.

d) I need more information.

76) How supportive would you be if the City were to consider a commercial energy code that required net zero energy through efficiency and onsite/off-site renewable energy?

a) I do not support this code option.

b) I am neutral on this code option.

c) I support the adoption of this code option.

d) I need more information.

77) What is your biggest concern or perceived barrier to the commercial code considerations presented?

a) [open-ended question]

78) In your opinion, what is the biggest benefit to the commercial code considerations presented?

a) [open-ended question / optional]

79) What HVAC systems, process loads, other appliances, or specific building types do you think would need to be exempted from the commercial code options presented? (The rationale for exemptions could be prohibitively higher cost to operate, infeasible with current energy needs, technology does not exist, etc.)

a) [open-ended question / optional]

80) Are there any considerations to address equity for low-income residents or disproportionately impacted communities that the City of Louisville should consider for any of the three commercial code scenarios considered above?

a) [open-ended question / optional]

81) If the City provides incentives for energy efficiency or electrification upgrades, would you be more likely to support this code adoption?

a) I already support this code option.

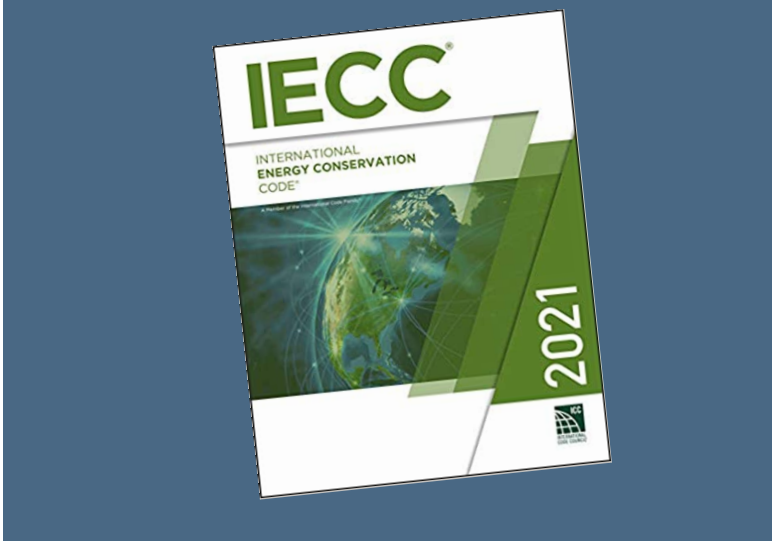
b) Not likely to change my support.

c) Somewhat likely to change my support.

d) Yes, it would change my support.

Appendix C

2021 International Energy Conservation Code



About I-Codes: Building codes improve the quality of construction of the built environment and thereby promote the health, safety, resiliency, affordability, sustainability, and general welfare of our communities. Building codes set a bare minimum construction quality that local officials deem necessary and that consumers expect. Most jurisdictions across the country adopt model building codes published by the International Code Council, and these are updated every three years in an extensive process involving builders, trades, architects, manufacturers and suppliers, low-income advocates, and, crucially, local building officials who are ultimately responsible for enforcing the codes. These codes are then adopted at local level. The 2021 codes are the most recent edition.

About the 2021 International Energy Conservation Code (IECC): After two previous cycles of stagnant efficiency, building officials voted overwhelmingly in favor of provisions in the latest IECC to strengthen energy efficiency. Overall, the 2021 IECC reduces energy by 8-9% (and reduces energy bills by 8-9%) compared to the previous 2018 IECC. The 2021 also includes language clean-up and clarifications, and an expanded focus on flexibility and options. Most of the changes "tighten up" provisions already in the code. Key changes for residential new construction include a better "thermal envelope" (e.g. walls, insulation, windows, doors, etc.), windows that take into account "solar heat gain" in climate zone 5B (the climate zone for the front range of Colorado), changes to duct testing, and increased use of lighting controls. On the commercial side, key changes include air barrier commissioning (i.e. testing and verification of the layer in walls that keeps outside air out and clean, conditioned inside air in), more efficient mechanical systems, technology for energy monitoring in larger buildings so that building operators can better measure and track their building's energy use, and increased options for additional energy efficiency "points."

Jurisdictions with the 2021 IECC: Arapahoe County, Aurora, Fort Collins, Larimer County, Longmont, Louisville, Parker, Superior, and Vail. At least 39 other jurisdictions covering 49% of Colorado's population have announced plans to adopt the 2021 IECC within the next year.

New Colorado Law (2022): The Colorado legislature passed a new bipartisan law that updates minimum energy code requirements. Jurisdictions must adopt at least the 2021 IECC, along with EV-ready, PV-ready, and electric-ready, when updating any other building codes between July 1, 2023 and July 1, 2026. After that date, jurisdictions must adopt at least a low-energy and carbon code. A new Energy Code Board will identify code language for the EV-ready, PV-ready, electric-ready, and low energy and carbon code, and jurisdictions can choose to adopt that code language, something equivalent, or something stronger.

Cost Discussion: An extensive analysis from the Pacific Northwest National Labs (PNNL, the entity charged by the U.S. Congress to perform energy code cost-effectiveness studies) calculates that the increased first cost per household is $3,376 for the 2021 IECC versus the 2015 IECC in Climate Zone 5B (as of Dec. 2021). PNNL's analysis is considered the most credible compared to other estimates because of PNNL's long-standing peer-reviewed methodology, and its absence of profit motive or conflict of interest. The majority of the first cost increase compared to the 2015 IECC is an increase in insulation levels. (Cost data is roughly similar between the 2015 and 2018 IECC, since the efficiency levels were similar.)

- Note: Applying a 19% inflation/supply chain adder as recommended by the National Association of Home Builders, and slightly increasing the size of the average house to better represent our region, yields an increased first cost of $5,118, per PNNL. Also, natural gas prices for residential customers in Colorado have nearly doubled since the study, which would improve the energy cost savings as compared to the original report.

Increased First Cost (vs 2015)	Mortgage Increase	Annual Energy Savings	Net Savings	Years to Positive Savings	Lifecycle Cost Savings
$3,376	$122	$161	$20/yr	9	$1,247

Mild/Medium/Aggressive Rating: Mild. The 2021 IECC is the minimum energy code required by the state of Colorado and even before the state law, jurisdictions covering half of Colorado's population had already announced plans to adopt it. As such, "mild" also includes EV-ready, PV-ready, and electric-ready as required by Colorado law. A "medium" rating would include a higher degree of electric transition – for instance, allowing a choice of either all-electric or mixed fuel new construction but requiring mixed fuel homes and buildings to pursue additional energy efficiency to make up for the extra emissions from fossil gas use onsite. An "aggressive" rating would include either all-electric requirements, the zero energy appendices, or both.

Notes on Cost Studies:

- In a memo to Marshall fire households, the Home Builders Association. of Metro Denver estimated $100,000 in additional upfront costs for 2021 IECC, then scaled back to $11,000 at the state legislature in April 2022 based on a study from Home Innovation Research Labs for National Association of Home Builders.
- Another study from ICF International showed HIRL/NAHB's $11,000 estimate used incorrect economic assumptions, and determined that the estimates in PNNL's study are more accurate.
- A City of Louisville survey of two builders estimated $6,450 in additional first cost for the 2021 IECC vs Louisville's amended 2018 IECC (for a slightly larger house size).
- Natural gas prices were $6.06/thousand cubic feet in PNNL's analysis, versus $11.93 as of April 2022, per EIA.

Prepared For: DOLA Code Cohort for Northwestern Metro / Boulder County
Date Updated: July 19, 2022

SWEEP
SOUTHWEST ENERGY EFFICIENCY PROJECT

LOTUS
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Solar-Ready

About: Solar-Ready appendices (RB for residential and CB for commercial) are officially prepared by the International Code Council as "add-on" to the IECC. They prepare homes and buildings for the future installation of solar by requiring conduit, space on the electrical panel, space reserved on the roof free from obstructions and shady objects, adequate roof structural capacity, notation on construction documentation, and a permanent certificate. Shady roofs are exempted. The current appendices only include multifamily buildings 4-5 stories tall, so an amendment is needed to include all multifamily buildings – a provision we call "expanded solar-ready".

Cost Discussion: Upfront costs are minimal (<$200). Cost savings include avoiding the need to tear up walls, redo wiring, and potentially upgrade an electrical panel. They also avoid the situation where roof penetrations for attic vents, etc. are poorly placed in a way that prevents future solar.

Jurisdictions with Solar-Ready: Avon, Boulder, Boulder County, Breckenridge,* Craig, Denver, Fort Collins, Frisco,* Golden, Lafayette, Louisville, Superior, Vail, and Wheat Ridge. Others considering or in the process of adopting it, besides Code Cohort communities, include Eagle County (*via Summit County sustainability program). Note: a new 2022 Colorado law requires all upcoming IECC adoptions to include solar-ready provisions equivalent to or better than a version to be identified by the state's Energy Code Board. We highly anticipate Appendices RB and CB with the multifamily fix will meet the law.

Mild/Medium/Aggressive Rating: Mild. A "medium" rating would require solar to actually be installed on some buildings for part of the energy load, plus a residential solar access law. An "aggressive" rating would require solar installed on all buildings for all of the energy load, a residential solar access law, and a retrofit policy.

Prepared For: DOLA Code Cohort for Northwestern Metro / Boulder County
Date Updated: July 7, 2022

SWEEP
SOUTHWEST ENERGY EFFICIENCY PROJECT

LOTUS
Engineering & Sustainability

SHUMS CODA
ASSOCIATES

EV-Ready

About: Electric Vehicle Ready (EV-Ready) appendices prepare homes and buildings for the current transition to electric vehicles. These appendices recognize that the vast majority of all electric vehicle charging will occur at home, with some charging infrastructure needed at work or around town. New single family homes will require one EV-ready space, and new multifamily and commercial buildings will require a percentage of EV-capable, EV-ready, and EV-installed spaces depending on the building type and use.

- Note: EV-ready is especially important for multifamily buildings, for equity reasons, since renters can't retrofit their parking lot or garage to install a 240-volt outlet on their own.

These percentages align with levels recently approved by Denver's code committee, and are less than the percentages adopted in some other jurisdictions (Superior, for instance). Multifamily percentages were reduced to ease the cost impact to new housing, and commercial building percentages were reduced to account for charging behavior based on building type.

Building Type	Minimum EV Installed Spaces	Minimum EV Ready Spaces	Minimum EV Capable Spaces
Single-family Duplex, Townhome	N/A	1 Space	N/A
Group A, B, E, M	10%	5%	10%
Group F, I, R-3, R-4	2%	0%	5%
Group R-1 and R-2[a]	15%	5%	40%
Group S-2 Parking Garages	10%	5%	0%

a. Where all (100%) parking serving R-2 occupancies are EV ready spaces, requirements for EVSE spaces for R-2 occupancies shall not apply.

(In I-code terminology, Group A is Assembly, B is Business, E is Education, F is Factory & Industrial, I is Institutional, M is Mercantile, R-1 is transient residential, R-2 is apartments and other non-transient residential, R-3 and R-4 are small group homes including halfway houses, rehab centers, care facilities, etc., and S is Storage.)

Market Discussion: EVs comprised 9% of new vehicle sales in Colorado in Q1 2022, and dealers continue to have long waitlists, especially with the recent rises in gas prices. All major auto brands have announced plans to shift the majority of their fleets to EVs by the mid-2030s or sooner. Newer models have ranges of well over 300 miles. Besides the reduced environmental impact, buyers like the faster acceleration, the low maintenance, the safety ratings, and the convenience of avoiding trips to the gas station.

Cost Discussion: One EV-ready space for a single-family home averages about $325-$400 at the time of construction. Federal and Xcel Energy rebates are available. Retrofitting even just the wiring later can run $481-$1,493 per space (depending on the distance from the panel to the garage) plus potential costs to upgrade the electrical panel. For commercial and multifamily, costs can run $300 for EV-capable, $1,300 for EV-ready, and $2,500 for EV-Installed per space. Federal, Colorado, and Xcel Energy rebates are available. Retrofits done later can cost several times more, and may include the need to tear up and rebuild walls (and in the case of commercial and multifamily, parking lots and landscaping), redo wiring, and upgrade the electrical panel.

Jurisdictions with EV-Ready: Aspen, Avon, Boulder, Boulder County, Breckenridge, Denver, Dillon, Durango, Eagle County, Fort Collins, Frisco, Golden, Lafayette, Lakewood, Larimer County, Louisville, Pueblo County, Steamboat, Summit County, Superior, Westminster, and Vail, Others in the Code Cohort communities are also planning to adopt it. Note: a new 2022 Colorado law requires all upcoming IECC adoptions to include EV-ready provisions equivalent to or better than a version to be identified by the state's Energy Code Board. We highly anticipate these amendments will meet the new law.

Mild/Medium/Aggressive Rating: Medium. A “mild” rating would have lower percentages for commercial and multifamily. An "aggressive" rating would require every space in multifamily to have some level of infrastructure, plus a policy for renovations.

Prepared For: DOLA Code Cohort for Northwestern Metro Area / Boulder County
Date Updated: July 7, 2022

Electric-Ready and Electric Preferred

About: Electric-ready amendments prepare homes and buildings for the choice between electric and gas equipment and appliances by ensuring they have the wiring and panel capacity available for future electric equipment (and enough physical space, in the case of water heaters). Electric-transition amendments, the next step, still allow new construction to be either all-electric or "mixed fuel" (e.g. natural gas) but mixed fuel homes and buildings require extra efficiency to make up for extra emissions.

In particular, the residential amendments in the prescriptive path require mixed fuel homes to select three "additional efficiency packages" instead of one. Mixed fuel homes choosing the "Energy Rating Index" (ERI) pathway would seek a score of 50 instead of 55.* For commercial buildings, mixed fuel buildings would choose extra efficiency options totaling an extra 10 points. The amendment also fixes two places in the commercial code where gas equipment was given more points than electric.

Market Developments: Air source heat pumps have been commonplace in other parts of the country, and are now making inroads in Colorado thanks to rapid technological developments that allow "cold climate" heat pumps to supply heat even when outdoor temps fall to -22F. Other configurations are possible as well, such as a non-cold-climate heat pump plus extra "strip heat" that can kick in for extra cold times. (This configuration is cheaper upfront but more expensive to run in extra cold temperatures when the heat strips are on.) For water heating, heat pump water heaters are an easy replacement for a typical gas or electric hot water storage tank. Finally, on the cooking side, some homeowners may express a preference for gas, but induction stoves are proving their mettle with twice-as-fast boil times, more finely-tunable controls, safety protections (e.g. the ability to touch the burner and not get burned) and the near-elimination of harmful air pollutants that lead to increased asthma rates and other respiratory distress.

Cost Discussion: Upfront costs depend highly on the configuration selected by the builder. All-electric homes, depending on supply chain availability and builder/contractor familiarity, can be built at no additional cost compared to mixed fuel [1]. Although the upfront costs of an air source heat pump and heat pump water heater are typically more than gas equivalents, the big savings come from avoiding the gas connection and gas piping costs to and within the home or building, and state and utility rebates offset the cost as well. For mixed fuel homes, electric-ready infrastructure is estimated at $300 for a water heater and the same for a stove (or possibly increased to $400 each with inflation and a tight labor market). No additional costs are incurred for electric readiness for a furnace, because central air conditioning or other space cooling would be provided anyway.

* Before 5% efficiency required in R401

(Cost Discussion Cont'd) A high-efficiency gas furnace (95-96% AFUE vs 92-93% AFUE), one of the most likely options for the required "additional efficiency package," is a difference of $200-$500 plus labor [2]. Data from the forthcoming Colorado Residential Field Study shows half of new homes are installing high-efficiency gas furnaces already. For water heaters, the difference between meeting the federal minimum efficiency standards of 0.63 UEF and an 0.92 UEF on-demand water heater is $500 plus labor [3] [4]. After heating and water heating, mixed fuel homes would then need to select one more "additional efficiency package" from the list provided in the 2021 IECC.

- Note: separate market transformation efforts are underway to train builders and contractors for the transition to all-electric equipment, and the familiarity and economies of scale are expected to bring total costs down as well.

Jurisdictions with Electric-Ready and/or Electric Transition: Boulder, Boulder County, Denver (in progress), Fort Collins, Longmont, Louisville, Superior, other Code Cohort communities (in progress). Note: a new 2022 Colorado law requires all upcoming IECC adoptions to include electric-ready provisions equivalent to or better than a version to be identified by the state's Energy Code Board. We highly anticipate these amendments will be in compliance with the law.

Mild/Medium/Aggressive Rating: Medium. A “mild” rating would be just electric ready – i.e. just the wiring and panel capacity. An “aggressive” rating would require all-electric heating and water heating for most residential, multifamily, and commercial buildings, or, even further, no gas connections at all.

[1] Despite a few recent studies, a couple local home builders report challenges getting the costs to "pencil out." State policies passed since then, like the 10% tax credit for heat pumps, heat pump water heaters, and panels, plus regulatory dockets underway at the Public Utilities Commission, may improve the cost calculations.
[2] Manufacturer model database review from electrification expert David Petroy, January 23, 2022. Note: Mr. Petroy notes that some comparisons may show wider differences because more efficient models are more likely to have higher-end “bells and whistles” that don’t affect performance.
[3] Home Depot website comparison of in-stock 0.64 UEF gas storage water heater ($800) and 0.93 gas tankless water heater ($1,300), Feb 9, 2022.
[4] Another full study on the economics of all-electric homes in CO is available at https://swenergy.org/pubs/heat-pump-study-2022

Efficiency Amendments

About: One amendment improves the lighting efficiency in horticulture facilities, and another amendment addresses the heat island effect, as explained below.

These two were selected from a wide array of other strengthening amendments, including a review of other nearby jurisdictions' codes, decarbonization model codes, and the 2024 IECC proposals. These two were selected based on a balance of technical and practical implementability, simple code language, and sustainability impact.

No additional efficiency-strengthening amendments are proposed for residential buildings (beyond those in the electric preferred proposals). This is recognition of the already-decent efficiency improvements in the 2021 IECC, the current challenges with the cost of construction, and the general preferences for simplicity and focused impact.

Horticulture lighting. Energy consumption from lighting in marijuana grow facilities, as well as other indoor agricultural facilities, is staggering, and is projected to continue increasing. Lighting can account for 50% to 80% of an indoor facility's energy use and 30% of a greenhouse's energy use. Traditionally, grow facilities hadn't invested in efficient lighting because of uncertainty in their market and shifting legal policies. This proposal is cost-neutral for greenhouses and has a 3-year payback for indoor facilities. This proposal has been approved by the 2024 IECC Commercial Consensus Committee.

Cool roofs. Cool roofs are made of materials that reflect more sunlight and absorb less heat. They are usually, though not always, made of lighter-color materials. Cool roofs still allow the installation of solar panels, skylights, mechanical equipment, rooftop amenities, and/or vegetative roofs at the building owner's discretion. This only affects low-sloped (i.e. flat or nearly flat) roofs, and it doesn't apply to roof repairs or replacements. Cool roofs are already in the IECC, but this brings them into our climate zone (5B) in recognition of increased summer temperatures and the growing problem of the heat island effect. Higher urban temperatures also speed the formation of ground-level ozone, the primary component of smog. Costs for a cool roof are equivalent to costs for a black roof, and most suppliers and contractors supply both types. Energy costs are not notably impacted, because more recent energy codes have high amounts of insulation in the attic that limit the roof's impact on inside temperatures. Instead, as noted, the significant benefits here are for reducing heat island and improving air quality.

Jurisdictions with Efficiency Amendments: Denver requires a cool roof and has improved horticulture lighting. Other jurisdictions in the area have selected various other amendments to increase the efficiency of their homes and buildings, including Boulder, Boulder County, Breckenridge, Denver, Fort Collins, Frisco, Golden, Louisville, Summit County, and Superior.

Mild/Medium/Aggressive Rating: Medium. A "mild" rating would be just the 2021 IECC unamended. An "aggressive" rating would have prescriptive table updates, stricter performance path requirements (e.g. 10% more efficient), and/or more amendments approved for the 2024 IECC.

City of Louisville
COLORADO • SINCE 1878

DRAFT Memorandum

To: **Louisville City Council Members**

From: **Louisville Sustainability Advisory Board**

Date: **May 15, 2024**

Re: **Energy Code Amendments**

Dear Louisville City Councillors,

The Louisville Sustainability Advisory Board understands that City Council will consider several amendments to the City's building codes at its meeting on 4 June 2024. The Board reviewed and discussed these amendments at its March, April, and May meetings. While City staff provided a thorough report, the Board would have appreciated more information concerning the genesis of the proposed amendments.

We offer some advice on these amendments just below. To frame our advice, we remind City Council that climate change presents humanity with a crisis of unparalleled proportions to which humanity has so far responded inadequately, that the City has set decarbonization goals in an attempt to respond to this crisis, and that the City's latest residential and commercial building codes are integral to achieving these goals. We further remind City Council that the City's latest building codes are not exceptional: several municipalities in Colorado have adopted the 2021 International Energy Conservation Code, and the State of Colorado has essentially mandated widespread adoption; Lafayette and Crested Butte recently adopted building codes with electrification mandates (allowing for certain exemptions), and Boulder is currently considering similar legislation; and the City's commercial building codes were modeled on those of other municipalities including Boulder. We finally remind City Council that the Board wholeheartedly supported adoption of the City's latest building codes, and we again thank City Council for authorizing their adoption.

First, we address the proposed amendments to the City's electric vehicle infrastructure code. City staff have proposed that the City replace its current code with the State of Colorado's

recommendations. While the City's code and the State's recommendations are very similar in many respects, and while the Board generally supports regional alignment on such legislation as building codes, we also recognize that Louisville differs from other communities across Colorado and that Louisville has a celebrated history of sustainability leadership. Of relevance in this case, Louisville has higher rates of adoption of electric vehicles than many other communities across Colorado, and Louisville has more aggressive decarbonization goals than the State and many of its other communities. Accordingly, the Board advises City Council to consider a compromise between the City's electric vehicle infrastructure code and the State's recommendations. Specifically, the Board endorses the Planning Commission's recommendations.

Next, we address the proposed amendments to the City's residential and commercial building codes. Several of these amendments are essentially clarifications or corrections; the Board most certainly supports these amendments. The remaining amendments represent weakenings of the City's building codes as far as efficiency and electrification are concerned; the Board recommends that City Council consider compromises between the City's current building codes and the proposed amendments. We provide brief recommendations for each such amendment.

- *All-electric requirements for commercial space and water heating*: The Board recommends retaining the all-electric space and water heating requirements for alterations and additions if existing equipment is replaced or if additional heating units are installed. Accordingly, existing equipment, no matter its power source, may continue to be used for the extent of its useful lifetime.
- *Natural gas backup for commercial space heating*: The Board recommends that natural gas backups for commercial space heating only be permitted if existing natural gas space heating equipment is being retained to serve this function.
- *Post-construction compliance and documentation for new commercial construction*: The Board supports post-construction compliance and documentation, through monitoring and metering, of the energy use intensity standards for new commercial buildings, but we appreciate the burden that such compliance and documentation places on building owners and City staff. Accordingly, we endorse removal of these requirements, but we strongly believe that legislation will mandate monitoring and metering of greenhouse gas emissions in the relatively near future.
- *Minimum heat pump standards*: The Board supports the amended minimum heat pump standards.

- *Furnace efficiency standards*: The Board recommends maintaining furnace efficiency standards but creating a simple waiver for cases in which products meeting these standards are not readily available.
- *Commercial door U-value standards*: The Board recommends maintaining commercial door U-value standards but creating a simple waiver for cases in which products meeting these standards are not readily available.
- *Electric vehicle infrastructure for altered parking*: The Board recommends that electric vehicle charging standards apply to any added parking but not to any reconfigured parking.
- *Passive house certification*: The Board recommends that the City allow passive house certification from both PHI and PHIUS as an alternative to Appendix RC of the 2021 IECC.

The Board strongly believes that legislation will mandate electrification retrofits of existing residential and commercial buildings in the relatively near future. By electrifying their buildings during construction, alteration, or addition, building owners will likely bear lower costs in the long term.

If the City can offer any assistance to meet or incentives to exceed the current building codes, then the Board would be most supportive of such efforts. The Board has recommended to City staff that the City provide incentives for commercial and residential efficiency and electrification upgrades in the next biennial budget.

Thank you for considering our advice.

Sincerely,
The Louisville Sustainability Advisory Board

City of Louisville
COLORADO • SINCE 1878

CITY COUNCIL COMMUNICATION
AGENDA ITEM 10E

SUBJECT: **ORDINANCE NO. 1877, SERIES 2024 – AN ORDINANCE AMENDING TITLE 17 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING ELECTRIC VEHICLE CHARGING INFRASTRUCTURE – 2nd READING – PUBLIC HEARING (advertised *Daily* Camera 9/14/24)**

DATE: **JULY 9, 2023**

PRESENTED BY: **ROB ZUCCARO, AICP, COMMUNITY DEVELOPMENT DIRECTOR**

SUMMARY:
Staff is presenting a proposed ordinance that updates the City's standards for Electric Vehicle Charging Infrastructure that must be installed with new development. The update is intended to align with the standards set forth in the Colorado Model Electric and Solar Ready Code, published by the Colorado Energy Office.

BACKGROUND:
The City adopted Ordinance No. 1816, Series 2021 on October 19, 2021, which established Electric Vehicle (EV) Charging Infrastructure requirements for all new residential and commercial developments in the City and additions that add 25% or more new commercial building area or 50% or more new residential building area to an existing development. The standards established categories for *EV Installed, Capable* and *Ready* parking spaces. An *EV Installed* parking space is a fully functional charging station. An *EV Ready* parking space is wired for a charging station but does not have the charger installed. An *EV Capable* parking space has a conduit for a future wiring and space reserved in the electrical service panel to install future wiring and a charger. The City based the number of spaces required on a review of similar ordinances from other jurisdictions and anticipated demand by use. Table 1 below summarizes the currently adopted number of spaces required by use.

In 2021 and 2022, the City also adopted a series of building code amendments to improve energy efficiency in new development and redevelopments. This included adoption of the 2021 International Energy Conservation Code, with amendments, requirements for all new commercial development to incorporate all-electric water and space heating systems as a way to limit the use of fossil fuels, and a requirement for certain commercial and multi-family developments to meet minimum *Energy Use Intensity* (EUI) ratings.

Table 1: EV Charging Standards Established by Ordinance No. 1816, Series 2021

	EV Installed	EV- Ready	EV Capable
Residential Uses			
Single-Family unit		1 space	1 space
Multi-Family unit, with dedicated parking spaces or garages		1 space	1 space
Tier 1			
Multi-Family, without dedicated parking spaces or garages	10% of spaces	10% of spaces	50% of spaces
Hotel, Motel, Extended Stay Lodging Facility			
Tier 2 – Employment oriented uses	7% of spaces	10% of spaces	15% of spaces
Business and Professional Offices			
General research facilities, light industrial facilities including manufacturing, assembly, warehouse and fabrication			
Hospital			
Tier 3 – Service and Sales oriented uses	5% of spaces	10% of spaces	10% of spaces
Private and public recreational and social facilities, membership clubs, lodges, and fraternal organizations			
Religious institution			
Commercial amusement, indoor and outdoor			
Schools, including public, private, vocational or business			
Restaurant			
Retail			
Personal service			
Medical and dental clinics			

Following the adoption of each of these ordinances, the City Council asked City staff to conduct additional outreach to businesses, commercial property owners and developers to address concerns over feasibility of implementing certain parts of these new ordinances. The City held a public open house in August of 2023 to review the codes and gather input. Included in the input from this open house was that the City consider aligning its EV charging infrastructure standards with the Colorado Model Electric and Solar Ready Code, which the Colorado Energy Office adopted June 1, 2023 (see Attachment 2). This new model code has less stringent standards than what the City has adopted.

PROPOSAL:
The proposed ordinance would combine use types into three categories: commercial, multifamily residential (commercial R-2 occupancies), and other residential uses. A new category of *EV Capable Light* parking spaces is added. This category only requires a conduit from the electrical panel to the parking space for future upgrades, but does not require electrical panel capacity for the circuit. The number of required *EV Installed, Ready* and *Capable* parking spaces would all be reduced under the proposal from the current ordinance for commercial and multifamily development. The number of required spaces for other residential development would remain the same as the current ordinance. Table 2 below provides a summary of the proposed number of EV charging spaces.

Table 2: Proposed Revised EV Charging Standards

Building Type	EVSE Installed Space	EV Ready Space	EV Capable Space	EV Capable Light Space
Commercial Buildings: Non R-2 Occupancies				
With 10 or less parking spaces	0	2 spaces	0	0
With greater than parking spaces	2% of spaces	8% of spaces	10% of spaces	10% of spaces
Commercial Buildings: R-2 Occupancies				
With 10 or less parking spaces	1 space	1 space	1 space	1 space
With greater than 10 parking spaces	5% of spaces	15% of spaces	10% of spaces	30% of spaces
Residential Buildings				
Per Dwelling	0	1 space	1 space	0

The proposal also adds definitions to the zoning code (LMC Title 17) that currently exist in the building code (LMC Title 15) for ease of reference. A definition for *EV Capable Light* space would also be added to the code.

ANALYSIS:
In a review of other local codes, the City's existing EV Charging Infrastructure code is more stringent than some and less stringent than others. For example, Boulder County's EV charging code requires a lower percent of EV Installed spaces for commercial development and does not require for EV Capable or Ready spaces (see Attachment 3). Lafayette's code does require EV Capable and Ready spaces in addition to Installed Spaces, but with some categories at a higher percentage than the City's existing code (see Attachment 4). Aligning with the Colorado Model Electric and Solar Ready Code is a way to provide more consistency and predictability for property developers, while still meeting the City's goals to promote EV infrastructure.

FISCAL IMPACT:
No fiscal impact is anticipated from the changes to the code.

PLANNING COMMISSION RECOMMENDATION:
The Planning Commission reviewed the draft ordinance at their February 8, 2024 meeting and voted unanimously to recommend approval with the following conditions:

- Provide language to ensure a minimum "Level 2" EV charging station standards for installed spaces.
- Change R-2 multi-family residential occupancy with 10 or fewer parking spaces to require at least one EVSE Installed Space.
- Add language so that if EVSE Installed Spaces are provided above the minimum number that a credit can be provided to the required number of EV Capable, EV Ready, or EV Ready Light Spaces.
- Require labeling in electrical panels for the spaces reserved for breakers to support future EV Capable Spaces.

All Commission conditions were incorporated into the 1st reading draft for City Council.

The recording of the meeting is at the following link (6:30 – 1:14:30).
https://www.youtube.com/live/YCc4rVSudEc?si=hzQH-bhurnTipPHf

Minutes from the meeting will be available for the public hearing and second reading of the proposed ordinance.

SUSTAINABILITY ADVISORY BOARD:
The Sustainability Advisory Board has submitted a letter with comments on the proposed code amendment. The letter specifically references endorsement of the Planning Commission's recommendations.

STAFF RECOMMENDATION:
Staff recommends approval of Ordinance No. 1877, Series 2024 on first reading and setting the public hearing for August 6, 2024

ATTACHMENTS:

1. Ordinance No. 1877, Series 2024
2. Colorado Model Electric and Solar Ready Code
3. Boulder County Building Code Section K111.4, and R329
4. Lafayette Building Code Sections CD103, RD103, RD104, and RD105
5. Planning Commission Resolution 01, Series 2024
6. Louisville Sustainability Advisory Board Memo

STRATEGIC PLAN IMPACT:

☐	**Financial Stewardship & Asset Management**	☐	**Reliable Core Services**
☒	**Vibrant Economic Climate**	☐	**Quality Programs & Amenities**
☒	**Engaged Community**	☐	**Healthy Workforce**
☐	**Supportive Technology**	☐	**Collaborative Regional Partner**

ORDINANCE NO. 1877
SERIES 2024

AN ORDINANCE AMENDING TITLE 17 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING ELECTRIC VEHICLE CHARGING INFRASTRUCTURE

WHEREAS, the City of Louisville remains committed to its adopted goals to reduce energy consumption, increase clean energy sources, and support the transition to a low-carbon community as outlined in the Sustainability Action Plan and Resolution 25, Series 2019, "A Resolution Setting Clean Energy and Carbon Reduction Goals"; and

WHEREAS, the City Council desires to add requirements for solar readiness, electric vehicle charging infrastructure, and building electrification to build a more resilient building stock and support future building and transportation electrification efforts pursued by residents and businesses; and

WHEREAS, by Ordinance No. 1816 adopted on October 19, 2021, the City Council amended the Zoning Code to require new construction include electric vehicle charging infrastructure; and

WHEREAS, the City Council desires to amend the City's electric vehicle charging standards to better align with the Colorado Model Electric Ready and Solar Ready Code, published June 1, 2023 by the Colorado Energy Office; and

WHEREAS, the Planning Commission, after property notice required by law, held a public hearing on this ordinance on February 8, 2024 and provided a recommendation to the City Council on its adoption; and

WHEREAS, the City Council, after proper notice as required by law, has held a public hearing on this ordinance providing for the adoption of said code.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

Section 1. Louisville Municipal Code Section 17.20.170. – Electric Vehicle Charging Infrastructure, is hereby amended as follows (words added are underlined; words deleted are ~~stricken through~~):

Sec. 17.20.170. – Electric Vehicle Charging Infrastructure.

A. Purpose and Intent. The purpose and intent of this section is to facilitate and encourage the use of electric vehicles, to expedite the establishment of convenient and cost-effective electric vehicle infrastructure, and establish the minimum requirements for such infrastructure to serve both short and long-term parking needs.

B. Definitions. The following definitions shall apply to this Section:

Commercial Buildings, for this section, means commercial buildings and R-Occupancies that are covered by the International Building Code.

Electric Vehicle (*EV*) means a vehicle registered for on-road use, primarily powered by an electric motor that draws current from a rechargeable storage source that is charged by being plugged into an electrical current source.

Electric Vehicle Supply Equipment (EVSE) means the electrical conductors and associated equipment external to the electric vehicle that provide a connection between the premises wiring and the electric vehicle to provide electric vehicle charging.

Electric Vehicle (EV) Capable Space means a designated parking space that is provided with conduit sized and rated for a minimum 40-amp, 208/240-Volt dedicated branch circuit and shall be no less than 1" in size. Conduit must be continuous from the future or existing electrical panelboard or switchboard location(s) and end at a junction box or receptacle located within close proximity of the parking space. The electrical panel serving the parking space shall have sufficient capacity and physical space for a dual-pole, 40-amp breaker and shall be labeled “For Future Electric Vehicle Supply.” The conduit shall be sealed at the junction or outlet box that is capped off, with the conduit sealed and the cap labeled as "For future electric vehicle charging."

Electric Vehicle (EV) Capable Light Space means a designated parking space that is provided with conduit sized and rated for a minimum 40-amp, 208/240-Volt dedicated branch circuit and shall be no less than 1" in size and has sufficient physical space adjacent to the existing electrical equipment for future electric upgrades.

Electric Vehicle (EV) Ready Space means a designated parking space that is provided with a dedicated branch circuit with wiring capable of supporting a minimum 40-ampere, 208/240-Volt circuit that terminates at a receptacle, plug, junction box, or an installed electric vehicle supply equipment within close proximity of the parking space. There shall be adequate reserved space in an electrical panelboard or switchboard to meet the electric vehicle requirements.

Electric Vehicle Supply Equipment (EVSE) Installed Space means a designated parking space with dedicated electric vehicle supply equipment capable of supplying a minimum 40-amp, dedicated circuit rated at 208/240 Volt from a building electrical panelboard.

Electric vehicle charging stations (EVCS) means a public or private parking space that is served by battery charging station equipment that has

as its primary purpose the transfer of electric energy (by conductive or inductive means) to a battery or other energy storage device in an electric vehicle.

Electric vehicle charging station – private restricted use means an electric vehicle charging station that is:

1. Privately owned and restricted access (e.g., single-family dwelling unit, executive parking, designated employee parking, assigned parking at multi-family residential building); or

2. Publicly owned and restricted (e.g., fleet parking with no access to the general public).

Electric vehicle charging station – public use means an electric vehicle charging station that is:

1. Publicly owned and publicly available (e.g., Park-n-ride, public library parking lot, Recreation and Senior Center lot, etc); or

2. Privately owned and available to visitors of the use (e.g., shopping center, hotel, office, etc.)

Electric vehicle parking space means any marked parking space that identifies the use to be exclusively for the parking of an electric vehicle.

Residential Buildings, for this section, means dwellings that are covered by the International Residential Code

C. Number of required electric vehicle charging stations. The following table sets forth the number of required charging stations for all new development or redevelopments as required in Chapter 15.18 of the Louisville Municipal Code. ~~This list is not intended to be exhaustive of each use category, however is intended to establish general categories of use tiers. The Director of Planning and Building Safety shall determine the appropriate tier if the use is not identified in the table below.~~ For each EVSE Installed Space beyond the minimum number of required spaces, a credit may be given for a required EV Ready, EV Capable, or EV Capable Light Space.

1. Requirements will be rounded up to the nearest whole number.

2. Minimum electrical and hardware requirements for EVSE Installed, EV Ready, and EV Capable are set forth in Chapter 15.18 of the Louisville Municipal Code.

3. Minimum Charging Rate. Each installed EVSE shall comply with one of the following:

a. Be capable of charging at a minimum rate of 6.2 kVA (or 30A at 208/240V).

b. When serving multiple EVSE installed spaces and controlled by an energy management system providing load management, be capable of simultaneously sharing each EVSE installed space at a minimum charging rate of no less than 3.3 kVA.

	~~EV Installed~~	~~EV- Ready~~	~~EV Capable~~
~~**Residential Uses**~~			
~~Single-Family unit~~		~~1 space~~	~~1 space~~
~~Multi-Family unit, with dedicated parking spaces or garages~~		~~1 space~~	~~1 space~~
~~**Tier 1**~~			
~~Multi-Family, without dedicated parking spaces or garages~~	~~10% of spaces~~	~~10% of spaces~~	~~50% of spaces~~
~~Hotel, Motel, Extended Stay Lodging Facility~~			
~~**Tier 2 – Employment oriented uses**~~	~~7% of spaces~~	~~10% of spaces~~	~~15% of spaces~~
~~Business and Professional Offices~~			
~~General research facilities, light industrial facilities including manufacturing, assembly, warehouse and fabrication~~			
~~Hospital~~			
~~**Tier 3 – Service and Sales oriented uses**~~	~~5% of spaces~~	~~10% of spaces~~	~~10% of spaces~~
~~Private and public recreational and social facilities, membership clubs, lodges, and fraternal organizations~~			
~~Religious institution~~			
~~Commercial amusement, indoor and outdoor~~			
~~Schools, including public, private, vocational or business~~			

~~Restaurant~~			
~~Retail~~			
~~Personal service~~			
~~Medical and dental clinics~~			

Building Type	EVSE Installed Space	EV Ready Space	EV Capable Space	EV Capable Light Space
Commercial Buildings: Non R-2 Occupancies				
With 10 or less parking spaces	0	2 spaces	0	0
With greater than parking spaces	2% of spaces	8% of spaces	10% of spaces	10% of spaces
Commercial Buildings: R-2 Occupancies				
With 10 or less parking spaces	1 space	1 space	1 space	1 space
With greater than 10 parking spaces	5% of spaces	15% of spaces	10% of spaces	30% of spaces
Residential Buildings				
Per Dwelling	0	1 space	1 space	0

D. Permitted locations.

1. EVCS are permitted in every zoning district when accessory to a principal permitted use. Such stations located at single-family and designated multi-family units shall be private restricted use only.

2. If the primary use of the parcel is the retail electric charging of vehicles, then the use shall be considered an automotive fueling station for zoning purposes. Installation shall be located in zone districts which permit this use.

E. General requirements.

1. Accessible spaces. A charging station will be considered accessible if it is located adjacent to, and can serve, an accessible parking space as defined and required by the ADA. It is not necessary to designate the EVSE exclusively for the use of vehicles parked in the accessible space.

2. EVCS – public use shall be subject to the following requirements.

a. The EVCSs shall be located in a manner that will be easily seen by the public for informational and security purposes.

b. The EVCSs shall be located in desirable and convenient parking locations will serve as an incentive for the use of electric vehicles.

c. The EVCSs must be operational during the normal business hours of the use(s) that it serves.

d. The EVSE shall be maintained in all respects, including the functioning of equipment. A phone number or other contact information shall be provided on the equipment for reporting problems with the equipment or access to it.

e. The property owner may collect a service fee for the use of EVSE.

Section 2. If any article, section, paragraph, sentence, clause, or phrase of this ordinance is held to be unconstitutional or invalid for any reason, such decision shall not affect the validity or constitutionality of the remaining portions of this ordinance. The City Council hereby declares that it would have passed this ordinance and each part or parts hereof irrespective of the fact that any one part or parts be declared unconstitutional or invalid.

Section 3. The repeal or modification of any provision of any prior ordinance by this ordinance shall not release, extinguish, alter, modify, or change in whole or in part any penalty, forfeiture or liability, either civil or criminal, which shall have been incurred under such provision, and each provision shall be treated and held as still remaining in force for the purpose of sustaining any judgment, decree, or order which can or may be rendered, entered, or made in such actions, suits, proceedings, or prosecutions.

Section 4. All other ordinances or portions thereof inconsistent or conflicting with this ordinance or any portion hereof are hereby repealed to the extent of such inconsistency or conflict.

INTRODUCED, READ, PASSED ON FIRST READING, AND ORDERED PUBLISHED this _____ day of _____, 2024.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Meredyth Muth, City Clerk

APPROVED AS TO FORM:

_____
Kelly PC, City Attorney

PASSED AND ADOPTED ON SECOND AND FINAL READING, this _____ day of _____, 2024.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Genny Kline, Interim City Clerk

COLORADO
Energy Office

Colorado Model Electric Ready and Solar Ready Code

Published: June 1, 2023

COLORADO
Department of Local Affairs

Chapter 1 Scope and Administration

SECTION 101 SCOPE AND GENERAL REQUIREMENTS.

101.1 Title. This code shall be known as the **Electric Ready and Solar Ready Code** of [NAME OF JURISDICTION], and shall be cited as such. It is referred to herein as "this code".

101.2 Scope. This code applies to all buildings and dwelling units, and the buildings' sites and associated systems and equipment.

101.3 Intent. This code shall regulate the design and construction of buildings to prepare new buildings for solar photovoltaic or solar thermal, electric vehicle charging infrastructure, and electrification of building systems. This code is intended to provide flexibility and balance upfront construction costs with the future cost to retrofit buildings to accommodate these systems. This code is not intended to abridge safety, health or environmental requirements contained in other applicable codes or ordinances.

101.4. Applicability. Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall govern.

> **101.4.1 Residential Buildings.** *Residential buildings* must comply with the Residential Chapters of this code.
>
> **101.4.2 Commercial Buildings.** *Commercial buildings* must comply with the Commercial Chapters of this code.

SECTION 102 WAIVER AND VARIANCE.

102.1 Scope. The following waivers shall be permitted to be requested if buildings meet the following requirements.

> **102.1.1 Commercial Buildings Greater than 10,000 sq. ft.** *Commercial buildings* that have a gross floor area greater than 10,000 sq. ft. shall be eligible to request

a partial waiver to the requirements of this code if they meet the requirements of Section **102.2**.

102.1.2 Buildings Impacted by a Natural Disaster. [NAME OF JURISDICTION] is permitted to authorize, upon appeal in specific cases, a waiver from the requirements of this code where, owing to a declared natural disaster that has destroyed buildings or resulted in other exceptional and extraordinary circumstances as determined by [NAME OF JURISDICTION], and [NAME OF JURISDICTION] determines enforcement of the provisions of this code will result in unnecessary hardship.

102.2 Substantial Cost Differential Waiver. [NAME OF JURISDICTION] shall be permitted to authorize, upon appeal, a waiver from the requirements of this code for an applicant that asserts that compliance with this code will result in a substantial cost differential. [NAME OF JURISDICTION], when authorizing such a waiver, shall be permitted to waive certain requirements of this code only until the cost differential for compliance with the remaining requirements reaches one percent or less. The burden of proof is upon the applicant to provide substantiation of a cost differential, such as quotes or other licensed design professional analyses as *approved* by [NAME OF JURISDICTION].

102.2.1 Substantial Cost Differential. For the purposes of Section **102.2**, "substantial cost differential" means costs incurred as a result of compliance with the requirements of this code would exceed one percent of total mechanical, electrical, and plumbing construction costs inclusive of materials and labor.

SECTION 103 CONSTRUCTION DOCUMENTS.

103.1 General. Construction documents and other supporting data shall be submitted in one or more sets, or in a digital format where allowed by the *code official*, with each application for a permit. The construction documents shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed. Where special conditions exist, the *code official* is authorized to require necessary construction documents to be prepared by a registered design professional.

Exception: The *code official* is authorized to waive the requirements for construction documents or other supporting data if the *code official* determines they are not necessary to confirm compliance with this code.

103.2 Information on Construction Documents. Construction documents shall be drawn to scale on suitable material. Electronic media documents are permitted to be submitted where *approved* by the *code official*. Construction documents shall be of sufficient clarity to indicate the location, nature, and extent of the work proposed, and show in sufficient detail pertinent data and features of the building, systems, and equipment as herein governed. Details shall include, but are not limited to, the following as applicable:

1. Location and size of the *solar-ready zone.*
2. Structural design loads of roof dead load and roof live load.
3. Pathways for routing of conduit from the *solar-ready zone* to the electrical service panel.
4. Number and location of *EV capable light spaces.*
5. Number and location of *EV capable spaces.*
6. Number and location of *EV ready spaces.*
7. Number and location of *EVSE installed spaces.*
8. Locations of conduit and termination points serving the aforementioned parking spaces.
9. Location for condensate drainage where *combustion equipment* for space heating and water heating is installed.

103.3 Examination of Documents. The *code official* shall examine or cause to be examined the accompanying documents and shall ascertain whether the construction indicated and described is in accordance with the requirements of this code and other pertinent laws or ordinances. The *code official* is authorized to utilize a registered design professional, or other *approved* entity not affiliated with the building design or construction, in conducting the review of the plans and specifications for compliance with the code.

103.3.1 Approval of Construction Documents. When the *code official* issues a permit where construction documents are required, the construction documents shall be endorsed in writing and stamped "Reviewed for Code

Compliance". Such *approved* construction documents shall not be changed, modified, or altered without authorization from the *code official*. Work shall be done in accordance with the *approved* construction documents.

One set of "Reviewed for Code Compliance" construction documents shall be retained by the *code official*. The other set shall be returned to the applicant, kept at the site of work, and shall be open to inspection by the *code official* or a duly authorized representative.

103.3.2 Previous Approvals. This code shall not require changes in the construction documents, construction, or designated occupancy of a structure for which a lawful permit has been heretofore issued or otherwise lawfully authorized, and the construction of which has been pursued in good faith within 180 days after the effective date of this code and has not been abandoned; except that the *code official* is authorized to grant one or more extensions of time for additional periods not exceeding 180 days each.

103.3.3 Phased Approval. The *code official* shall have the authority to issue a permit for the construction of part of a solar ready, EV ready, or electric ready installation before the construction documents for the entire system have been submitted or *approved*, provided that adequate information and detailed statements have been filed complying with all pertinent requirements of this code. The holders of such permit shall proceed at their own risk without assurance that the permit for the entire solar ready, EV ready, or electric ready installation will be granted.

I03.4 Amended Construction Documents. Changes made during construction that are not in compliance with the *approved* construction documents shall be resubmitted for approval as an amended set of construction documents.

103.5 Retention of Construction Documents. One set of *approved* construction documents shall be retained by the *code official* for a period of not less than 180 days from the date of completion of the permitted work, or as required by state or local laws.

103.6 Building Documentation and Closeout Submittal Requirements. The construction documents shall specify that the documents described in this section be

provided to the building owner or owner's authorized agent within 90 days of the date of receipt of the certificate of occupancy.

Exception: *Residential buildings.*

103.6.1 Record Documents. Construction documents shall be updated to convey a record of the completed work. Such updates shall include mechanical, electrical, and control drawings that indicate all changes to size, type, and location of components, equipment, and assemblies.

103.6.2 Compliance Documentation. Compliance documentation and supporting calculations shall be delivered in one document to the building owner as a part of the project record documents or manuals, or as a standalone document. This document shall include the specific energy code edition utilized for compliance determination for each system.

SECTION 104 INSPECTIONS.

104.1 General. Construction or work for which a permit is required shall be subject to inspection by the *code official*, his or her designated agent or an *approved agency*, and such construction or work shall remain visible and able to be accessed for inspection purposes until *approved*. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction. Inspections presuming to give authority to violate or cancel the provisions of this code or of other ordinances of the jurisdiction shall not be valid. It shall be the duty of the permit applicant to cause the work to remain visible and/or able to be accessed for inspection purposes. Neither the *code official* nor the jurisdiction shall be liable for expenses entailed in the removal or replacement of any material, product, system or building component required to allow an inspection to validate compliance with this code.

104.2 Required Inspections. The *code official*, his or her designated agent or an *approved agency*, upon notification, shall make the inspections set forth in Sections **104.2.1** through **104.2.4**.

104.2.1 Solar Ready. Inspections shall verify all of the following as required by this code, *approved* plans, and specifications:

1. The location and size of the *solar-ready zone* or the capacity of an installed on-site renewable energy system.
2. Electrical capacity and reserved physical space for circuit breakers in the main electrical service panel that are properly labeled.

104.2.2 Electric Vehicle Ready. Inspections shall verify all of the following as required by this code, *approved* plans, and specifications:

1. *EV* power transfer infrastructure requirements.
2. Electrical equipment associated with each parking space type, including branch circuits, conduit and/or raceway, junction boxes, receptacles, and *EVSE* are properly labeled and installed.
3. Electrical capacity and reserved physical space for circuit breakers in the main electrical service panel are properly labeled, if applicable.

104.2.3 Electric Ready. Inspections shall verify all of the following as required by this code, *approved* plans, and specifications:

1. Branch circuits, conduit and/or raceway, wiring, junction boxes, and receptacles for *future electric equipment* or appliances are properly labeled and installed, as applicable.
2. Reserved physical space for *future electric equipment* or appliances.
3. Electrical capacity and reserved physical space for circuit breakers in the main electrical service panel are properly labeled.

104.2.4 Final Inspection. The final inspection shall include verification of the installation and proper labeling of all requirements of this code.

104.3 Reinspection. A building shall be reinspected where determined necessary by the *code official*.

104.4 Approved Inspection Agencies. The *code official* is authorized to accept reports of third-party inspection agencies not affiliated with the building design or construction, provided that such agencies are *approved* as to qualifications and reliability relevant to the building components and systems that they are inspecting.

104.5 Inspection Requests. It shall be the duty of the holder of the permit or their duly authorized agent to notify the *code official* when work is ready for inspection. It shall

be the duty of the permit holder to provide access to and means for inspections of such work that are required by this code.

104.6 Reinspection and Testing. Where any work or installation does not pass an initial test or inspection, the necessary corrections shall be made to achieve compliance with this code. The work or installation shall then be resubmitted to the *code official* for inspection and testing.

SECTION 105 NOTICE OF APPROVAL.

105.1 Approval. After the prescribed inspections indicate that the work complies in all respects with this code, a notice of approval shall be issued by the *code official*.

105.2 Revocation. The *code official* is authorized to suspend or revoke, in writing, a notice of approval issued under the provisions of this code wherever the certificate is issued in error, or on the basis of incorrect information supplied, or where it is determined that the building or structure, premise, or portion thereof is in violation of any ordinance or regulation or any of the provisions of this code.

SECTION 106 VALIDITY.

106.1 General. If a portion of this code is held to be illegal or void, such a decision shall not affect the validity of the remainder of this code.

SECTION 107 REFERENCED STANDARDS.

107.1 General. The codes and standards referenced in this code shall be listed in Section **107.2**, and such codes and standards shall be considered as part of the requirements of this code to the prescribed extent of each such reference.

107.2 Referenced Codes and Standards. The codes and standards referenced in this code are as follows:

1. International Building Code
    a. Chapter 3
    b. Chapter 11
2. International Energy Conservation Code
3. International Fire Code

4. International Residential Code
5. National Electrical Code Article 625
6. UL2202 and 2594

107.2.1 Conflicts. Where conflicts occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

107.2.2 Provisions in Referenced Codes and Standards. Where the extent of the reference to a referenced code or standard includes subject matter that is within the scope of this code, the provisions of this code, as applicable, shall take precedence over the provisions in the referenced code or standard.

107.3 Applications of References. References to chapter or section numbers, or to provisions not specifically identified by number, shall be construed to refer to such chapter, section, or provision of this code.

107.4 Other Laws. The provisions of this code shall not be deemed to nullify any provisions of local, state, or federal law.

SECTION 108 STOP WORK ORDER.

108.1 Authority. Where the *code official* finds any work regulated by this code being performed in a manner contrary to the provisions of this code or in a dangerous or unsafe manner, the *code official* is authorized to issue a stop work order.

108.2 Issuance. The stop work order shall be in writing and shall be given to the owner of the property, the owner's authorized agent, or the person performing the work. Upon issuance of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order and the conditions under which the cited work is authorized to resume.

108.3 Emergencies. Where an emergency exists, the *code official* shall not be required to give a written notice prior to stopping the work.

108.4 Failure to Comply. 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 fines established by [NAME OF JURISDICTION].

SECTION 109 BOARD OF APPEALS.

109.1 General. In order to hear and decide appeals of orders, decisions, or determinations made by the *code official* relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals. The *code official* shall be an ex officio member of said board but shall not have a vote on any matter before the board. The board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business and shall render all decisions and findings in writing to the appellant with a duplicate copy to the *code official*.

109.2 Limitations on Authority. 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 equally good or better form of construction is proposed. The board shall not have the authority to waive the requirements of this code.

109.3 Qualifications. The board of appeals shall consist of members who are qualified by experience and training and are not employees of [NAME OF JURISDICTION].

Chapter 2 Definitions

SECTION 201 GENERAL.

201.1 Scope. Unless stated otherwise, the following words and terms in this code shall have the meanings indicated in this chapter.

201.2 Interchangeability. Words used in the present tense include the future; words in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural includes the singular.

201.3 Terms Defined in Other Codes. Terms that are not defined in this code but are defined in the International Building Code, International Fire Code, International Fuel Gas Code, International Mechanical Code, International Plumbing Code, International Energy Conservation Code, or International Residential Code shall have the meanings ascribed to them in those codes.

201.4 Terms not Defined. Terms not defined by this chapter or the codes listed under 201.3 shall have ordinarily accepted meanings such as the context implies.

SECTION 202 GENERAL DEFINITIONS.

APPROVED. Acceptable to the *code official*.

APPROVED AGENCY. An established and recognized agency that is regularly engaged in conducting tests or furnishing inspection services, or furnishing product certification, where such agency has been approved by the *code official.*

CODE OFFICIAL. The officer or other designated authority charged with the administration and enforcement of this code, or a duly authorized representative.

COMBUSTION EQUIPMENT. For this code, any equipment or appliance used for space-heating, service water heating, cooking, clothes drying or lighting that uses *fuel gas* or *fuel oil*.

COMMERCIAL BUILDING. For this code, all commercial buildings and R-Occupancies that are covered by the International Building Code.

CORE AND SHELL. The first phase of a commercial project that has the outer building envelope constructed and may contain interior lighting and heating and has not received a permanent Certificate of Occupancy.

DIRECT CURRENT FAST CHARGER (DCFC) EVSE. Equipment capable of fast charging on a 100A or higher 480VAC three-phase branch circuit. AC power is converted into a controlled DC voltage and current within the *EVSE* that will then directly charge the *electric vehicle*.

ELECTRIC VEHICLE (EV). An automotive-type vehicle for on-road use, including but not limited to, passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, and electric motorcycles, primarily powered by an electric motor that draws current from a building electrical service, *EVSE*, a rechargeable storage battery, a fuel cell, a photovoltaic array, or another source of electric current. Off-road, self-propelled electric mobile equipment, including but not limited to, industrial trucks, hoists, lifts, transports, golf carts, airline ground support equipment, tractors, and boats are not considered electric vehicles.

ELECTRIC VEHICLE CAPABLE LIGHT SPACE (EV CAPABLE LIGHT SPACE). A designated vehicle parking space that has conduit and/or raceway installed to support future implementation of *electric vehicle* charging installation, and has sufficient physical space adjacent to the existing electrical equipment for future electric upgrades.

ELECTRIC VEHICLE CAPABLE SPACE (EV CAPABLE SPACE). A designated vehicle parking space that has the electric panel capacity and conduit and/or raceway installed to support future implementation of *electric vehicle* charging.

ELECTRIC VEHICLE READY SPACE (EV READY SPACE). A designated vehicle parking space that has the electric panel capacity, raceway wiring, receptacle, and circuit overprotection devices installed to support future implementation of *electrical vehicle* charging.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). An *electric vehicle* charging system or device that is used to provide electricity to a plug-in *electric vehicle* or *plug-in hybrid electric vehicle*, is designed to ensure that a safe connection has been made between the electrical grid and the vehicle, and is able to communicate with the vehicle's control system so that electricity flows at an appropriate voltage and current level.

ELECTRIC VEHICLE SUPPLY EQUIPMENT INSTALLED SPACE (EVSE INSTALLED SPACE). A vehicle parking space that is provided with a dedicated *EVSE* connection.

FIRST TENANT FINISH. The first tenant finish(es) in a new structure or *core and shell* building that is credited towards meeting the requirements of this Chapter.

FUEL GAS. A natural gas, manufactured gas, liquefied petroleum gas, or mixtures of these gasses.

FUEL OIL. Kerosene or any hydrocarbon oil having a flash point of not less than 100°F (38°C).

FUTURE ELECTRIC EQUIPMENT. Equipment or appliances necessary to support future all-electric space and water heating, cooking, or clothes drying.

PLUG-IN HYBRID ELECTRIC VEHICLE. An *electric vehicle* having a second source of motive power.

RESIDENTIAL BUILDING. For this code, one- and two-family dwellings and townhouses as defined in the International Residential Code.

SOLAR-READY ZONE. A section or sections of the roof or building overhang designated and reserved for future installation of a solar photovoltaic system or solar thermal system.

Chapter 3 Electric Ready

PART 1 RESIDENTIAL ELECTRIC READY

SECTION RE301 SCOPE

RE301.1 General. These provisions shall be applicable for all new buildings, and major renovations and additions.

SECTION RE302 ADDITIONAL ELECTRIC INFRASTRUCTURE

RE302.1 Additional Electric Infrastructure. *Combustion equipment* in *residential buildings* must meet the requirements of Sections **RE302.2** through **RE302.6**.

Exceptions:

1. Interior fireplaces that do not serve as a primary source of heating.
2. Exterior fireplaces and firepits.

RE302.2 Combustion Equipment. *Combustion equipment* shall be provided with all of the following:

1. A dedicated, appropriately phased branch circuit sized to accommodate *future electric equipment* or appliances to serve a comparable capacity to meet the heating load.

2. An electric receptacle or junction box that meets the requirements of Section **RE302.5**, and is connected to the electrical panel through the branch circuit. Each electrical receptacle or junction box shall have reasonable access to the *combustion equipment* or dedicated physical space for *future electric equipment* with no obstructions other than the current *combustion equipment*.

3. Where *combustion equipment* is used for space or water heating, dedicated physical space shall be provided for *future electric equipment,* including an electric resistance backup coil for ducted systems, if applicable.

   Exception: Dwelling units with installed air conditioning systems are not required to provide additional dedicated physical space for an outdoor heat pump.

RE302.3 Electrical Panel Space. The electrical panel shall have a reserved space for a minimum two-pole circuit breaker for each branch circuit provided for *future electric equipment* or appliances.

RE302.4 Labeling. The junction box or receptacle and the dedicated circuit breaker space serving *future electric equipment* or appliances in the electrical panel shall be labeled for their intended use.

RE302.5 Adjacency. The electrical receptacle or junction box must be provided within 3 feet of the *combustion equipment* or appliances, or within 3 feet of the dedicated physical space for *future electric equipment* or appliances.

Exception: For *combustion equipment* dedicated to space or water heating, the electrical receptacle or junction box shall be located not more than 6 feet from the *combustion equipment* or the dedicated physical space for *future electric equipment*.

RE302.6 Condensate Drain. Where *combustion equipment* for space heating and water heating is installed, a location shall be provided for condensate drainage.

PART 2 COMMERCIAL ELECTRIC READY

SECTION CE301 SCOPE

CE301.1 General. These provisions shall be applicable for all new buildings, additions, and *first tenant finish* permits.

CE301.1.1 First Tenant Finishes. In the case that a *first tenant finish* to a commercial *core and shell* building or unfinished space is credited towards meeting the requirements of this Chapter, the *code official* shall not issue a

Certificate of Occupancy to the tenant until the requirements of Section **CE302** are met.

SECTION CE302 ADDITIONAL ELECTRIC INFRASTRUCTURE

CE302.1 Additional Electric Infrastructure. *Combustion equipment* in *commercial buildings* shall meet the electric infrastructure requirements of Sections **CE302.2** or **CE302.3**.

Exceptions:

1. Interior fireplaces that do not serve as a primary source of heating.
2. Exterior fireplaces and fire pits.
3. Additions to buildings that do not provide new space-heating equipment will not be required to provide additional electrical infrastructure to the existing space-heating equipment.

CE302.2 Commercial Buildings Less than 10,000 sq. ft. and all R-Occupancies. *Commercial buildings* that have a gross floor area of less than 10,000 sq. ft., and all R-occupancies of any size, shall comply with Sections **CE302.2.1** through **CE302.2.5**.

CE302.2.1 Combustion Equipment. *Combustion equipment* shall be provided with all of the following:

1. A dedicated, appropriately phased branch circuit sized to accommodate *future electric equipment* or appliances to serve a comparable capacity to meet the heating load.

2. An electric receptacle or junction box that meets the requirements of Section **CE302.2.5**, and is connected to the electrical panel through the branch circuit. Each electrical receptacle or junction box shall have reasonable access to the *combustion equipment* or dedicated physical space for *future electric equipment* with no obstructions other than the current *combustion equipment*.

3. Where *combustion equipment* is used for space or water heating, dedicated space shall be provided for all *future electric equipment*,

including an electric resistance backup coil for ducted systems if applicable.

Exception: Buildings with installed air conditioning systems are not required to provide additional dedicated physical space for an outdoor heat pump.

CE302.2.2 Electrical Panel Space. The electrical panel shall have reserved physical space for a minimum two-pole or three-pole circuit breaker for each branch circuit provided for *future electric equipment* or appliances. The physical space in the electrical panel for each circuit breaker shall be sized with sufficient breaker capacity to meet the electrical demand of the *future electric equipment* or appliance that is sized to serve a comparable capacity to meet the heating load.

CE302.2.3 Labeling. The junction box or receptacle and the dedicated circuit breaker space serving *future electric equipment* or appliances in the electrical panel shall be labeled for their intended use.

CE302.2.4 Adjacency. The electrical receptacle or junction box must be provided within 3 feet of the *combustion equipment* or appliances or within 3 feet of the dedicated physical space for *future electric equipment* or appliances.

Exception: For *combustion equipment* dedicated to space or water heating, the electrical receptacle or junction box shall be located not more than 6 feet from the *combustion equipment* or the dedicated physical space for *future electric equipment*.

CE302.2.5 Condensate Drain. Where *combustion equipment* dedicated to space heating and water heating is installed, a location shall be provided for condensate drainage.

CE302.3 Commercial Buildings 10,000 sq. ft. or Greater. All *commercial buildings* that have a gross floor area of 10,000 sq. ft. or greater shall comply with the following requirements.

Exception: R-occupancies.

CE302.3.1 Combustion Equipment or Appliances. All *combustion equipment* shall be provided with the following:

1. A junction box that is located in the same physical space as the *combustion equipment* and is reasonably accessible, and that is connected to the electrical panel by continuous conduit and/or raceways.
2. Dedicated electrical panel space for an appropriately phased branch circuit sized to accommodate *future electric equipment* or appliances to serve a comparable capacity to meet the heating load.
3. Where *combustion equipment* is used for space and water heating, dedicated physical space shall be provided for all *future electric equipment*.

CE302.3.2 Electrical Panel Space. The electrical panel shall have reserved physical space for a minimum two-pole or three-pole circuit breaker for each branch circuit provided for *future electric equipment* or appliances. The physical space in the electrical panel for each circuit breaker shall be sized with sufficient breaker capacity to meet the electrical demand of the *future electric equipment* or appliance that is sized to serve a comparable capacity to meet the heating load.

CE302.3.3 Labeling. The dedicated circuit breaker space serving *future electric equipment* or appliances in the electrical panel shall be labeled "For future electric equipment".

CE302.3.4 Physical Space. Dedicated physical space shall be provided for additional electric equipment, including but not limited to transformers and cabinets, necessary for electrical service to *future electric equipment* or appliances.

Chapter 4 Solar Ready

PART 1 RESIDENTIAL SOLAR READY.

SECTION RS401 SCOPE.

RS401.1 General. These provisions shall be applicable for new buildings, and major renovations and additions.

SECTION RS402 SOLAR READY ZONE.

RS402.1 General. New *residential buildings* with not less than 600 square feet of roof area oriented between 110 degrees and 270 degrees of true north or that is a low-sloped roof, shall comply with Sections **RS402.2** through **RS402.8**.

Exceptions:

1. New residential dwelling units with a permanently installed on-site renewable energy system that provides electricity to the dwelling unit's electrical system.
2. A building where all areas of the roof that would otherwise meet the requirements of Section **RS402** are in full or partial shade for more than 70 percent of daylight hours annually.

RS402.2 Construction Document Requirements for Solar-Ready Zone. Construction documents shall indicate the *solar-ready zone*.

RS402.3 Solar-Ready Zone Areas. The total *solar-ready zone* area for each dwelling unit shall be not less than 300 square feet exclusive of mandatory access or setback areas as required by the International Fire Code. The *solar-ready zone* shall be composed of areas not less than 5 feet in width and not less than 80 square feet exclusive of access or setback areas as required by the International Fire Code.

Exception: New townhouses three stories or less in height above grade plane and with a total floor area less than or equal to 2,000 square feet of conditioned space per townhouse unit shall have a *solar-ready zone* area of not less than 150 square feet.

RS402.4 Obstructions. *Solar-ready zones* shall be free from obstructions, including but not limited to, vents, chimneys, and roof-mounted equipment.

RS402.5 Shading. The *solar-ready zone* shall be set back from any existing or new permanently affixed object on the building or site that is located south, east, or west of the *solar-ready zone* a distance not less than two times the object's height above the nearest point on the roof surface. Such objects include, but are not limited to, taller portions of the building itself, parapets, chimneys, antennas, signage, rooftop equipment, trees, and roof plantings either existing at the time of permit application or planned for on the construction documents.

RS402.6 Roof Load Documentation. The structural design loads of roof dead load and roof live load shall be clearly indicated on the construction documents.

RS402.7 Interconnection Pathway. Construction documents shall indicate at least one potential pathway for routing of conduit and/or raceway from the *solar-ready zone* to the electrical service panel and shall be labeled as "Potential Pathway" on the construction documents.

RS402.8 Electrical Service Reserved Space. The main electrical service panel shall have sufficient reserved space to allow the installation of a dual pole circuit breaker for future solar electric installation and shall be labeled "For Future Solar Electric." The reserved space shall be positioned at the opposite (load) end from the input feeder location or main circuit location.

RS402.9 Construction Documentation Certificate. A permanent certificate, indicating the *solar-ready zone* and other requirements of this Part, shall be posted near the electrical distribution panel, water heater, or other conspicuous location.

PART 2 COMMERCIAL SOLAR READY

SECTION CS401 SCOPE

CS401.1 General. These provisions shall be applicable for new buildings, and major renovations and additions.

SECTION CS402 SOLAR-READY ZONE

CS402.1 General. A *solar-ready zone* shall be located on the roof of all new *commercial buildings* that are oriented between 110 and 270 degrees of true north or have low-sloped roofs. *Solar-ready zones* shall comply with Sections **CS402.2** through **CS402.7**.

Exceptions:

1. A building with a permanently-installed, on-site renewable energy system that meets the following criteria.
    a. The system produces the energy output equivalent to covering 40 percent of the net roof area with solar photovoltaic calculated as the horizontally projected gross roof area less the area covered by skylights, occupied roof decks, vegetative roof areas, and mandatory access or set back areas as required by the International Fire Code.
    b. The system is located on the roof or overhang of the building or on the roof or overhang of another structure located within 250 feet of the building, on the building premises, on covered parking, or another *approved* location installed with the building project and under the same property ownership.
2. A building with a *solar-ready zone* that is shaded for more than 70 percent of daylight hours annually.
3. A building where a licensed design professional certifies that the incident solar radiation available to the building is not suitable for a *solar-ready zone*.
4. A building where a licensed design professional certifies that the *solar-ready zone* area required by Section **CS402.3** cannot be met because of extensive rooftop equipment, skylights, vegetative roof areas, or other obstructions.

CS402.2 Construction Document Requirements for a Solar-Ready Zone. Construction documents shall indicate the *solar-ready zone*.

CS402.3 Solar-Ready Zone Area. The total *solar-ready zone* area shall not be less than 40 percent of the roof area calculated as the horizontally projected gross roof area less the area covered by skylights, occupied roof decks, vegetative roof areas, and mandatory access or set back areas as required by the International Fire Code. The *solar-ready zone* shall be a single area or smaller, separated sub-zone areas. Each sub-zone area shall be not less than 5 feet in width in the narrowest dimension.

The *solar-ready zone* shall be located on the roof or overhang of the building or on the roof or overhang of another structure located within 250 feet of the building, on the building premises, on covered parking, or another *approved* location installed with the building project and under the same property ownership .

CS402.4 Obstructions. *Solar-ready zones* shall be free from obstructions, including pipes, vents, ducts, HVAC equipment, skylights, and roof-mounted equipment.

CS402.5 Roof Loads and Documentation. The structural design loads for roof dead load and roof live load shall be indicated on the construction documents.

CS402.6 Interconnection Pathway. Construction documents shall indicate at least one potential pathway for routing of conduit and/or raceway from the *solar-ready zone* to an electrical service panel and shall be labeled as "Potential Pathway" on the construction documents.

CS402.7 Electrical Service Reserved Space. The main electrical service panel shall have a minimum bus bar rating of not less than 200 amps. The main electrical service panel shall have a reserved space to allow installation of a dual-pole circuit breaker for future solar electric. This space shall be labeled "For Future Solar Electric." The reserved space shall be positioned at the end of the panel that is opposite from the panel supply conductor connection.

PART 3 RESIDENTIAL SOLAR PANEL CAPACITY

SECTION RS410 SCOPE

RS410.1 General. These provisions shall be applicable for all new buildings, and major renovations and additions.

RS410.2 Electric Service Reserved Space. The main electrical service panel shall have sufficient reserved space to allow installation of a dual pole circuit breaker for future solar electric installation and shall be labeled "For Future Solar Electric." The reserved space shall be positioned at the opposite (load) end from the input feeder location or main circuit location.

> **Exception**: A dwelling unit that already must comply with the solar ready provisions in Chapter 4 or that has a permanently installed on-site renewable energy system that provides electricity to the dwelling unit's electrical system.

PART 4 COMMERCIAL SOLAR PANEL CAPACITY

SECTION CS410 SCOPE

CS410.1 General. These provisions shall be applicable for new buildings, and major renovations and additions.

CS410.2 Electric Service Reserved Space. The main electrical service panel shall have a minimum bus bar rating of not less than 200 amps. The main electrical service panel shall have sufficient reserved space to allow installation of a dual pole circuit breaker for future solar electric installation and shall be labeled "For Future Solar Electric." The reserved space shall be positioned at the opposite (load) end from the input feeder location or main circuit location.

> **Exception:** A building that already must comply with the solar ready provisions in Chapter 4 or that has a permanently installed on-site renewable energy system that provides electricity to the building's electrical system.

Chapter 5 Electric Vehicle Ready

PART 1 RESIDENTIAL ELECTRIC VEHICLE READY

SECTION RV501 SCOPE

RV501.1 General. These provisions shall be applicable for all new buildings, and major renovations and additions.

SECTION RV502 ELECTRIC VEHICLE POWER TRANSFER INFRASTRUCTURE

RV502 Electric Vehicle Power Transfer Infrastructure. New vehicle parking spaces for *residential buildings* shall be provided in accordance with Sections **RV502.1** and **RV502.3**.

RV502.1 One- and Two-family Dwellings and Townhouses. Each dwelling unit with a dedicated attached or detached garage or other onsite designated parking provided for the dwelling unit shall be provided with one *EV ready space* per dwelling unit.

RV502.2 EV Ready Spaces. Each *EV ready space* shall have a branch circuit that complies with all of the following:

1. Terminates at a receptacle, located within 3 feet of each *EV ready space* it serves. *EV ready* includes two adjacent parking spaces if the receptacle for the electrical facilities of this section is installed adjacent to and between both parking spaces.
2. Has a minimum circuit capacity of 8.3 kVA (40A 208/240V).
3. The electrical panel, electrical distribution equipment directory, and all outlets or enclosures shall be marked "For future electric vehicle supply equipment".

   Exception: A receptacle need not be provided if a hard-wired *EVSE* is installed.

RV502.3 Identification. Construction documents shall designate the *EV ready space* and indicate the locations of raceway and/or conduit and the termination points serving them. The circuits or spaces reserved in the electrical panel for *EV ready spaces* shall be clearly identified in the panel or subpanel directory.

PART 2 COMMERCIAL ELECTRIC VEHICLE READY

SECTION CV501 SCOPE

CV501.1 General. These provisions shall be applicable for all new buildings, and major renovations and additions.

SECTION CV502 ELECTRIC VEHICLE POWER TRANSFER INFRASTRUCTURE

CV502 Electric Vehicle Power Transfer Infrastructure. Where new parking is provided for *commercial buildings,* it shall be provided with *electric vehicle* power transfer infrastructure in compliance with Sections **CV502.1** through **CV502.9**.

CV502.1 Quantity. The number of required *EVSE installed spaces, EV ready spaces, EV capable spaces,* and *EV capable light spaces* shall be determined in accordance with this Section and **Table CV502.1** based on the total number of provided vehicle parking spaces and shall be rounded up to the nearest whole number. This includes all covered parking under carports or detached garages.

CV502.1.1 Where more than one parking lot is provided on a building site, the number of provided vehicle parking spaces required to have *EV* power transfer infrastructure shall be calculated separately for each parking lot.

CV502.1.1.1 R-2 Occupancies, as defined in Chapter 3 of the International Building Code, shall use the total parking requirement for the entire development to determine the *EV* power transfer infrastructure requirements using **Table CV502.1**.

CV502.1.2 For *commercial buildings* that install a *DCFC EVSE,* each *DCFC EVSE* installed shall be permitted to be substituted for other space types as follows:

1. *Commercial buildings* other than R-2 Occupancies shall be permitted to substitute up to 10 spaces when the building provides a minimum of 20 percent of parking spaces as a combination of *EV Capable*, *EV ready*, or *EVSE installed spaces*.
2. R-2 Occupancies shall be permitted to substitute up to 5 spaces when the building provides a minimum of 60 percent of parking spaces as a combination of *EV Capable light, EV Capable, EV ready*, or *EVSE installed spaces*.

CV502.1.3 *EVSE installed spaces* that exceed the minimum requirements of this section are permitted to be used to meet minimum requirements for *EV ready spaces*, *EV capable spaces*, and *EV capable light spaces*.

CV502.1.4 *EV ready spaces* that exceed the minimum requirements of this section are permitted to be used to meet minimum requirements for *EV capable spaces* and *EV capable light spaces*.

CV502.1.5 *EV capable spaces* that exceed the minimum requirements of this section are permitted to be used to meet the minimum requirements for *EV capable light spaces*.

CV502.1.6 All attached garages with direct connection to a dwelling unit will be required to have one *EV ready space*.

Table CV502.1: EV Power Transfer Infrastructure Requirements

Building Type / Space Type	*EVSE Installed Space*	*EV Ready Space*	*EV Capable Space*	*EV Capable Light Space*
All *commercial buildings*, except for R-2 occupancies, with 10 or less parking spaces.	0	2 spaces	0	0
***Commercial buildings*, except for R-2 occupancies, with greater than 10 parking spaces.**	2% of spaces	8% of spaces	10% of spaces	10% of spaces
R-2 occupancies with 10 or less parking spaces	0	15% of spaces	10% of spaces	10% of spaces
R-2 occupancies with greater than 10 parking spaces.	5% of spaces	15% of spaces	10% of spaces	30% of spaces

CV502.2 EV Capable Light Spaces. Each *EV capable light space* shall comply with all of the following:

1. A continuous raceway and/or conduit shall be installed between a suitable electrical panel or other electrical distribution equipment and terminate within 3 feet of the *EV capable light space* and shall be capped. *EV capable light* includes two adjacent parking spaces if the raceway and/or conduit terminates adjacent to and between both parking spaces.
2. Installed raceway and/or conduit shall be sized and rated to supply a minimum of 208 volts and a minimum of 40-ampere rated circuits.
3. Dedicated physical space to accommodate all equipment necessary for electrical service to future *EVSE*.
4. The routing of the raceway and/or conduit must be noted on the construction documents and the raceway shall be permanently and visibly marked "EV CAPABLE" at the load center and termination point locations.

CV502.3 EV Capable Spaces. Each *EV capable space* shall comply with all of the following:

1. A continuous raceway and/or conduit shall be installed between a suitable electrical panel or other electrical distribution equipment and terminate within 3 feet of the *EV capable space* and shall be capped. *EV capable* includes two adjacent parking spaces if the raceway and/or conduit terminates adjacent to and between both parking spaces.
2. The installed raceway and/or conduit shall be sized and rated to supply a minimum of 208 volts and a minimum of 40-ampere rated circuits.
3. The electrical panel or other electrical distribution equipment to which the raceway and/or conduit connects shall have sufficient dedicated space and spare electrical capacity to supply a minimum of 208 volts and a minimum of 40-ampere rated circuits.
4. The termination point of the conduit and/or raceway and the electrical distribution equipment directory shall be marked: "For future electric vehicle supply equipment (EVSE)."
5. Reserved capacity shall be no less than 8.3 kVA (40A 208/240V) for each *EV capable space*.

CV502.4 EV Ready Spaces. Each *EV ready space* shall have a branch circuit that complies with all of the following:

1. Terminates at a receptacle or junction box located within 3 feet of each *EV ready space* it serves. *EV ready* includes two adjacent parking spaces if the receptacle is installed adjacent to and between both parking spaces.
2. Has a minimum circuit capacity of 8.3 kVA (40A 208/240V).
3. The electrical panel, electrical distribution equipment directory, and all outlets or enclosures shall be marked "For future electric vehicle supply equipment (EVSE)."

CV502.5 Electric Vehicle Supply Equipment (EVSE). All *EVSE* shall meet all of the following requirements:

1. The installed *EVSE* shall meet one of the following requirements:
    a. A power capacity of at least 6.2 kVa (or 30A at 208/240V) and has the ability to connect to the internet.
    b. An inductive charging system for battery-powered *electric vehicles* that:
        i. Is ENERGY STAR certified; and
        ii. Has the ability to connect to the internet.
2. An *electric vehicle* charging system shall be wall-mounted or pedestal style and may provide multiple cords to connect with *electric vehicles*.
3. An *electric vehicle* charging system shall be listed and labeled for *EV* charging and must comply with the current version of Article 625 of the National Electrical Code.

CV502.6 EVSE Installed Spaces. An installed *EVSE* with multiple output connections shall be permitted to serve multiple *EVSE installed spaces*. Each *EVSE* installed serving either a single *EVSE installed space* or multiple *EVSE installed spaces*, shall comply with all of the following:

1. Have a minimum charging rate in accordance with Section **CV502.7**.
2. Be located within 3 feet of each *EVSE installed space* it serves.
3. Be installed in accordance with Section **CV502.8**.
4. Have a minimum circuit capacity of 8.3 kVA (40A 208/240V).
5. Must meet the requirements of Section **CV502.5**.

CV502.7 EVSE Minimum Charging Rate. Each installed *EVSE* shall comply with one of the following:

1. Be capable of charging at a minimum rate of 6.2 kVA (or 30A at 208/240V).
2. When serving multiple *EVSE installed spaces* and controlled by an energy management system providing load management, be capable of simultaneously sharing each *EVSE installed space* at a minimum charging rate of no less than 3.3 kVA.

CV502.8 EVSE Installation. *EVSE* shall be installed in accordance with NFPA 70 and shall be listed and labeled in accordance with UL 2202 or UL 2594. When serving an accessible parking space, *EVSE* shall be accessible in accordance with the International Building Code Chapter 11.

CV502.9 Identification. Construction documents shall designate all *EVSE installed spaces, EV ready spaces, EV capable spaces,* and *EV capable light spaces,* and indicate the locations of raceway and/or conduit and termination points serving them. The circuits or spaces reserved for *EVSE installed spaces, EV ready spaces,* and *EV capable spaces* shall be clearly identified in the panel or subpanel directory. The raceway and/or conduit for *EV ready spaces, EV capable spaces* and *EV capable light spaces* shall be clearly identified at both the panel or subpanel and the termination point at the parking space.

IBC APPENDIX CHAPTER K
ADMINISTRATIVE PROVISIONS

SECTION K111
ELECTRICAL PROVISIONS

Note: Delete the published text for Section K111.4 and replace it with provisions for electric vehicle charging receptacles.

K111.4 Electric vehicle (EV) charging receptacle outlets. Level 2 (240-volt) electric vehicle (EV) charging receptacle outlets are to be installed for all new commercial, industrial or multiple-family residential buildings or additions or alterations to existing such buildings that increase the existing total floor area of the building by either fifty percent or by 5,000 square feet in accordance with Table K111.4. Charging receptacle outlets shall be installed in accordance with the requirements of Article 625 of the Electrical Code.

TABLE K111.4
ELECTRIC VEHICLE (EV) CHARGING RECEPTACLE OUTLETS

TOTAL PARKING SPACES PROVIDED	1-19	20-50	51-100	101-150	151-200	201-250	251-300	301-350	351-400	401-450	451-500	501 and over
REQUIRED MINIMUM NUMBER OF EV CHARGING OUTLETS	0	1	2	3	4	5	6	7	8	9	10	2% of total

R327.5.13 Weed barrier and gravel or crushed rock. A weed barrier and gravel or crushed rock not less than ¾-inch in diameter applied at least 2 inches thick must be installed beneath decks, unenclosed floors, and around the perimeter of the building to extend at least 3 feet beyond the exterior walls and at least 2 feet beyond the driplines of decks, bay windows and other eaves and overhangs.

Exception: Noncombustible surfaces, such as poured concrete or asphalt, or other approved noncombustible materials, such as a weed barrier and brick, concrete or stone pavers, may satisfy this requirement.

SECTION R328
SOLAR PRE-WIRE OPTION

R328.1 Solar pre-wire option. In accordance with Section 1, Article 37.7 of title 38 of the Colorado Revised Statutes, every new single-family detached residence shall include one of the following:

1. A residential photovoltaic solar generation system or a residential solar thermal system, or both, or
2. Upgrades of wiring or plumbing, or both, installed by the builder to accommodate the future installation of a residential photovoltaic solar generation system or a residential solar thermal system, or both, or
3. A metallic chase or conduit, or both, constructed to allow ease of future installation of the necessary wiring or plumbing for a residential photovoltaic solar generation system or a residential solar thermal system, or both.

IRC SECTION R329
ELECTRIC VEHICLE CHARGING PRE-WIRE OPTION

R329.1 Electric vehicle charging pre-wire option. In addition to the one 125-volt receptacle outlet required for each car space by NEC Section 210.52(G)(1.), every new garage or carport that is accessory to a one- or two-family dwelling or townhouse shall include at least one of the following, installed in accordance with the requirements of Article 625 of the Electrical Code:

1. A Level 2 (240-volt) electric vehicle charging receptacle outlet, or
2. Upgraded wiring to accommodate the future installation of a Level 2 (240-volt) electric vehicle charging receptacle outlet, or
3. Electrical conduit to allow ease of future installation of a Level 2 (240-volt) electric vehicle charging receptacle outlet.

IRC CHAPTER 4
FOUNDATIONS

SECTION R401
GENERAL

R401.3 Drainage.

R401.3.1 Gutters and downspouts. Gutters, downspouts, and downspout extensions are required on all buildings.

Exceptions:

1. Post framed buildings.
2. Buildings where, in the opinion of the building official, the gutters will become damaged by sliding snow.
3. Roofs with eaves or overhangs of six feet or greater.
4. Roofs that are constructed with internal roof drains
5. Buildings where an approved alternate means of drainage is designed by a soils engineer or other qualified registered design professional.

IRC CHAPTER 8
ROOF-CEILING CONSTRUCTION

SECTION R806
ROOF VENTILATION

R806.1 Roof ventilation. See the provisions of Section R327.4.12 for attic ventilation in Wildfire Zone 1.

IRC CHAPTER 9
ROOF ASSEMBLIES

SECTION R902
ROOF COVERING MATERIALS

Add a sentence to Section R902.1, as follows:

R902.1 Roof covering materials. See Section R327.4.1 for roof covering materials requirements in Wildfire Zone 1 and Section R327.5.1 for roof covering materials requirements in Wildfire Zone 2.

SECTION R903
ROOF DRAINAGE

R903.4.1.1 Sizing of roof drains, scuppers, and downspouts. The rainfall amount to be used to size roof drainage components shall be 2.4 inches per hour.

CB 102 General Definitions

MAJOR ALTERATION. Any building where the work area exceeds 50 percent of the aggregate area of the building.

CB103 Solar-Ready Zone

CB103.1 General. A solar-ready zone shall be located on the roof of all new buildings that are subject to the commercial provisions of the IECC and that are oriented between 110 degrees and 270 degrees of true north or have low-slope roofs. Solar-ready zones shall comply with Sections CB103.2 through CB103.9.

This section hereby creates and adopts a new **Appendix CD EV Readiness - Commercial:**

APPENDIX CD

EV READINESS - COMMERCIAL

CD101 Scope

CD101.1 Purpose and Intent. The purpose and intent of this Appendix CD is to accommodate the growing need for EV charging infrastructure. Including these measures during initial commercial construction substantially reduces the costs and difficulty of installing EV infrastructure at a later date.

CD101.2. Applicability. This Appendix CD shall apply to all new commercial construction to which the current International Building Code applies and to major alterations, which the current International Existing Building Code applies.

Section CD102 Definitions.

AUTOMOBILE PARKING SPACE. A space within a building or private or public parking lot, exclusive of driveways, ramps, columns, office, and work areas, for the parking of an automobile.

DIRECT CURRENT FAST CHARGING (DCFC) EVSE: EV power transfer infrastructure capable of fast charging on a 100A or higher 480VAC three-phase branch circuit. AC power is converted into a controlled DC voltage and current within the *EVSE* that will then directly charge the *electric vehicle*.

EV LOAD MANAGEMENT SYSTEM: A system designed to allocate charging capacity among multiple *EVSE* and that complies with the current National Electric Code.

ELECTRIC VEHICLE (EV). An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood *electric vehicles*, and electric motorcycles, primarily powered by an electric motor that draws current from an electric source.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). Equipment for plug-in power transfer including the ungrounded, grounded, and equipment grounding conductors, and the *electric vehicle* connectors, attachment plugs, personal protection system and all other fittings, devices, power outlets or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the *electric vehicle*.

ELECTRIC VEHICLE SUPPLY EQUIPMENT INSTALLED SPACE (EVSE space). An automobile parking space that is provided with a dedicated *EVSE* connection.

ELECTRIC VEHICLE CAPABLE SPACE (EV CAPABLE SPACE). A designated automobile parking space that is provided with electrical infrastructure, such as, but not limited to, raceways, cables, electrical capacity, and panelboard or other electrical distribution equipment space, necessary for the future installation of an *EVSE*.

ELECTRIC VEHICLE READY SPACE (EV READY SPACE). An automobile parking space that is provided with a branch circuit and either an outlet, junction box or receptacle, that will support an installed *EVSE*.

MAJOR ALTERATION. Any building where the work area exceeds 50 percent of the aggregate area of the building.

UNIVERSAL VEHICLE CHARGING STATION. A charging station installed in a parking space for a minimum vehicle width of 120 inches (3048 mm) with 36-inch access aisles (915 mm) on each side.

CD103 Electrical Vehicle Readiness

CD103.1 Electric vehicle power transfer infrastructure. New parking facilities shall be provided with *electric vehicle* power transfer infrastructure in compliance with Sections CD104.1 through CD104.6, CD105, and CD106.

CD103.2 Quantity. The number of required *EVSE* spaces, *EV ready* spaces, and *EV capable* spaces shall be determined in accordance with this Section and Table CD104.1 based on the total number of *automobile parking spaces* and shall be rounded up to the nearest whole number. For R-2 buildings, the Table requirements shall be based on the total number of dwelling units or the total number of *automobile parking spaces*, whichever is less.

1. Where more than one parking facility is provided on a building site, the number of required *automobile parking spaces* required to have EV power transfer infrastructure shall be calculated separately for each parking facility.
2. Where one shared parking facility serves multiple building occupancies, the required number of spaces shall be determined proportionally based on the floor area of each building occupancy.
3. Installed *EVSE* spaces that exceed the minimum requirements of this section may be used to meet minimum requirements for *EV ready* spaces and *EV capable* spaces.
4. Installed *EV ready* spaces that exceed the minimum requirements of this section may be used to meet minimum requirements for *EV capable* spaces.
5. Where the number of *EV ready* spaces allocated for R-2 occupancies is equal to the number of dwelling units or to the number of *automobile parking spaces*, whichever is less, requirements for *EVSE* spaces for R-2 occupancies shall not apply.

6. In commercial multi-family (R-2, R-3, and R-4) complexes, four stories or greater, that contain multiple buildings, required EV spaces shall be dispersed throughout parking areas so that each building has access to a similar number of spaces per dwelling unit.

7. Requirements for a Group S-2 parking garage shall be determined by the occupancies served by that parking garage. Where new *automobile parking spaces* do not serve specific occupancies, the values for Group S-2 parking garage in Table CD104.1 shall be used.

8. Direct Current Fast Charging. The number of *EVSE* spaces for Groups A, B, E, I, M and S-2 Occupancies may be reduced by up to ten per *DCFC EVSE* provided that the building includes not less than one parking space equipped with a *DCFC EVSE* and not less than one *EV ready* space. A maximum of fifty spaces may be reduced from the total number of *EVSE* spaces.

Exception: Parking facilities, serving occupancies other than R-2 with fewer than 10 *automobile parking spaces*.

TABLE CD103.1

REQUIRED EV POWER TRANSFER INFRASTRUCTURE

BUILDING TYPE	MINIMUM EV INSTALLED SPACES	MINIMUM EV READY SPACES	MINIMUM EV CAPABLE SPACES
Group A, B, E, M	**15%[b]**	**5%**	**30%**
Group F, I, R-3, R-4	**2%[b]**	**0%**	**5%**
Group R-1 and R-2[a]	**25%[b]**	**5%**	**60%**
Group S-2 Parking Garages	**10%[b]**	**5%**	**0%**

a. Where all (100%) parking serving R-2 occupancies are EV ready spaces, requirements for EVSE spaces for R-2 occupancies shall not apply.

b. For each EV installed space above the required percentage, 4 EV ready spaces can be eliminated.

CD103.2 EV capable spaces. Each *EV capable* space used to meet the requirements of Section CD103.1 shall comply with all of the following:

1. A continuous raceway or cable assembly shall be installed between an enclosure or outlet located within 3 feet (914 mm) of the *EV capable* space and a suitable panelboard or other onsite electrical distribution equipment.
2. Installed raceway or cable assembly shall be sized and rated to supply a minimum circuit capacity in accordance with CD103.5
3. The electrical distribution equipment to which the raceway or cable assembly connects shall have sufficient dedicated space and spare electrical capacity for a 2-pole circuit breaker or set of fuses.
4. The electrical enclosure or outlet and the electrical distribution equipment directory shall be marked: "For future electric vehicle supply equipment (EVSE)."
5. Reserved capacity shall be no less than 4.1 kVA (20A 208/240V) for each *EV capable* space.

CD103.3 EV ready spaces. Each branch circuit serving *EV ready* spaces used to meet the requirements of Section CD103.1 shall comply with all of the following:

1. Terminate at an outlet or enclosure, located within 3 feet (914 mm) of each *EV ready* space it serves.
2. Have a minimum circuit capacity in accordance with CD104.5.
3. The panelboard or other electrical distribution equipment directory shall designate the branch circuit as "For electric vehicle supply equipment (EVSE)" and the outlet or enclosure shall be marked "For electric vehicle supply equipment (EVSE)."

CD103.4 EVSE spaces. An installed *EVSE* with multiple output connections shall be permitted to serve multiple EVSE spaces. Each *EVSE* installed to meet the requirements of Section CD103.1, serving either a single *EVSE* space or multiple *EVSE* spaces, shall comply with all of the following:

1. Have a minimum circuit capacity in accordance with CD103.5.
2. Have a minimum charging rate in accordance with CD103.4.1.
3. Be located within 3 feet (914 mm) of each *EVSE* space it serves.
4. Be installed in accordance with Section CD103.6 and CD103.7.

CD103.4.1 EVSE minimum charging rate. Each installed *EVSE* shall comply with one of the following:

1. Be capable of charging at a minimum rate of 6.2 kVA (or 30A at 208/240V).
2. When serving multiple *EVSE* spaces and controlled by an energy management system providing load management, be capable of simultaneously charging each *EVSE* space at a minimum rate of no less than 3.3 kVA.

3. When serving *EVSE* spaces allowed to have a minimum circuit capacity of 2.7 kVA in accordance with CD103.5.1 and controlled by an energy management system providing load management, be capable of simultaneously charging each *ESVE* space at a minimum rate of no less than 2.1 kVA.

CD103.5 Disbursement. Required EVSE, EV Ready, and EV Capable spaces shall be disbursed throughout parking areas in commercial developments that contain multiple buildings so that each building has access to roughly the same number of spaces.

CD103.6 Circuit capacity. The capacity of electrical infrastructure serving each *EV capable* space, *EV ready* space, and *EVSE* space shall comply with one of the following:

1. A branch circuit shall have a rated capacity not less than 8.3 kVA (or 40A at 208/240V) for each EV ready space or *EVSE* space it serves.
2. The requirements of CD103.5.1.

CD103.6.1 Circuit capacity management. The capacity of each branch circuit serving multiple *EVSE* spaces, *EV ready* spaces or *EV capable* spaces designed to be controlled by an energy management system providing load management in accordance with NFPA 70, shall comply with one of the following:

1. Have a minimum capacity of 4.1 kVA per space.
2. Have a minimum capacity of 2.7 kVA per space when serving *EV ready* spaces or *EVSE* spaces for a building site where all (100%) of the automobile parking spaces are designed to be *EV ready* or *EVSE* spaces.

CD103.7 EVSE installation. *EVSE* shall be installed in accordance with NFPA 70 and shall be listed and labeled in accordance with UL 2202 or UL 2594.

CD103.8. EVSE ENERGY STAR. All *EVSE* shall be ENERGY STAR certified.

CD104 Universal Vehicle Charging Stations.

CD104.1 Universal vehicle charging stations. Where *electric vehicle* charging stations are provided for public use, or where *electric vehicle* charging stations are shared by multiple multi-family dwelling units, the number of universal vehicle charging stations shall be provided in accordance with Table CD104.1. When multiple stalls are required, access aisles may be shared.

TABLE CD104.1

UNIVERSAL EV SPACE REQUIREMENTS

TOTAL # OF EV CHARGING STATIONS	MINIMUM # OF UNIVERSAL VEHICLE CHARGING STATIONS

1 or more	**25%**

CD105. Identification.

CD105.1 Identification. Construction documents shall designate all *EV capable* spaces, *EV ready* spaces and *EVSE* spaces and indicate the locations of conduit and termination points serving them. The circuit breakers or circuit breaker spaces reserved for the *EV capable* spaces, *EV ready* spaces, and *EVSE* spaces shall be clearly identified in the panel board directory. The conduit for *EV capable* spaces shall be clearly identified at both the panel board and the termination point at the parking space.

Residential Provisions of the IECC

Section R101 Scope and General Requirements

R101.1 Title. This code shall be known as the International Energy Conservation Code of the City of Lafayette, Colorado, and shall be cited as such. It is referred to herein as "this code".

Section R103 Construction Documents

Section R103.2 Information on construction documents, is amended by adding items 10, 11, and 12 as follows:

10. Details of additional electric infrastructure, including branch circuits, conduit, or pre-wiring, and panel capacity in compliance with the provisions of this code.
11. Location of pathways for routing of raceways or cable from the solar ready zone to the electrical service panel.
12. Location of designated EVSE spaces, EVSE Universal spaces, EV-Ready spaces, and EV-Capable spaces in parking facilities, as applicable.

Section R202 GENERAL DEFINITIONS is amended to add the following definitions in alphabetical order:

ALL-ELECTRIC BUILDING. A *building* and building site that contains no *combustion equipment*, or plumbing for *combustion equipment*, and that uses heat pump technology as the primary supply for heating, cooling, and service water heating loads.

COMBUSTION EQUIPMENT: Any equipment or appliances used for space heating, cooling, water heating (including pools and spas), cooking, clothes drying or lighting that uses natural gas, propane, other fuel gas, or fuel oil.

INVOLUNTARY DEMOLITION OR INVOLUNTARY DESTRUCTION. The destruction or demolition of a structure caused by natural forces such as fire, flood, or tornado but not by human forces or human error.

R408.2.2 More efficient HVAC equipment. Heating and cooling equipment shall meet one of the following efficiencies:

1. Greater than or equal to 10 HSPF/16 SEER air source heat pump.

2. Greater than or equal to 3.5 COP ground source heat pump.

Section R408.2.3 Reduced energy use in service water-heating option is amended as follows:

R408.2.3 Reduced energy use in service water-heating option. The hot water system shall meet one of the following efficiencies:

1. Greater than or equal to 2.0 EF electric service water-heating system.

2. Greater than or equal to 0.4 solar fraction solar water-heating system.

Appendix RB is hereby adopted and amended to read: "**Appendix RB Solar Ready Provisions."**

Section RB101 Scope

RB101.1 General. These provisions shall be applicable for new construction and major alterations where solar-ready provisions are required.

RB103 Solar-Ready Zone

RB103.1 General. New residential buildings with not less than 600 square feet (55.74 m 2) of roof area oriented between 110 degrees and 270 degrees of true north shall comply with Sections RB103.2 through RB103.8.

Exceptions:

1. Residential buildings with a permanently installed on-site renewable energy system.
2. A building where all areas of the roof that would otherwise meet the requirements of section RB103 are in full or partial shade for more than 70 percent of daylight hours annually.

This section hereby creates and adopts a new **Appendix RD EV Readiness – Residential:**

APPENDIX RD

EV READINESS - RESIDENTIAL

RD101 Scope

RD101. Purpose and intent. The purpose and intent of this Appendix RD is to accommodate the growing need for EV charging infrastructure, in particular meeting preferences for charging at home. Including these measures during initial construction substantially reduces the costs and difficulty of installing future EV infrastructure.

RD101.2 Applicability. This Appendix RD shall apply to all new residential construction and to major alterations to which the International Residential Code applies.

RD102. Definitions.

AUTOMOBILE PARKING SPACE. A space within a building or private or public parking lot, exclusive of driveways, ramps, columns, office, and work areas, for the parking of an automobile.

DIRECT CURRENT FAST CHARGING (DCFC) EVSE: EV power transfer infrastructure capable of fast charging on a 100A or higher 480VAC three-phase branch circuit. AC power is converted into a controlled DC voltage and current within the *EVSE* that will then directly charge the *electric vehicle*.

EV LOAD MANAGEMENT SYSTEM: A system designed to allocate charging capacity among multiple *EVSE* and that complies with the current National Electric Code.

ELECTRIC VEHICLE (EV). An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood *electric vehicle*s, and electric motorcycles, primarily powered by an electric motor that draws current from an electric source.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). Equipment for plug-in power transfer including the ungrounded, grounded, and equipment grounding conductors, and the *electric vehicle* connectors, attachment plugs, personal protection system and all other fittings, devices, power outlets or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the *electric vehicle*.

ELECTRIC VEHICLE SUPPLY EQUIPMENT INSTALLED SPACE (EVSE space). An automobile parking space that is provided with a dedicated *EVSE* connection.

ELECTRIC VEHICLE CAPABLE SPACE (EV CAPABLE SPACE). A designated automobile parking space that is provided with electrical infrastructure, such as, but not limited to, raceways, cables, electrical capacity, and panelboard or other electrical distribution equipment space, necessary for the future installation of an *EVSE*.

ELECTRIC VEHICLE READY SPACE (EV READY SPACE). An automobile parking space that is provided with a branch circuit and either an outlet, junction box or receptacle, that will support an installed *EVSE*.

MAJOR ALTERATION. Any building where the work area exceeds 50 percent of the aggregate area of the building.

UNIVERSAL VEHICLE CHARGING STATION. A charging station installed in a parking space for a minimum vehicle width of 120 inches (3048 mm) with 36-inch access aisles (915 mm) on each side.

RD103 One- and two- Family Dwellings and Townhouses

RD103.1 General. One *EV ready* space shall be provided for each dwelling unit. The branch circuit shall be identified as *EV ready* in the service panel or subpanel directory, and the termination location shall be marked as *EV ready*.

Exception: Dwelling units where no parking spaces are either required or provided.

RD103.1.1 Receptacle. The EV ready space shall be provided with a receptacle, over current protection, and GFCI protection as required by NFPA 70.

RD103.1.2 Voltage and ampacity. The EV ready space shall be supplied with 240 volts and 40 amps.

RD104 Residential Multi-Family Dwellings

RD104.1 General. New dwelling units for residential multi-family buildings, other than duplexes and townhomes, shall be provided with *electric vehicle* power transfer infrastructure in compliance with Sections RD104.1 through RD104.6 and Sections RD105 through RD106.

RD104.2 Quantity. The number of required *EVSE* spaces, *EV ready* spaces, and *EV capable* spaces shall be determined in accordance with this Section and Table RD105.1 based on the total number of *automobile parking spaces* and shall be rounded up to the nearest whole number. For R-2 buildings, the Table requirements shall be based on the total number of dwelling units or the total number of *automobile parking spaces*, whichever is less.

1. Where more than one parking facility is provided on a building site, the number of required *automobile parking spaces* required to have EV power transfer infrastructure shall be calculated separately for each parking facility.
2. Installed *EVSE* spaces that exceed the minimum requirements of this section may be used to meet minimum requirements for *EV ready* spaces and *EV capable* spaces.
3. Installed *EV ready* spaces that exceed the minimum requirements of this section may be used to meet minimum requirements for *EV capable* spaces.
4. Where the number of *EV ready* spaces allocated for R-2 occupancies is equal to the number of dwelling units or to the number of *automobile parking spaces* allocated to R-2 occupancies, whichever is less, requirements for *EVSE* spaces for R-2 occupancies shall not apply.
5. In residential multi-family complexes that contain multiple buildings, required EV spaces shall be dispersed throughout parking areas so that each building has access to a similar number of spaces per dwelling unit.

TABLE RD104.2

REQUIRED EV POWER TRANSFER INFRASTRUCTURE FOR MULTI-FAMILY

BUILDING TYPE	MINIMUM EV INSTALLED SPACES	MINIMUM EV READY SPACES	MINIMUM EV CAPABLE SPACES

Group R-1 and R-2[a]	**15%**	**5%**	**40%**
Group R-3 and R-4	**2%**	**0%**	**5%**

a. Where all (100%) parking serving R-2 occupancies are EV ready spaces, requirements for *EVSE* spaces for R-2 occupancies shall not apply.

RD104.3 EV capable spaces. Each *EV capable* space used to meet the requirements of Section RD105.1 shall comply with all of the following:

1. A continuous raceway or cable assembly shall be installed between an enclosure or outlet located within 3 feet (914 mm) of the *EV capable* space and a suitable panelboard or other onsite electrical distribution equipment.
2. Installed raceway or cable assembly shall be sized and rated to supply a minimum circuit capacity in accordance with RD104.5
3. The electrical distribution equipment to which the raceway or cable assembly connects shall have sufficient dedicated space and spare electrical capacity for a 2-pole circuit breaker or set of fuses.
4. The electrical enclosure or outlet and the electrical distribution equipment directory shall be marked: "For future electric vehicle supply equipment (EVSE)."
5. Reserved capacity shall be no less than 4.1 kVA (20A 208/240V) for each *EV capable* space.

RD104.4 EV ready spaces. Each branch circuit serving *EV ready* spaces used to meet the requirements of Section RD105.1 shall comply with all of the following:

1. Terminate at an outlet or enclosure, located within 3 feet (914 mm) of each *EV ready* space it serves.
2. Have a minimum circuit capacity in accordance with RD104.5.
3. The panelboard or other electrical distribution equipment directory shall designate the branch circuit as "For electric vehicle supply equipment (EVSE)" and the outlet or enclosure shall be marked "For electric vehicle supply equipment (EVSE)."

RD104.5 EVSE spaces. An installed *EVSE* with multiple output connections shall be permitted to serve multiple EVSE spaces. Each *EVSE* installed to meet the requirements of Section RD104.1, serving either a single *EVSE* space or multiple *EVSE* spaces, shall comply with all of the following:

1. Have a minimum circuit capacity in accordance with RD104.5.
2. Have a minimum charging rate in accordance with RD104.4.1.
3. Be located within 3 feet (914 mm) of each *EVSE* space it serves.

4. Be installed in accordance with Section RD104.6 and RD104.7

RD104.5.1 EVSE minimum charging rate. Each installed *EVSE* shall comply with one of the following:

1. Be capable of charging at a minimum rate of 6.2 kVA (or 30A at 208/240V).
2. When serving multiple *EVSE* spaces and controlled by an energy management system providing load management, be capable of simultaneously charging each *EVSE* space at a minimum rate of no less than 3.3 kVA.
3. When serving *EVSE* spaces allowed to have a minimum circuit capacity of 2.7 kVA in accordance with RD104.5.1 and controlled by an energy management system providing load management, be capable of simultaneously charging each *ESVE* space at a minimum rate of no less than 2.1 kVA.

RD 104.6 Disbursement. Required EVSE, EV ready, and EV capable spaces shall be disbursed throughout the parking areas in Residential Multi-family developments that contain multiple buildings so that each building has access to roughly the same number of spaces.

RD104.7 Circuit capacity. The capacity of electrical infrastructure serving each *EV capable* space, *EV ready* space, and *EVSE* space shall comply with one of the following:

1. A branch circuit shall have a rated capacity not less than 8.3 kVA (or 40A at 208/240V) for each EV ready space or *EVSE* space it serves.
2. The requirements of RD104.5.1.

RD104.7.1 Circuit capacity management. The capacity of each branch circuit serving multiple *EVSE* spaces, EV ready spaces or EV capable spaces designed to be controlled by an energy management system providing load management in accordance with NFPA 70, shall comply with one of the following:

1. Have a minimum capacity of 4.1 kVA per space.
2. Have a minimum capacity of 2.7 kVA per space when serving *EV ready* spaces or *EVSE* spaces for a building site when all (100%) of the automobile parking spaces are designed to be *EV ready* or *EVSE* spaces.

RD104.8 EVSE installation. *EVSE* shall be installed in accordance with NFPA 70 and shall be listed and labeled in accordance with UL 2202 or UL 2594.

RD104.9. EVSE ENERGY STAR. All *EVSE* shall be ENERGY STAR certified.

RD105 Universal vehicle charging stations

RD105.1 General. Where *electric vehicle* charging stations are provided for public use, or where *electric vehicle* charging stations are shared by multiple multi-family dwelling units, the number of universal vehicle charging stations shall be provided in accordance with Table RD105.1. When multiple stalls are required, access aisles may be shared.

TABLE RD105.1

UNIVERSAL EV SPACE REQUIREMENTS

TOTAL # OF EV CHARGING STATIONS	MINIMUM # OF UNIVERSAL VEHICLE CHARGING STATIONS
1 or more	25%

RD106. Identification

RD 106.1 General. Construction documents shall designate all EV Capable spaces, EV Ready spaces and EV Installed spaces and indicate the locations of conduit and termination points serving them. The circuit breakers or circuit breaker spaces reserved for the EV Capable spaces, EV Ready spaces, and EV Installed spaces shall be clearly identified in the panel board directory. The conduit for EV Capable spaces shall be clearly identified at both the panel board and the termination point at the parking space.

Article 10 – Amendments to the 2021 International Swimming Pool and Spa Code

Chapter 1. Chapter 1 is hereby deleted. Please refer to the 2021 International Building Code Chapter 1 and 2023 Lafayette Building Code Chapter 1 amendments to the International Building Code for Scope and Administrative requirements.

Article 11 – Amendments to the 2021 International Property Maintenance Code

Chapter 1. Chapter 1 is hereby deleted. Please refer to the 2021 International Building Code Chapter 1 and 2023 Lafayette Building Code Chapter 1 amendments to the International Building Code for Scope and Administrative requirements.

RESOLUTION NO. 1
SERIES 2024

A RESOLUTION RECOMMENDING APPROVAL OF AN ORDINANCE AMENDING LOUISVILLE MUNICIPAL CODE SECTION 17.20.170 - ELECTRIC VEHICLE CHARGING INFRASTRUCTURE

WHEREAS, the City of Louisville is a Colorado home rule municipal corporation duly organized and existing under laws of the State of Colorado and the City Charter; and

WHEREAS, City of Louisville municipal code Title 17, Zoning, establishes standards for the development of land within the City, including standards for parking and energy efficient development; and

WHEREAS, by Ordinance No. 1816 adopted on October 19, 2021, the City Council amended the Zoning Code to require new construction include electric vehicle charging infrastructure; and

WHEREAS, the City of Louisville remains committed to its adopted goals to reduce energy consumption, increase clean energy sources, and support the transition to a low-carbon community as outlined in the Sustainability Action Plan and Resolution 25, Series 2019, "A Resolution Setting Clean Energy and Carbon Reduction Goals";

WHEREAS, the Planning Commission desires to amend the City's electric vehicle charging standards to better align with the Colorado Model Electric Ready and Solar Ready Code, published June 1, 2023 by the Colorado Energy Office; and

NOW THEREFORE, BE IT RESOLVED that the Planning Commission of the City of Louisville, Colorado does hereby recommend approval of an ordinance amending Title 17 of the Louisville Municipal Code concerning Electric Vehicle Charging Infrastructure with the following conditions:

- Provide language to ensure a minimum "Level 2" EV charging station standards for installed spaces.
- Change R-2 multi-family residential occupancy with 10 or fewer parking spaces to require at least one installed EVSE Installed Space.
- Add language so that if EVSE Installed Spaces are provided above the minimum number that a credit can be provided to the required number of EV Capable, EV Ready or EV Ready Light Spaces.
- Require labeling in electrical panels for the spaces reserved for breakers to support future EV Capable Spaces.

PASSED AND ADOPTED this 8th day of February, 2024.

By: _____

Steve Brauneis, Chair
Planning Commission

Attest: _____
Jeffrey Moline, Secretary
Planning Commission

City of Louisville
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DRAFT Memorandum

To: **Louisville City Council Members**

From: **Louisville Sustainability Advisory Board**

Date: **May 15, 2024**

Re: **Energy Code Amendments**

Dear Louisville City Councillors,

The Louisville Sustainability Advisory Board understands that City Council will consider several amendments to the City's building codes at its meeting on 4 June 2024. The Board reviewed and discussed these amendments at its March, April, and May meetings. While City staff provided a thorough report, the Board would have appreciated more information concerning the genesis of the proposed amendments.

We offer some advice on these amendments just below. To frame our advice, we remind City Council that climate change presents humanity with a crisis of unparalleled proportions to which humanity has so far responded inadequately, that the City has set decarbonization goals in an attempt to respond to this crisis, and that the City's latest residential and commercial building codes are integral to achieving these goals. We further remind City Council that the City's latest building codes are not exceptional: several municipalities in Colorado have adopted the 2021 International Energy Conservation Code, and the State of Colorado has essentially mandated widespread adoption; Lafayette and Crested Butte recently adopted building codes with electrification mandates (allowing for certain exemptions), and Boulder is currently considering similar legislation; and the City's commercial building codes were modeled on those of other municipalities including Boulder. We finally remind City Council that the Board wholeheartedly supported adoption of the City's latest building codes, and we again thank City Council for authorizing their adoption.

First, we address the proposed amendments to the City's electric vehicle infrastructure code. City staff have proposed that the City replace its current code with the State of Colorado's

recommendations. While the City's code and the State's recommendations are very similar in many respects, and while the Board generally supports regional alignment on such legislation as building codes, we also recognize that Louisville differs from other communities across Colorado and that Louisville has a celebrated history of sustainability leadership. Of relevance in this case, Louisville has higher rates of adoption of electric vehicles than many other communities across Colorado, and Louisville has more aggressive decarbonization goals than the State and many of its other communities. Accordingly, the Board advises City Council to consider a compromise between the City's electric vehicle infrastructure code and the State's recommendations. Specifically, the Board endorses the Planning Commission's recommendations.

Next, we address the proposed amendments to the City's residential and commercial building codes. Several of these amendments are essentially clarifications or corrections; the Board most certainly supports these amendments. The remaining amendments represent weakenings of the City's building codes as far as efficiency and electrification are concerned; the Board recommends that City Council consider compromises between the City's current building codes and the proposed amendments. We provide brief recommendations for each such amendment.

- *All-electric requirements for commercial space and water heating*: The Board recommends retaining the all-electric space and water heating requirements for alterations and additions if existing equipment is replaced or if additional heating units are installed. Accordingly, existing equipment, no matter its power source, may continue to be used for the extent of its useful lifetime.
- *Natural gas backup for commercial space heating*: The Board recommends that natural gas backups for commercial space heating only be permitted if existing natural gas space heating equipment is being retained to serve this function.
- *Post-construction compliance and documentation for new commercial construction*: The Board supports post-construction compliance and documentation, through monitoring and metering, of the energy use intensity standards for new commercial buildings, but we appreciate the burden that such compliance and documentation places on building owners and City staff. Accordingly, we endorse removal of these requirements, but we strongly believe that legislation will mandate monitoring and metering of greenhouse gas emissions in the relatively near future.
- *Minimum heat pump standards*: The Board supports the amended minimum heat pump standards.

City of Louisville
COLORADO • SINCE 1878

- *Furnace efficiency standards*: The Board recommends maintaining furnace efficiency standards but creating a simple waiver for cases in which products meeting these standards are not readily available.
- *Commercial door U-value standards*: The Board recommends maintaining commercial door U-value standards but creating a simple waiver for cases in which products meeting these standards are not readily available.
- *Electric vehicle infrastructure for altered parking*: The Board recommends that electric vehicle charging standards apply to any added parking but not to any reconfigured parking.
- *Passive house certification*: The Board recommends that the City allow passive house certification from both PHI and PHIUS as an alternative to Appendix RC of the 2021 IECC.

The Board strongly believes that legislation will mandate electrification retrofits of existing residential and commercial buildings in the relatively near future. By electrifying their buildings during construction, alteration, or addition, building owners will likely bear lower costs in the long term.

If the City can offer any assistance to meet or incentives to exceed the current building codes, then the Board would be most supportive of such efforts. The Board has recommended to City staff that the City provide incentives for commercial and residential efficiency and electrification upgrades in the next biennial budget.

Thank you for considering our advice.

Sincerely,
The Louisville Sustainability Advisory Board

City of Louisville
COLORADO • SINCE 1878

CITY COUNCIL COMMUNICATION
AGENDA ITEM 10F

SUBJECT: **ORDINANCE NO. 1878, SERIES 2024 – AN ORDINANCE EXEMPTING CONSTRUCTION MATERIALS FROM THE CITY'S USE TAX FOR BUILDING PERMITS ISSUED FOR REPAIR AND RECONSTRUCTION OF FENCES, WALLS, AND ACCESSORY STRUCTURES THAT SUSTAINED FIRE, SMOKE, HEAT, WATER, ASH OR OTHER DAMAGE AS A RESULT OF THE MARSHALL FIRE – 2nd READING – PUBLIC HEARING (advertised *Daily Camera* 7/21/24)**

DATE: **AUGUST 6, 2024**

PRESENTED BY: **ROB ZUCCARO, COMMUNITY DEVELOPMENT DIRECTOR**

SUMMARY:
Attached for consideration is an ordinance that would extend the current City use tax exemption program for the Marshall Fire to any structure requiring a city-issued building permit that is being repaired or rebuilt due to damage from the Marshall Fire (see Attachment 1). Previously approved use tax exemptions were limited to the rebuilding or repair of the residential structure itself, and did not cover other structures such as fences, walls and detached accessory structures (see Attachments 2 and 3 for Ordinance 1841, Series 2022 and Ordinance 1867, Series 2023 respectively).

Second Reading Amendments:
Based on resident feedback following first reading, staff amended the language in Section 1.A. of the ordinance to expand the use tax credit to structures being built as part of rebuilding even if that structure may not have existed when the fire took place. For example, if someone rebuilding did not have a retaining wall before the fire, but needed one to accommodate their rebuild, or if they did not have solar panels prior to the fire, but chose to add solar panels to their rebuild, then these items would also be eligible for the City use tax exemption.

> *Section 1. A. The building permit application is for repair or rebuilding of any structure requiring a city-issued building permit, including walls, fences,* ***solar panels,*** *and accessory structures,* ***relating to the repair or rebuilding of homes*** *that sustained direct fire, smoke, heat, water, ash or other damage from the Marshall Fire.*

PROPOSAL:
Use Tax Exemption
Ordinance No. 1878, Series 2024 would extend the City use tax exemption to the repair or rebuilding of any structure requiring a city-issued building permit that sustained damage from the Marshall Fire. This exemption would cover fences, walls and accessory structures such as storage sheds.

The City collects use tax at the time of issuing a building permit. This tax applies to the construction materials associated with the project and replaces the City's portion of sales tax at the point of sale for those materials. The City also collects County use tax and remits those funds to the County. State use tax is paid at the point of sale. This ordinance would only exempt the City's portion of the use tax.

The City's construction use tax totals 3.650%, broken out as follows:

- 3.000% restricted for capital improvements.
- 0.375% restricted for acquisition and maintenance of land in and around the city used for open space buffer zones, trails, wildlife habitats, wetlands preservation and parks.
- 0.125% restricted for historic preservation and operations of the Louisville Historical Museum.
- 0.150% restricted for operating and maintaining the Louisville Recreation & Senior Center and pool facilities at Memory Square Park.

The amount of use tax collected is determined by the reported valuation of the construction project. The formula assumes that a project's valuation is split 50/50 between labor and materials. Therefore, the use tax collected totals 50% of the reported valuation multiplied by 3.650%. For example, a permit for installation of new fence with a reported valuation of $10,000 would pay ($10,000/2) x .0365 = $182.50 in City use tax.

FISCAL IMPACT:
Current use tax collected for fences, walls and accessory structures on lots impacted by the Marshall Fire is estimated at $44,438. Assuming full compliance with city permitting requirements, staff estimates that total fiscal impact may be up to $200,000. Additional city staff time will also be needed to create communications and application procedures, and process refunds.

STAFF RECOMMENDATION:
Staff recommends approval of Ordinance No. 1878, Series 2024.

ATTACHMENTS:

1. Proposed Ordinance No. 1878, Series 2024
2. Ordinance 1841, Series 2022
3. Ordinance 1867, Series 2023
4. Public Comments

STRATEGIC PLAN IMPACT:

☒	**Financial Stewardship & Asset Management**	☒	**Reliable Core Services**
☐	**Vibrant Economic Climate**	☐	**Quality Programs & Amenities**
☒	**Engaged Community**	☐	**Healthy Workforce**
☐	**Supportive Technology**	☐	**Collaborative Regional Partner**

Second Reading Amendments

Ordinance No. 1878, Series 2024 is revised to read as follows (amendments are shown in **bold underline** and ~~**bold strikeout**~~):

ORDINANCE NO. 1878
SERIES 2024

AN ORDINANCE EXEMPTING CONSTRUCTION MATERIALS FROM THE CITY'S USE TAX FOR BUILDING PERMITS ISSUED FOR REPAIR AND RECONSTRUCTION OF FENCES, WALLS, AND ACCESSORY STRUCTURES THAT SUSTAINED FIRE, SMOKE, HEAT, WATER, ASH OR OTHER DAMAGE AS A RESULT OF THE MARSHALL FIRE

WHEREAS, on December 30, 2021, the Marshall Fire ignited and quickly spread to the City of Louisville, resulting in severe damage or total loss of almost six hundred (600) structures within the City of Louisville, most of them residential homes; and

WHEREAS, also on December 30, 2021, the Mayor of the City of Louisville, pursuant to Chapter 2.32 of the Louisville Municipal Code and C.R.S. § 24-33.5-709, executed a Declaration of Local Disaster Emergency in and for the City of Louisville, which Declaration was thereafter continued in effect by resolution of the City Council, and the Governor of the State of Colorado issued a Declaration of Statewide Emergency in response to the Marshall Fire; and

WHEREAS, on January 1, 2022, President Joseph R. Biden approved a Major Disaster Declaration for the Event (DR-4634-CO) beginning on December 30, 2021 and continuing thereafter; and

WHEREAS, the structures damaged and destroyed by the Marshall Fire comprise significant portions of several residential subdivisions within the City; and

WHEREAS, pursuant to Sections 3.20.300 and 3.20.305 of the Louisville Municipal Code, the City imposes a use tax on construction and building materials; and

WHEREAS, pursuant to Section 3.20.330 of the Louisville Municipal Code, the use tax for construction and building materials is determined based on fifty percent (50%) of the estimated general contract costs and fifty percent (50%) of the estimated mechanical contract costs, which is deemed to be the purchase price of such construction and building materials; and

WHEREAS, also pursuant to Section 3.20.330 of the Louisville Municipal Code, the full amount of the use tax is collected prior to issuance of a building permit; and

WHEREAS, many of the City's residents affected by the Marshall Fire have learned they may be significantly underinsured and will thus face financial hardships rebuilding their fire-damaged homes; and

WHEREAS, the City Council finds that repairing and rebuilding of homes lost to the Marshall Fire is essential to maintaining the fabric of the community, and that providing a use tax exemption for homeowners affected by the Marshall Fire who are underinsured will help those residents return to the City; and

WHEREAS, the exemption of construction and building materials from the City's use tax may only be made based upon satisfaction of those criteria set forth herein, to ensure the exemption is provided only to the extent reasonably necessary to facilitate the repair and rebuilding of fire-damaged homes within the community; and

WHEREAS, the City Council finds that restoring a vibrant and robust community requires rebuilding to occur within a reasonable amount of time, and that the relief set forth herein afforded those who lost their homes in the Marshall Fire who are experiencing financial hardship is rationally related to the important government function of fostering and maintaining a vibrant and robust community; and

WHEREAS, the City Council finds those persons who lost their homes or ability to live in their homes due to the Marshall Fire have experienced and been impacted by a natural disaster of epic proportions, and thus are differently situated from those within the City who choose to repair or remodel an existing residence, or build a new residence; and

WHEREAS, by this ordinance, the City Council furthers its established policy of facilitating rebuilding of structures damaged or destroyed by the Marshall Fire as set forth in previous actions of the City Council; and

WHEREAS, the City Council recognizes those residents whose homes were damaged or destroyed by the Marshall Fire have suffered great losses and it is the policy of the City to assist and encourage these residents to return to the community; and

WHEREAS, it is the intent of the City Council that adoption of this ordinance shall provide only the limited relief under the specific circumstances set forth herein, and the short-term exemption provided shall not alter the property and services taxed in Section 3.20.305 of the Louisville Municipal Code for construction and building materials, and as such will not constitute a new tax, tax increase, or tax policy change directly causing a net tax revenue gain as those terms are used in Article X, Section 20 of the Colorado Constitution (the "Taxpayer's Bill of Rights" or "TABOR") when the conditions for the exemption no longer exist; and

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

Section 1. Requirements for Exemption. In addition to those exemptions from the City's use tax set forth in Section 3.20.310 of the Louisville Municipal Code, and those exemptions approved by Ordinance 1841, Series 2022 and Ordinance 1867, Series 2023 for the repair and rebuilding of a residence that sustained fire damage, construction and building materials shall be exempt, or partially exempt, from the imposition of the tax levied by Section 3.20.300 of the Louisville Municipal Code when all of the following requirements are met:

A. The building permit application is for repair or rebuilding of any structure requiring a city-issued building permit, including walls, fences, **solar panels,** and accessory structures, **relating to the repair or rebuilding of homes** that sustained direct fire, smoke, heat, water, ash or other damage from the Marshall Fire.

B. The building permit application has been filed by a person who, on December 30, 2021, was the owner of record of property in any jurisdiction on which a residence was damaged or destroyed by the Marshall Fire.

C. The building permit application is filed with the City of Louisville on or before December 31, 2025.

D. The building permit applicant attests on the building permit application that they are requesting a use tax exemption due to financial hardship caused by inadequate insurance or a gap in insurance coverage when compared to the cost of repairs.

Section 2. Amount of Exemption. The amount of the use tax exemption provided by this ordinance shall equal the full amount of the City use tax due for the construction and building materials.

Section 3. Refunds of City Use Taxes. City staff is authorized and directed to issue refunds of City use taxes paid in connection with building permits issued prior to the effective date of this ordinance, and which permits meet the requirements for exemption set forth in Section 1 of this ordinance. The amount of such refunds shall be determined as set forth in Section 2 of this ordinance.

Section 4. If any portion of this ordinance is held to be invalid for any reason, such decision shall not affect the validity of the remaining portions of this ordinance. The City Council hereby declares that it would have passed this ordinance and each part hereof irrespective of the fact that any one part be declared invalid.

Section 5. The repeal or modification of any provision of the Municipal Code of the City of Louisville by this ordinance shall not release, extinguish, alter, modify, or change in whole or in part any penalty, forfeiture, or liability, either civil or criminal, which shall have been incurred under such provision, and each provision shall be treated and held as still remaining in force for the purpose of sustaining any and all proper actions, suits, proceedings, and prosecutions for the enforcement of the penalty, forfeiture, or liability, as well as for the purpose of sustaining any judgment, decree, or order which can or may be rendered, entered, or made in such actions, suits, proceedings, or prosecutions.

Section 6. All other ordinances or portions thereof inconsistent or conflicting with this ordinance or any portion hereof are hereby repealed to the extent of such inconsistency or conflict.

Section 7. The City Council herewith finds, determines and declares that this ordinance is genuinely and urgently necessary for the immediate preservation of the public health, safety, and welfare due to the impacts of the Marshall Fire set forth herein.

INTRODUCED, READ, PASSED ON FIRST READING AND ORDERED PUBLISHED this 16th day of July, 2024.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Meredyth Muth, City Clerk

APPROVED AS TO FORM:

_____
Kelly PC, City Attorney

PASSED AND ADOPTED ON SECOND AND FINAL READING, this 6th day of August, 2024.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Genny Kline, Interim City Clerk

ORDINANCE NO. 1841
SERIES 2022

AN EMERGENCY ORDINANCE EXEMPTING CONSTRUCTION MATERIALS FROM THE CITY'S USE TAX FOR BUILDING PERMITS ISSUED FOR RECONSTRUCTION OF HOMES DAMAGED OR DESTROYED IN THE MARSHALL FIRE BURN AREA

WHEREAS, on December 30, 2021, the Marshall Fire ignited and quickly spread to the City of Louisville, resulting in severe damage or total loss of almost six hundred (600) structures within the City of Louisville, most of them residential homes; and

WHEREAS, also on December 30, 2021, the Mayor of the City of Louisville, pursuant to Chapter 2.32 of the Louisville Municipal Code and C.R.S. § 24-33.5-709, executed a Declaration of Local Disaster Emergency in and for the City of Louisville, which Declaration was thereafter continued in effect by resolution of the City Council, and the Governor of the State of Colorado issued a Declaration of Statewide Emergency in response to the Marshall Fire; and

WHEREAS, on January 1, 2022, President Joseph R. Biden approved a Major Disaster Declaration for the Event (DR-4634-CO) beginning on December 30, 2021 and continuing thereafter; and

WHEREAS, the structures damaged and destroyed by the Marshall Fire comprise significant portions of several residential subdivisions within the City; and

WHEREAS, pursuant to Sections 3.20.300 and 3.20.305 of the Louisville Municipal Code, the City imposes a use tax on construction and building materials; and

WHEREAS, pursuant to Section 3.20.330 of the Louisville Municipal Code, the use tax for construction and building materials is determined based on fifty percent (50%) of the estimated general contract costs and fifty percent (50%) of the estimated mechanical contract costs, which is deemed to be the purchase price of such construction and building materials; and

WHEREAS, also pursuant to Section 3.20.330 of the Louisville Municipal Code, the full amount of the use tax is collected prior to issuance of a building permit; and

WHEREAS, many of the City's residents affected by the Marshall Fire have learned they may be significantly underinsured and will thus face financial hardships rebuilding their fire-damaged homes; and

WHEREAS, the City Council finds that rebuilding of homes lost to the Marshall Fire is essential to maintaining the fabric of the community, and that providing a use tax exemption for homeowners affected by the Marshall Fire who are underinsured will help those residents return to the City; and

WHEREAS, the City Council further finds its adoption of the 2021 IECC was in furtherance of its important policy objectives contained in the City's Sustainability Action Plan, and the incentive provided by the full City use tax exemption set forth in this ordinance for rebuilding of residences pursuant to the 2021 IECC will facilitate such policy objectives to the greatest extent possible; and

WHEREAS, the exemption of construction and building materials from the City's use tax may only be made based upon satisfaction of those criteria set forth herein, to ensure the exemption is provided only to the extent reasonably necessary to facilitate the rebuilding of fire-damaged homes within the community; and

WHEREAS, the City Council finds that restoring a vibrant and robust community requires rebuilding to occur within a reasonable amount of time, and that the relief set forth herein afforded those who lost their homes in the Marshall Fire who are experiencing financial hardship is rationally related to the important government function of fostering and maintaining a vibrant and robust community; and

WHEREAS, the City Council finds those persons who lost their homes in the Marshall Fire have experienced and been impacted by a natural disaster of epic proportions, and thus are differently situated from those within the City who choose to repair or remodel an existing residence, or build a new residence; and

WHEREAS, by this ordinance, the City Council furthers its established policy of facilitating rebuilding of structures damaged or destroyed by the Marshall Fire as set forth in previous actions of the City Council; and

WHEREAS, the City Council recognizes those residents whose homes were damaged or destroyed by the Marshall Fire have suffered great losses and it is the policy of the City to assist and encourage these residents to return to the community; and

WHEREAS, it is the intent of the City Council that adoption of this ordinance shall provide only the limited relief under the specific circumstances set forth herein, and the short-term exemption provided shall not alter the property and services taxed in Section 3.20.305 of the Louisville Municipal Code for construction and building materials, and as such will not constitute a new tax, tax increase, or tax policy change directly causing a net tax revenue gain as those terms are used in Article X, Section 20 of the Colorado Constitution (the "Taxpayer's Bill of Rights" or "TABOR") when the conditions for the exemption no longer exist; and

WHEREAS, the City Council finds that an emergency exists because the preservation of public property, health, safety, and welfare requires the City to take immediate action to provide the relief set forth herein to those whose homes were damaged or destroyed due to the Marshall Fire.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

Section 1. Requirements for Exemption. In addition to those exemptions from the City's use tax set forth in Section 3.20.310 of the Louisville Municipal Code, construction and building materials shall be exempt, or partially exempt, from the imposition of the tax levied by Section 3.20.300 of the Louisville Municipal Code when all of the following requirements are met:

A. The building permit application is for major structural repair or rebuilding of a residence that sustained fire damage from the Marshall Fire, not consisting solely of smoke or ash damage, which rendered the residence not habitable.

B. The building permit application has been filed by a person who, on December 30, 2021, was the owner of record of property in any jurisdiction on which a residence was damaged or destroyed by the Marshall Fire.

C. The building permit application is filed with the City of Louisville on or before December 31, 2024.

D. The building permit applicant attests on the building permit application they are requesting a use tax exemption due to financial hardship caused by inadequate insurance coverage.

Section 2. Amount of Exemption. The amount of the use tax exemption provided by this ordinance shall be determined as follows:

A. For permits issued pursuant to the 2021 IECC as adopted by the City, with or without Appendix RC, the use tax exemption shall equal the full amount of the City use tax due for the construction and building materials regardless of any increase in the size of the home.

B. For permits issued pursuant to the 2018 IECC as adopted by the City, the use tax exemption shall be a percentage of the City use tax due, based on the size of the home to be rebuilt as compared to the previous home that was located on the lot for which the building permit is issued. The home to be rebuilt will be considered the same size if it is not more than ten percent (10%) larger than the home that was previously located on the lot. For example, if the home that was previously located on the lot for which the building permit is issued was 2,000 square feet, and the home to be rebuilt is 2,200 square feet or smaller, the use tax exemption shall equal the full amount of the City use tax. If the home to be rebuilt on such lot is 3,000 square feet, two-thirds (2/3) of the City use tax due for construction and building materials shall be exempt.

Section 3. Refunds of City Use Taxes. City staff is authorized and directed to issue refunds of City use taxes paid in connection with building permits issued prior to the effective date of this ordinance, and which permits meet the requirements for exemption set forth in Section 1 of this ordinance. The amount of such refunds shall be determined as set forth in Section 2 of this ordinance.

Section 4. If any portion of this ordinance is held to be invalid for any reason, such decision shall not affect the validity of the remaining portions of this ordinance. The City Council hereby declares that it would have passed this ordinance and each part hereof irrespective of the fact that any one part be declared invalid.

Section 5. The repeal or modification of any provision of the Municipal Code of the City of Louisville by this ordinance shall not release, extinguish, alter, modify, or change in whole or in part any penalty, forfeiture, or liability, either civil or criminal, which shall have been incurred under such provision, and each provision shall be treated and held as still remaining in force for the purpose of sustaining any and all proper actions, suits, proceedings, and prosecutions for the enforcement of the penalty, forfeiture, or liability, as well as for the purpose of sustaining any judgment, decree, or order which can or may be rendered, entered, or made in such actions, suits, proceedings, or prosecutions.

Section 6. All other ordinances or portions thereof inconsistent or conflicting with this ordinance or any portion hereof are hereby repealed to the extent of such inconsistency or conflict.

Section 7. The City Council herewith finds, determines and declares that this ordinance is genuinely and urgently necessary for the immediate preservation of the public health, safety, and welfare due to the impacts of the Marshall Fire set forth herein.

INTRODUCED, READ, PASSED AND ADOPTED AS AN EMERGENCY ORDINANCE BY TWO-THIRDS OF THE ENTIRE CITY COUNCIL, AND ORDERED PUBLISHED this 3rd day of October, 2022.

~~Ashley Stolzmann, Mayor~~
Dennis Maloney, Mayor Pro Tem

ATTEST:

Meredyth Muth, City Clerk

CITY OF LOUISVILLE SEAL COLORADO

Second Reading Amendments

Ordinance No. 1867, Series 2023, is revised to read as follows (amendments on second reading are shown in track changes format):

ORDINANCE NO. 1867
SERIES 2023

AN ORDINANCE EXEMPTING CONSTRUCTION MATERIALS FROM THE CITY'S USE TAX FOR BUILDING PERMITS ISSUED FOR REPAIR AND RECONSTRUCTION OF HOMES THAT SUSTAINED SMOKE, HEAT, WATER, ASH OR OTHER DAMAGE AS A RESULT OF THE MARSHALL FIRE

WHEREAS, on December 30, 2021, the Marshall Fire ignited and quickly spread to the City of Louisville, resulting in severe damage or total loss of almost six hundred (600) structures within the City of Louisville, most of them residential homes; and

WHEREAS, also on December 30, 2021, the Mayor of the City of Louisville, pursuant to Chapter 2.32 of the Louisville Municipal Code and C.R.S. § 24-33.5-709, executed a Declaration of Local Disaster Emergency in and for the City of Louisville, which Declaration was thereafter continued in effect by resolution of the City Council, and the Governor of the State of Colorado issued a Declaration of Statewide Emergency in response to the Marshall Fire; and

WHEREAS, on January 1, 2022, President Joseph R. Biden approved a Major Disaster Declaration for the Event (DR-4634-CO) beginning on December 30, 2021 and continuing thereafter; and

WHEREAS, the structures damaged and destroyed by the Marshall Fire comprise significant portions of several residential subdivisions within the City; and

WHEREAS, pursuant to Sections 3.20.300 and 3.20.305 of the Louisville Municipal Code, the City imposes a use tax on construction and building materials; and

WHEREAS, pursuant to Section 3.20.330 of the Louisville Municipal Code, the use tax for construction and building materials is determined based on fifty percent (50%) of the estimated general contract costs and fifty percent (50%) of the estimated mechanical contract costs, which is deemed to be the purchase price of such construction and building materials; and

WHEREAS, also pursuant to Section 3.20.330 of the Louisville Municipal Code, the full amount of the use tax is collected prior to issuance of a building permit; and

WHEREAS, many of the City's residents affected by the Marshall Fire have learned they may be significantly underinsured and will thus face financial hardships rebuilding their fire-damaged homes; and

WHEREAS, the City Council finds that repairing and rebuilding of homes lost to the Marshall Fire is essential to maintaining the fabric of the community, and that providing a use tax exemption for homeowners affected by the Marshall Fire who are underinsured will help those residents return to the City; and

WHEREAS, the exemption of construction and building materials from the City's use tax may only be made based upon satisfaction of those criteria set forth herein, to ensure the exemption is provided only to the extent reasonably necessary to facilitate the repair and rebuilding of fire-damaged homes within the community; and

WHEREAS, the City Council finds that restoring a vibrant and robust community requires rebuilding to occur within a reasonable amount of time, and that the relief set forth herein afforded those who lost their homes in the Marshall Fire who are experiencing financial hardship is rationally related to the important government function of fostering and maintaining a vibrant and robust community; and

WHEREAS, the City Council finds those persons who lost their homes or ability to live in their homes due to the Marshall Fire have experienced and been impacted by a natural disaster of epic proportions, and thus are differently situated from those within the City who choose to repair or remodel an existing residence, or build a new residence; and

WHEREAS, by this ordinance, the City Council furthers its established policy of facilitating rebuilding of structures damaged or destroyed by the Marshall Fire as set forth in previous actions of the City Council; and

WHEREAS, the City Council recognizes those residents whose homes were damaged or destroyed by the Marshall Fire have suffered great losses and it is the policy of the City to assist and encourage these residents to return to the community; and

WHEREAS, it is the intent of the City Council that adoption of this ordinance shall provide only the limited relief under the specific circumstances set forth herein, and the short-term exemption provided shall not alter the property and services taxed in Section 3.20.305 of the Louisville Municipal Code for construction and building materials, and as such will not constitute a new tax, tax increase, or tax policy change directly causing a net tax revenue gain as those terms are used in Article X, Section 20 of the Colorado Constitution (the "Taxpayer's Bill of Rights" or "TABOR") when the conditions for the exemption no longer exist; and

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

Section 1. Requirements for Exemption. In addition to those exemptions from the City's use tax set forth in Section 3.20.310 of the Louisville Municipal Code, and those exemptions approved by Ordinance 1841, Series 2022 for the repair and rebuilding of a residence that sustained fire damage, construction and building materials shall be exempt, or partially exempt, from the imposition of the tax levied by Section 3.20.300 of the Louisville Municipal Code when all of the following requirements are met:

A. The building permit application is for repair or rebuilding of a primary residential structure that sustained smoke, heat, water, ash or other damage from the Marshall Fire, not including direct fire damage.

B. The building permit application has been filed by a person who, on December 30, 2021, was the owner of record of property in any jurisdiction on which a residence was damaged or destroyed by the Marshall Fire.

C. The building permit application is filed with the City of Louisville on or before December 31, ~~2024~~ 2025.

D. The building permit applicant attests on the building permit application that they are requesting a use tax exemption due to financial hardship caused by inadequate insurance or a gap in insurance coverage when compared to the cost of repairs.

Section 2. Amount of Exemption. The amount of the use tax exemption provided by this ordinance shall equal the full amount of the City use tax due for the construction and building materials.

Section 3. Refunds of City Use Taxes. City staff is authorized and directed to issue refunds of City use taxes paid in connection with building permits issued prior to the effective date of this ordinance, and which permits meet the requirements for exemption set forth in Section 1 of this ordinance. The amount of such refunds shall be determined as set forth in Section 2 of this ordinance.

Section 4. If any portion of this ordinance is held to be invalid for any reason, such decision shall not affect the validity of the remaining portions of this ordinance. The City Council hereby declares that it would have passed this ordinance and each part hereof irrespective of the fact that any one part be declared invalid.

Section 5. The repeal or modification of any provision of the Municipal Code of the City of Louisville by this ordinance shall not release, extinguish, alter, modify, or change in whole or in part any penalty, forfeiture, or liability, either civil or criminal, which shall have been incurred under such provision, and each provision shall be treated and held as still remaining in force for the purpose of sustaining any and all proper actions, suits,

proceedings, and prosecutions for the enforcement of the penalty, forfeiture, or liability, as well as for the purpose of sustaining any judgment, decree, or order which can or may be rendered, entered, or made in such actions, suits, proceedings, or prosecutions.

Section 6. All other ordinances or portions thereof inconsistent or conflicting with this ordinance or any portion hereof are hereby repealed to the extent of such inconsistency or conflict.

Section 7. The City Council herewith finds, determines and declares that this ordinance is genuinely and urgently necessary for the immediate preservation of the public health, safety, and welfare due to the impacts of the Marshall Fire set forth herein.

INTRODUCED, READ, PASSED ON FIRST READING AND ORDERED PUBLISHED this 28th day of November, 2023.

Christopher M. Leh, Mayor

ATTEST:

Meredyth Muth, City Clerk

CITY OF LOUISVILLE SEAL COLORADO

APPROVED AS TO FORM:

Kelly PC, City Attorney

PASSED AND ADOPTED ON SECOND AND FINAL READING, this 19th day of December, 2023.

Christopher M. Leh, Mayor

ATTEST:

Meredyth Muth, City Clerk

CITY OF LOUISVILLE SEAL COLORADO

From: Tawnya Somauroo
To: City Council
Subject: Tonight"s Use tax ordinance - TWO AMENDMENTS PLEASE!
Date: Tuesday, July 16, 2024 2:53:53 PM

Dear Council,

I am very happy to see use tax relief come before Council tonight for fences, walls, and accessory structures for damaged and destroyed properties after the Marshall Fire! Every little bit helps, especially at the end of the project when so many of us are scraping to pay for fences and landscaping. Almost everyone is facing insurance shortfalls for fences: most of us only had insurance coverage for the depreciated value of our fences, not replacement costs. I hope that you will vote to move this ordinance forward.

I have **two amendments** that I hope you will consider, however.

1) As presently drafted, the ordinance is only for the repair and rebuild of structures damaged or destroyed by the Marshall Fire. Some of us ended up needing to install retaining walls that did not have them before, myself included. In another case, a family had a very fairly large retaining wall that survived the fire but got destroyed during construction and now needs a complete rebuild. Repairing that wall is part of that family's journey to rebuilding their home. It would be helpful if the City would include **all** retaining walls, structures, and fences that are part of a Marshall Fire rebuild/repair (damaged in the fire or needed due to the rebuild). Suggested amendment:

A. The building permit application is for repair or rebuilding of any structure requiring a city-issued building permit, including walls, fences, and accessory structures[**[,]] relating to the repair or rebuilding of homes** that sustained direct fire, smoke, heat, water, ash or other damage from the Marshall Fire.

2) Please consider including solar panels in the use tax relief! Many of us installed or are working to install solar to meet the City's code and decarbonization goals. In my family's case, we pulled the solar out of our project and went with a solar farm initially so that we could determine our usage to properly size our system. Especially now that so many of us have learned that we are in the Xcel preemptive power-down area, many more of us will be adding solar to our homes.

Best regards,
Tawnya Somauroo
944 Larkspur Ln

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From: Brooke Mann
To: City Council
Cc: Rob Zuccaro; billyod444@gmail.com
Subject: Feedback: Expansion of Marshall Fire Use Tax Exemption
Date: Tuesday, July 16, 2024 5:27:14 PM

Hi Council Members,

I just learned that you'll be considering an expansion of the Marshall Fire use tax exemption tonight.

Please consider including **concrete flatwork** in the new ordinance (assuming concrete flatwork is currently subject to use taxes when permitted?).

At the Wildflower Condominiums, we're having to do a significant amount of concrete flatwork replacement (specifically, parking areas and walkways) due to damage from the debris removal process, damage from heavy construction equipment traffic over the past year, and slightly different building footprints.

A use tax exemption for concrete flatwork would help mitigate our ongoing financial struggles at the HOA and individual owner level.

Thank you,
Brooke

B. Brooke Mann
Wildflower Condominiums Resident
Louisville, CO

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City of Louisville
COLORADO • SINCE 1878

CITY COUNCIL COMMUNICATION
AGENDA ITEM 10G

SUBJECT: THIRD REPLAT OF THE ENCLAVE AND EASEMENT VACATION TO ADJUST THE LOCATION OF THE LOT LINE BETWEEN 1147 AND 1149 W ENCLAVE

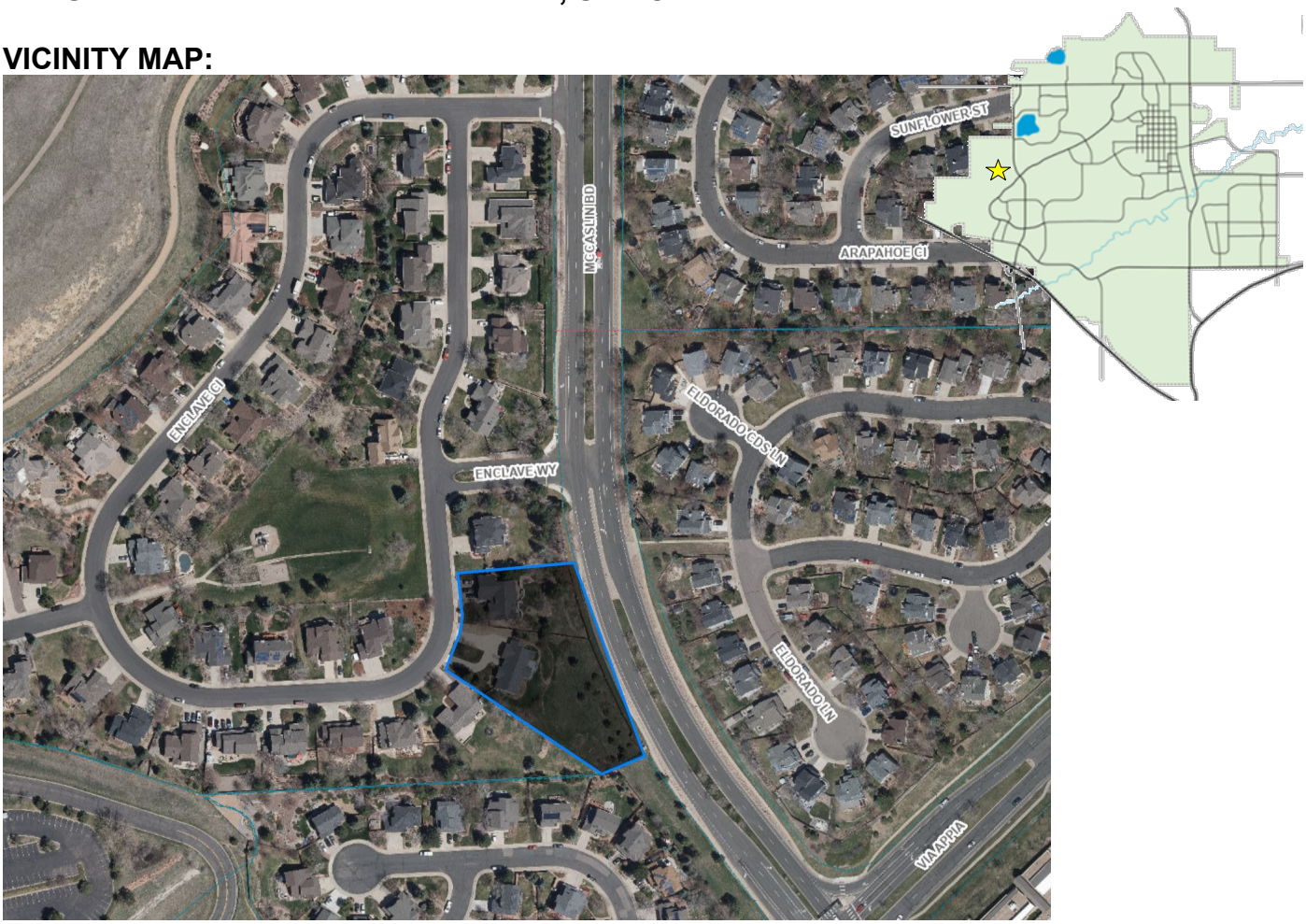
i. ORDINANCE NO. 1879, SERIES 2024 – AN ORDINANCE APPROVING THE VACATION OF AN EXISTING DRAINAGE EASEMENT LOCATED ON LOTS 3 AND 4, BLOCK 1 OF THE ENCLAVE REPLAT

ii. RESOLUTION NO. 35, SERIES 2024 – A RESOLUTION APPROVING THE THIRD REPLAT OF THE ENCLAVE AND EASEMENT VACATION

DATE: AUGUST 6, 2024

PRESENTED BY: AMELIA BRACKETT, SENIOR PLANNER

VICINITY MAP:



SUMMARY:
The applicants, Thomas and Kathryn Greany, request approval of a Minor Subdivision and Easement Vacation to adjust the lot line and associated easements between 1147 and 1149 W Enclave.

BACKGROUND:
The subject properties are part of the Enclave Subdivision, which has been replatted twice, most recently in 2023. They are zoned Planned Community Residential and are subject to the Enclave Planned Unit Development (PUD). The Marshall Fire destroyed the structures on both properties. 1147 W Enclave remains vacant; 1149 W Enclave has been rebuilt.

PROPOSAL:
The proposed replat and easement vacation moves the lot line and associated easements between the two properties to the south. No new lots would be created through this change.

The application also requires approval of the following subdivision modification. Note that the nonconformity described in the modification below already exists with the current lot configurations.

1. Allow a lot depth of 4.8 times the lot width on Lot 2A and a lot depth of 4.4 times the lot width where a maximum 2.5 lot depth is required by Louisville Municipal Code (LMC) Section 16.16.050.C.

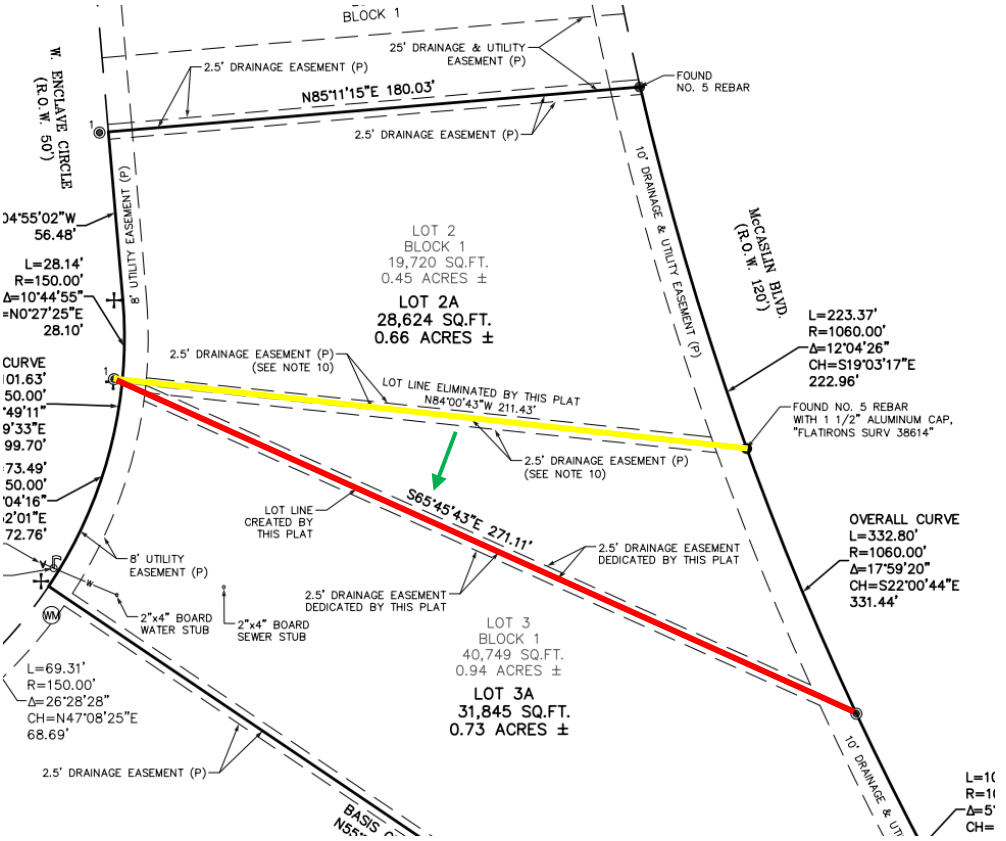


Figure 1. Proposed lot line adjustment moving current lot line (yellow) to south (red).

ANALYSIS:

The proposed re-plat falls under the Minor Subdivision procedure in Louisville Municipal Code (LMC) Sec. 16.12.110, which eliminates the need for review of a preliminary plat prior to review of the final plat. Thus, the Commission is reviewing the final plat for recommendation to the City Council.

Staff reviewed the plat against the final plat criteria and subdivision design standards in LMC Sec. 16.12.090 and LMC Chapter 16.16, and applicable city codes and standards for access, drainage and utilities.

Final Plat Criteria:

Section 16.12.075 of the LMC establishes the following rationale for consideration of final plats by Planning Commission and City Council:

1. *Whether the plat conforms to all of the requirements of this title;*
    - Outside of the modification described above, staff finds that the application would conform to all other requirements of Title 16.
2. *Whether approval of the plat will be consistent with the city's comprehensive plan, applicable zoning requirements, and other applicable federal, state and city laws;*

- Staff finds that the request does not have an impact on the Comprehensive Plan. Staff finds that both lots would support single-family dwelling units that meet the zoning standards and would therefore be buildable lots.
- Staff finds that the application is consistent with all applicable zoning requirements except where modifications have been requested as described in this report.

3. *Whether the proposed subdivision will promote the purposes set forth in section 16.04.020 of this Code and comply with the standards set forth in chapter 16.16 of this Code and this title.*
    - Staff finds that the application will promote the purposes in 16.04.020, including the assurance that public services are available, the safe and efficient circulation of traffic, pedestrians and bikeways, and provides appropriate regulation of the use of land in the city.
    - Staff finds that the application is consistent with the standards set forth in Chapter 16.16 in all respects except in the requested modifications.

Modification Criteria:
Section 16.24.030 of the LMC establishes the following criteria for consideration of modifications to final plats; applications must also comply with Section 16.04.020 (discussed above) and Section 16.24.010.

1. Section 16.04.010-Modifications: *The city council, upon advice of the planning commission, may authorize modifications where a subdivider proposes a plat that does not fully comply with the regulations in this title or title 17. No modification shall be granted if it would be detrimental to the public good or impair the basic intent and purposes of this title or title 17. Any modification granted shall be in keeping with the intent of the comprehensive development plan of the city. Any modification granted shall be in keeping with the intent of the comprehensive plan of the city.*
    - Staff finds that the proposed modification does not affect the Comprehensive Plan or other City policies, and would not be detrimental to the public good given that it continues the existing non-conformity and does not result in a greater non-conformity than what already exists.
2. Section 16.24.030-Modification review criteria:
    1. *That there are unique physical circumstances or conditions such as irregularity, narrowness or shallowness of the property, or exceptional topographical conditions, or other physical conditions peculiar to the affected property;*
        - Staff finds that there are unique physical circumstances regarding lot depth given that the current lot configurations do not conform to the lot depth requirements in Title 16.
    2. *That because of such physical circumstances or conditions, the property cannot be reasonably developed in conformity with the provisions of title 16 and title 17 resulting in a hardship;*

- The property line cannot be adjusted without the lot depth modification.

3. *That such hardship has not been created by the applicant;*
   - The applicants did not create the current, non-conforming lot configurations.
4. *That the modification, if granted, will not alter the essential character of the neighborhood or district in which the property is located, nor substantially or permanently impair the appropriate use or development of adjacent property;*
   - The modification will not alter the existing character or impair any adjacent uses given that the lot depth non-conformity currently exists on the properties.
5. *That there are no reasonable alternatives that would remove the need for the requested modification or would reduce the amount of the modification.*
   - There are no options to adjust the lot line that would avoid the modification request.
6. *That no additional dwelling units shall result from approval of the modification beyond what the underlying zoning would otherwise allow.*
   - Staff finds that no additional dwelling units would result from the modification.

Staff finds that the modification criteria are met and therefore recommends approval of the modification requests for the Minor Subdivision.

Easement Vacation
The easement vacation moves the existing drainage easements to run along the new property line. They will be the same size and alignment as the previous easements, and Public Works staff has reviewed the changes and have no concerns. No other changes are proposed. Staff recommends approval of the easement vacation.

PLANNING COMMISSION ACTION:
Planning Commission recommended approval of this application with no conditions at a public hearing on June 13, 2024. Video of the hearing is available here.

PUBLIC COMMENTS:
No public comments were received by staff at the time of publication of this report.

STAFF RECOMMENDATION:
Staff recommends approval of Resolution 35, Series 2024 recommending approval of the Third Replat of the Enclave with no conditions.

ATTACHMENTS:
1. Resolution 35, Series 2024 (plat)
2. Ordinance 1879, Series 2024 (easement vacation)

3. Third Replat of the Enclave
4. Easement Vacation Exhibit
5. Application Materials

RESOLUTION NO. 35
SERIES 2024

A RESOLUTION APPROVING THE THIRD REPLAT OF THE ENCLAVE AND EASEMENT VACATION

WHEREAS, there has been submitted to the Louisville Planning Commission an application for a Minor Subdivision and Easement Vacation to adjust the location of the lot line and associated easements between 1147 and 1149 W Enclave; and

WHEREAS, after a duly noticed public hearing on June 13, 2024 where evidence and testimony were entered into the record, including the findings in the Louisville Planning Commission staff report dated June 13, 2024, the Planning Commission recommended approval of a Minor Subdivision; and

WHEREAS, City staff has reviewed the information submitted and found that the application complies with the Louisville zoning and subdivision regulations and other applicable sections of the Louisville Municipal Code; and

WHEREAS, the City Council has considered the application at a duly noticed public hearing on August 6, 2024, where evidence and testimony were entered into the record, including the findings in the Louisville City Council staff report dated August 6, 2024.

NOW THEREFORE, BE IT RESOLVED that the City Council of the City of Louisville, Colorado does hereby approve the Louisville Heights Replat B.

PASSED AND ADOPTED this 6th day of August, 2024.

By: _____
Christopher M. Leh, Mayor

Attest: _____
Genny Kline, Interim City Clerk

ORDINANCE NO. 1879
SERIES 2024

AN ORDINANCE APPROVING THE VACATION OF AN EXISTING DRAINAGE EASEMENT LOCATED ON LOTS 3 AND 4, BLOCK 1 OF THE ENCLAVE REPLAT

WHEREAS, by the Enclave Replat, recorded in the Office of the Boulder County Clerk and Recorder on January 14, 1988 at Reception No. 00898171, there was a drainage easement across Lots 2 and 3, Block 1 ("the easement"); and

WHEREAS, a replat application has been approved by the City dedicating new easements under the name the Third Replat of the Enclave; and

WHEREAS, the City Council finds and determines that the easement for which vacation is requested is not and will not be needed for any public, governmental, or utility purposes; and

WHEREAS, the City Council desires to approve the application and vacate the City's interests in the easement for which vacation is requested;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

Section 1. The City hereby approves the vacation of the easement across Lots 2 and 3, Block 1 which easement herein vacated is in the location further described in Exhibit A attached hereto and incorporated herein by this reference ("the easement").

Section 2. All other ordinances or portions thereof inconsistent or in conflict with this ordinance or any portion hereof are repealed to the extent of such inconsistency or conflict.

Section 3. The Mayor and City Manager, or either of them, is authorized to execute such additional documents as may be necessary to evidence the vacation of the easement herein vacated, including but not limited to execution of quit claim deeds.

INTRODUCED, READ, PASSED ON FIRST READING, AND ORDERED PUBLISHED this 16TH day of July, 2024.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Meredyth Muth, City Clerk

APPROVED AS TO FORM:

_____
Kelly PC
City Attorney

PASSED AND ADOPTED ON SECOND AND FINAL READING, this 6th day of July, 2024.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Genny Kline, Interim City Clerk

EXHIBIT "A"

SHEET 1 OF 2

LOCATED IN THE SOUTHEAST QUARTER OF SECTION 12 AND THE SOUTHWEST QUARTER OF SECTION 7, TOWNSHIP 1 SOUTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF LOUISVILLE, COUNTY OF BOULDER, STATE OF COLORADO

VACATION OF A FIVE FOOT (5') WIDE EASEMENT FOR DRAINAGE PURPOSES UPON, OVER AND ACROSS LOTS 2 AND 3, BLOCK 1, AS SHOWN ON THE PLAT OF A REPLAT OF THE ENCLAVE AS DESCRIBED IN THE RECORDS OF BOULDER COUNTY AT REC. NO. 00898171, DATED JANUARY 14, 1988 BEING A PORTION OF THE SOUTHEAST QUARTER OF SECTION 12 AND THE SOUTHWEST QUARTER OF SECTION 7, TOWNSHIP 1 SOUTH, RANGE 70 WEST OF THE 6TH P.M., CITY OF LOUISVILLE, COUNTY OF BOULDER, STATE OF COLORADO, LYING TWO AND ONE HALF FEET (2.5') ON BOTH SIDES OF THE FOLLOWING DESCRIBED CENTERLINE:

THE COMMON LINE OF LOTS 2 & 3, AS DESCRIBED ON SAID PLAT.

SAID SIDELINES BEING SHORTENED AND LENGTHENED SO AS TO PREVENT GAPS OR OVERLAPS WITH THE PERIMETER BOUNDARY LINES OF SAID LOTS.

THE TOTAL AREA OF VACATED EASEMENT CONTAINS 1,057 SQUARE FEET, MORE OR LESS.

James Z. Gowan

Digitally signed by James Z. Gowan
DN: cn=James Z. Gowan, o=Flatirons, Inc., ou, email=zgowan@flatironsinc.com, c=US
Date: 2024.03.28 10:18:11 -06'00'

I, JAMES Z. GOWAN, A LAND SURVEYOR LICENSED IN THE STATE OF COLORADO, DO HEREBY STATE FOR AND ON BEHALF OF FLATIRONS, INC., THAT THIS PARCEL DESCRIPTION AND ATTACHED EXHIBIT, BEING MADE A PART THEREOF, WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, ARE ACCURATE TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, ARE IN ACCORDANCE WITH APPLICABLE STANDARDS OF PRACTICE AND ARE NOT A GUARANTY OR WARRANTY, EITHER EXPRESSED OR IMPLIED. SAID PARCEL DESCRIPTION AND EXHIBIT WERE PREPARED AT THE REQUEST OF THE CLIENT AND ARE NOT INTENDED TO REPRESENT A MONUMENTED LAND SURVEY OR SUBDIVIDE LAND IN VIOLATION OF STATE STATUTE.

COLORADO LICENSED JAMES Z. GOWAN 29038 PROFESSIONAL LAND SURVEYOR
3/28/24

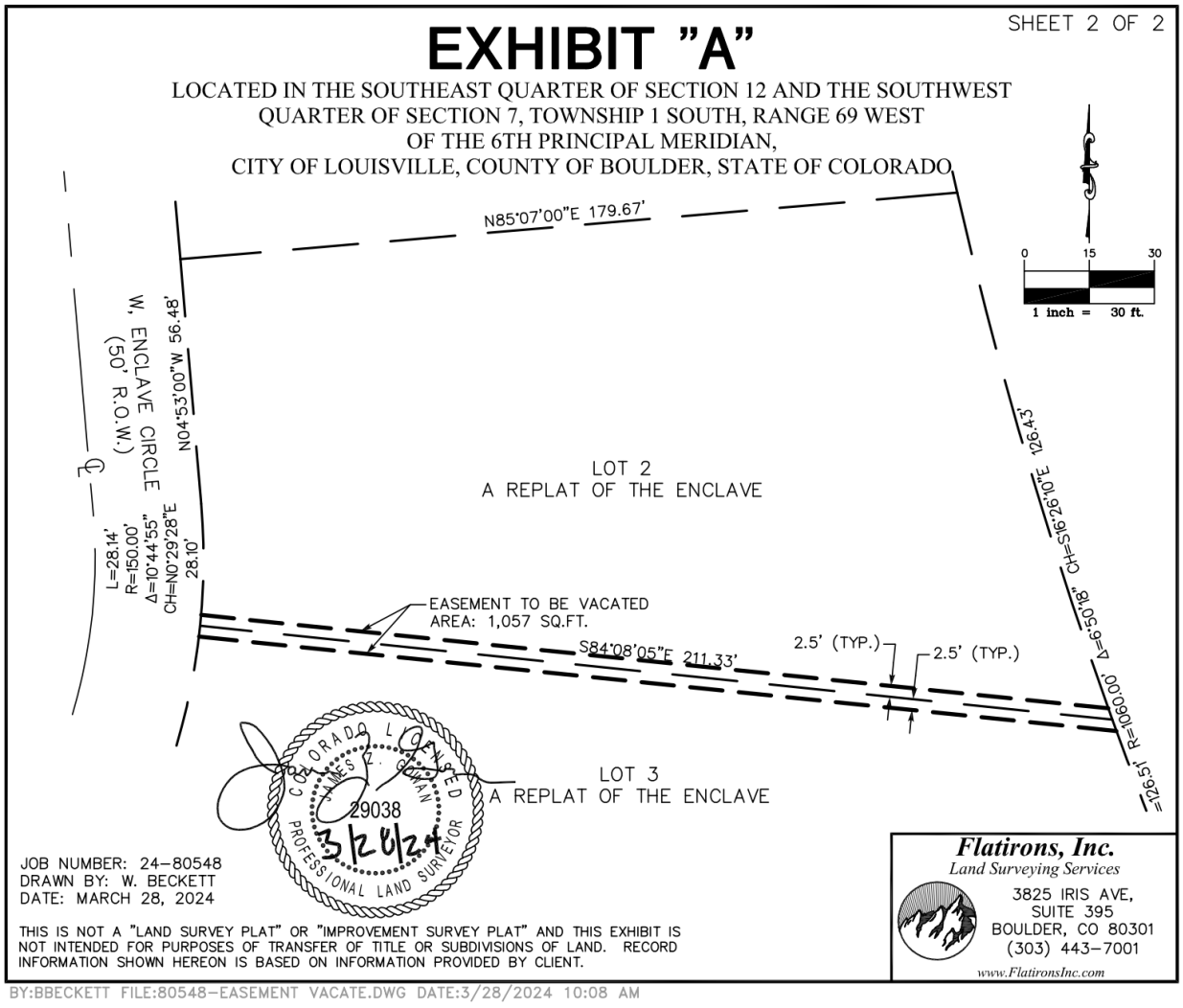
JAMES Z. GOWAN
COLORADO P.L.S. #29038
VICE PRESIDENT, FLATIRONS, INC.

JOB NUMBER: 24-80548
DRAWN BY: W. BECKETT
DATE: MARCH 28, 2024

THIS IS NOT A "LAND SURVEY PLAT" OR "IMPROVEMENT SURVEY PLAT" AND THIS EXHIBIT IS NOT INTENDED FOR PURPOSES OF TRANSFER OF TITLE OR SUBDIVISIONS OF LAND. RECORD INFORMATION SHOWN HEREON IS BASED ON INFORMATION PROVIDED BY CLIENT.

Flatirons, Inc.
Land Surveying Services
3825 IRIS AVE,
SUITE 395
BOULDER, CO 80301
(303) 443-7001
www.FlatironsInc.com

BY:BBECKETT FILE:80548-EASEMENT VACATE.DWG DATE:3/28/2024 8:50 AM


SHEET 2 OF 2
EXHIBIT "A"
LOCATED IN THE SOUTHEAST QUARTER OF SECTION 12 AND THE SOUTHWEST QUARTER OF SECTION 7, TOWNSHIP 1 SOUTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF LOUISVILLE, COUNTY OF BOULDER, STATE OF COLORADO
N85°07'00"E 179.67'
W. ENCLAVE CIRCLE (50' R.O.W.)
N04°53'00"W 56.48'
L=28.14'
R=150.00'
Δ=10°44'55"
CH=N0°29'28"E
28.10'
LOT 2
A REPLAT OF THE ENCLAVE
EASEMENT TO BE VACATED
AREA: 1,057 SQ.FT.
S84°08'05"E 211.33'
2.5' (TYP.)
2.5' (TYP.)
129.47'
CH=S16°26'10"E
Δ=6°50'18"
R=1080.00'
215.92'
LOT 3
A REPLAT OF THE ENCLAVE
COLORADO
JAMES C. GOWAN
29038
PROFESSIONAL LAND SURVEYOR
3/28/24
0
15
30
1 inch = 30 ft.
JOB NUMBER: 24-80548
DRAWN BY: W. BECKETT
DATE: MARCH 28, 2024
THIS IS NOT A "LAND SURVEY PLAT" OR "IMPROVEMENT SURVEY PLAT" AND THIS EXHIBIT IS NOT INTENDED FOR PURPOSES OF TRANSFER OF TITLE OR SUBDIVISIONS OF LAND. RECORD INFORMATION SHOWN HEREON IS BASED ON INFORMATION PROVIDED BY CLIENT.
Flatirons, Inc.
Land Surveying Services
3825 IRIS AVE,
SUITE 395
BOULDER, CO 80301
(303) 443-7001
www.FlatironsInc.com
BY:BBECKETT FILE:80548-EASEMENT VACATE.DWG DATE:3/28/2024 10:08 AM

THIRD REPLAT OF THE ENCLAVE

A REPLAT OF LOTS 2 AND 3, BLOCK 1

LOCATED IN THE SOUTHEAST QUARTER OF SECTION 12,
TOWNSHIP 1 SOUTH, RANGE 70 WEST OF THE 6TH P.M.,
CITY OF LOUISVILLE, COUNTY OF BOULDER, STATE OF COLORADO

SHEET 1 OF 1

Certificate of Dedication and Ownership

KNOW ALL PERSONS BY THESE PRESENTS, THAT THE UNDERSIGNED BEING THE OWNERS OF LOTS 2 AND 3, BLOCK 1, A REPLAT OF THE ENCLAVE, AS DESCRIBED IN THE RECORDS OF BOULDER COUNTY, RECORDED ON JANUARY 14, 1988 UNDER REC. NO. 00898171, LOCATED IN THE SOUTHEAST QUARTER OF SECTION 12, TOWNSHIP 1 SOUTH, RANGE 70 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF LOUISVILLE, COUNTY OF BOULDER, STATE OF COLORADO, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

CONSIDERING THE SOUTHWESTERLY LINE OF LOT 3, BLOCK 1, A REPLAT OF THE ENCLAVE, TO BEAR NORTH 55°58'52" WEST, A DISTANCE OF 315.41 FEET BETWEEN A FOUND #5 REBAR AT THE SOUTHERN MOST CORNER OF SAID LOT 3 AND A FOUND CHISELED CROSS IN CONCRETE SIDEWALK AT A 3 FOOT OFFSET TO THE WESTERN MOST CORNER OF SAID LOT 3 AS SHOWN HEREON, WITH ALL BEARINGS CONTAINED HEREIN BEING RELATIVE THERETO.

BEGINNING AT THE SOUTHERN MOST CORNER OF SAID LOT 3, THENCE NORTH 55°58'52" WEST, ALONG THE SOUTHWESTERLY LINE OF SAID LOT 3, A DISTANCE OF 315.41 FEET TO THE WESTERN MOST CORNER OF SAID LOT 3 AND TO A POINT OF NON-TANGENT CURVATURE; THENCE ALONG THE WEST LINE OF SAID LOT 3 AND THE WEST LINE OF LOT 2, BLOCK 1, A REPLAT OF THE ENCLAVE, THE FOLLOWING TWO (2) COURSES:
1. 101.63 FEET ALONG THE ARC OF A NON-TANGENT CURVE TO THE LEFT HAVING A RADIUS OF 150.00 FFET, AN INCLUDED ANGLE OF 38°49'11" AND SUBTENDED BY A CHORD BEARING NORTH 14°29'33" EAST, A DISTANCE OF 99.70 FEET;
2. THENCE NORTH 04°55'02" WEST, A DISTANCE OF 56.48 FEET TO THE NORTHWEST CORNER OF SAID LOT 2;
THENCE NORTH 85°11'15" EAST, ALONG THE NORTH LINE OF SAID LOT 2, A DISTANCE OF 180.03 FEET TO THE NORTHEAST CORNER OF SAID LOT 2 AND A POINT OF NON-TANGENT CURVATURE; THENCE 332.80 FEET ALONG THE ARC OF A NON-TANGENT CURVE TO THE LEFT, SAID ARC BEING ALONG THE EAST LINES OF SAID LOT 2 AND SAID LOT 3, HAVING A RADIUS OF 1060.00 FEET, AN INCLUDED ANGLE OF 17°59'20" AND SUBTENDED BY A CHORD BEARING SOUTH 22°00'44" EAST, A DISTANCE OF 331.44 FEET TO THE EASTERN MOST CORNER OF SAID LOT 3; THENCE SOUTH 59°06'51" WEST, ALONG THE SOUTHEASTERLY LINE OF SAID LOT 3, A DISTANCE OF 72.18 FEET, MORE OR LESS, TO THE POINT OF BEGINNING.

CONTAINING 60,469 SQ. FT. OR 1.39 ACRES, MORE OR LESS.

HAS LAID OUT AND PLATTED SAID LAND AS PER DRAWING HEREON CONTAINED UNDER THE NAME AND STYLE OF THIRD REPLAT OF THE ENCLAVE, A REPLAT OF LOTS 2 AND 3, BLOCK 1, A PART OF THE CITY OF LOUISVILLE, COUNTY OF BOULDER, STATE OF COLORADO, AND BY THESE PRESENTS DO HEREBY DEDICATE TO THE CITY OF LOUISVILLE, COLORADO THOSE PORTIONS OF SAID REAL PROPERTY WHICH ARE DESIGNATED AS EXCLUSIVE UTILITY EASEMENTS AND ALSO DEDICATE TO THE CITY OF LOUISVILLE, COLORADO, AND ALL MUNICIPALLY OWNED AND/OR FRANCHISED UTILITIES AND SERVICES THOSE PORTIONS OF SAID REAL PROPERTY WHICH ARE DESIGNATED AS UTILITY EASEMENTS FOR THE CONSTRUCTION, INSTALLATION, OPERATION, MAINTENANCE, REPAIR AND REPLACEMENT FOR ALL SERVICES, INCLUDING WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, TELEPHONE AND ELECTRIC LINES, WORKS, POLES AND UNDERGROUND CABLES, GAS PIPELINES, WATER PIPELINES, SANITARY SEWER LINES, STREET LIGHTS, CULVERTS, HYDRANTS, DRAINAGE DITCHES AND DRAINS AND ALL APPURTENANCES THERETO, IT BEING EXPRESSLY UNDERSTOOD AND AGREED BY THE UNDERSIGNED THAT ALL EXPENSES AND COSTS INVOLVED IN CONSTRUCTING AND INSTALLING WATER AND SANITARY SEWER SYSTEM WORKS AND LINES, GAS SERVICE LINES, ELECTRICAL SERVICE WORKS AND LINES, STORM SEWERS AND DRAINS, STREET LIGHTING, GRADING AND LANDSCAPING, CURBS, GUTTERS, STREET PAVEMENT, SIDEWALKS AND OTHER SUCH UTILITIES AND SERVICES SHALL BE GUARANTEED AND PAID FOR BY THE PROPERTY OWNERS OR ARRANGEMENTS MADE BY THE BY THE PROPERTY OWNERS THEREOF WHICH ARE APPROVED BY THE CITY OF LOUISVILLE, COLORADO, AND SUCH SUMS SHALL NOT BE PAID BY THE CITY OF LOUISVILLE, COLORADO, AND THAT ANY ITEM SO CONSTRUCTED OR INSTALLED WHEN ACCEPTED BY THE CITY OF LOUISVILLE, COLORADO, SHALL BECOME THE SOLE PROPERTY OF SAID CITY OF LOUISVILLE, COLORADO, EXCEPT ITEMS OWNED BY MUNICIPALLY FRANCHISED UTILITIES AND/OR CENTURY LINK AND PRIVATE ROADWAY CURBS, GUTTER AND PAVEMENT, WHICH, WHEN CONSTRUCTED OR INSTALLED, SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL NOT BECOME THE PROPERTY OF THE CITY OF LOUISVILLE, COLORADO.

Ownership Signature Block

WITNESS MY/OUR HAND(S) AND SEAL(S) THIS _____ DAY OF

_____, 20___.

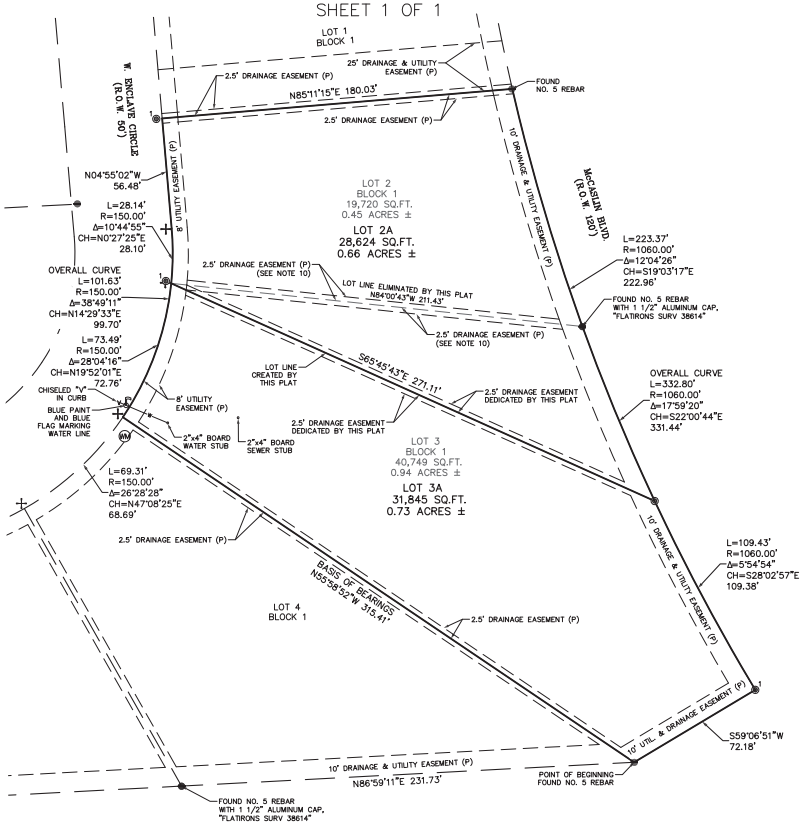
LOT 2 & LOT 3

_____ _____
THOMAS J. GREANY KATHRYN J. GREANY

Boundary Closure Report

Course: S55°58'52"E Length: 315.41'
Course: N59°06'51"E Length: 72.18'
Curve: Length: 109.43' Radius: 1060.00'
Delta: 005°54'54" Tangent: 54.77'
Chord: 109.38' Course: N28°02'57"W
Curve: Length: 223.37' Radius: 1060.00'
Delta: 012°04'26" Tangent: 112.10'
Chord: 222.96' Course: N19°03'17"W
Course: S85°11'15"W Length: 179.67'
Course: S04°55'02"E Length: 56.48'
Curve: Length: 28.14' Radius: 150.00'
Delta: 010°44'55" Tangent: 14.11'
Chord: 28.10' Course: S00°27'25"W
Curve: Length: 73.49' Radius: 150.00'
Delta: 028°04'16" Tangent: 37.50'
Chord: 72.76' Course: S19°52'01"W

Perimeter: 1058.17' Area: 60469.05 Sq. Ft.
Error Closure: 0.00 Course: S60°51'20"E
Error North: -0.002 East: 0.003



Planning Commission Certificate

RECOMMENDED APPROVAL THIS _____ DAY OF _____, 20___

BY THE PLANNING COMMISSION OF THE CITY OF LOUISVILLE, COLORADO.

RESOLUTION NO. _____, SERIES _____.

_____ _____
CHAIRMAN SECRETARY

City Council Certificate

APPROVED THIS _____ DAY OF _____, 20_____ BY THE

CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO.

RESOLUTION NO. _____, SERIES _____.

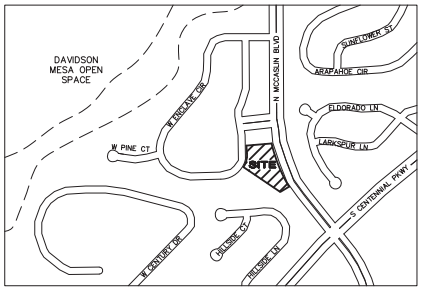
(CITY SEAL)

_____
MAYOR SIGNATURE

_____
CITY CLERK SIGNATURE

GRAPHIC SCALE

30 0 15 30 60
(IN FEET)
1 inch = 30 ft.



Vicinity Map

NOT TO SCALE

Notes

1. CAPITAL TITLE COMMITMENT NUMBER 665295—AMENDMENT NO. C2, DATED NOVEMBER 10, 2022 AT 8:00 A.M. (LOT 3); STEWART TITLE GUARANTY COMPANY COMMITMENT NUMBER 84939ECS, DATED MAY 18, 2021 AT 7:30 A.M. (LOT 2); WERE ENTIRELY RELIED UPON FOR RECORDED INFORMATION REGARDING RIGHTS-OF-WAY, EASEMENTS AND ENCUMBRANCES IN THE PREPARATION OF THIS SURVEY. THE PROPERTIES SHOWN AND DESCRIBED HEREON ARE ALL OF THE PROPERTIES DESCRIBED IN SAID TITLE COMMITMENTS.
2. ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE CERTIFICATION SHOWN HEREON.
3. THIS SURVEY IS VALID ONLY IF PRINT HAS SEAL AND SIGNATURE OF SURVEYOR.
4. BASIS OF BEARINGS: GPS DERIVED BEARINGS BASED ON A BEARING OF NORTH 55°58'52" WEST BETWEEN A FOUND #5 REBAR AT THE SOUTHERN MOST CORNER OF LOT 3, BLOCK 1, A REPLAT OF THE ENCLAVE AND A FOUND 3 FOOT OFFSET CHISELED CROSS IN CONCRETE SIDEWALK AT THE WESTERN MOST CORNER OF SAID LOT 3 AS SHOWN HEREON COLORADO STATE PLANE COORDINATE SYSTEM, NORTH ZONE (0501), NORTH AMERICAN DATUM 1983 (NAD83). ALL BEARINGS SHOWN HEREON ARE RELATIVE THERETO.
5. ANY PERSON WHO KNOWINGLY REMOVES, ALTERS OR DEFACES ANY PUBLIC LAND SURVEY MONUMENT AND/OR BOUNDARY MONUMENT OR ACCESSORY, COMMITS A CLASS TWO (2) MISDEMEANOR PURSUANT TO STATE STATUTE C.R.S. SEC 18-4-508.
6. THE DISTANCE MEASUREMENTS SHOWN HEREON ARE U.S. SURVEY FOOT.
7. DATES OF FIELDWORK: OCTOBER 16, 2023
8. THE WORD "CERTIFY" AS SHOWN AND USED HEREON MEANS AN EXPRESSION OF PROFESSIONAL OPINION REGARDING THE FACTS OF THIS SURVEY AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE, EXPRESSED OR IMPLIED.
9. EXCLUSIVE CITY UTILITY EASEMENTS ARE RESERVED FOR CITY OF LOUISVILLE EXCLUSIVE USE FOR CITY WATER, SANITARY SEWER AND STORM SEWER FACILITIES. DRY UTILITIES COMPANIES AND/OR PRIVATE OWNERS OF STORM DRAINAGE AND IRRIGATION LINES MUST OBTAIN PRIOR WRITTEN APPROVAL FROM THE CITY FOR ANY PROPOSED CROSSINGS OF ANY CITY WET UTILITY EASEMENTS AND MUST EXECUTE AN AGREEMENT WHICH STIPULATES THE DRY UTILITIES, STORM DRAINAGE, AND/OR IRRIGATION LINE APPROVED TO CROSS CITY EASEMENTS ARE SUBJECT TO RELOCATION AT THE COMPANY'S OR OWNERS' EXPENSE AT THE DIRECTION OF THE CITY. DRY UTILITIES, STORM DRAINAGE, AND/OR IRRIGATION LINES THAT ARE APPROVED TO CROSS CITY EASEMENTS SHALL DO SO AT SUBSTANTIALLY RIGHT ANGLES. WET UTILITIES SHALL TRAVERSE DRY UTILITY EASEMENTS WITHOUT REQUIREMENT FOR FURTHER PERMISSION. NO JOINT USE OF ANY CITY EXCLUSIVE UTILITY EASEMENTS IS PERMITTED WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE CITY AND EXECUTION OF A JOINT USE AGREEMENT, WHICH SHALL BE AT THE CITY'S DISCRETION.
10. THE ORIGINAL DRAINAGE EASEMENTS ASSOCIATED WITH ELIMINATED LOT LINES ARE VACATED BY SEPARATE DOCUMENT RECEPTION NUMBER _____.
11. BOUNDARY INFORMATION SHOWN HEREON PER LAND SURVEY PLATS PREPARED BY FLATIRONS INC., JOB NO. 22-78,405 DATED MARCH 22, 2022 DEPOSITED WITH BOULDER COUNTY LAND USE DEPARTMENT AS LS-22-0856 AND JOB NO. 22-78,289 DATED JULY 13, 2022 DEPOSITED WITH BOULDER COUNTY LAND USE DEPARTMENT AS LS-22-0720.
12. MODIFICATION APPROVED BY CITY COUNCIL RESOLUTION_____, SERIES_____: A MODIFICATION TO ALLOW A LOT DEPTH GREATER THAN 2.5 TIMES THE LOT WIDTH WHERE A MAXIMUM 2.5 LOT DEPTH IS REQUIRED BY LOUISVILLE MUNICIPAL CODE SECTION 16.16.050 C.

Legend

- + FOUND 3" OFFSET CHISELED CROSS
- ● FOUND MONUMENT AS DESCRIBED
- ◉ SET 18" #5 REBAR WITH 1 1/2" ALUMINUM CAP "FLATIRONS SURV 29038"
- ◉' SET 1" BRASS TAG "FLATSURV LS29038"
- (P) AS PER THE PLAT OF "A REPLAT OF THE ENCLAVE" DATED JANUARY 14, 1988 UNDER REC. NO. 00898171

Surveyor's Certificate

I, JAMES Z. GOWAN, A LAND SURVEYOR LICENSED IN THE STATE OF COLORADO, HEREBY CERTIFY FOR AND ON BEHALF OF FLATIRONS, INC., THAT A SURVEY OF LOTS 2 AND 3, BLOCK 1, A REPLAT OF THE ENCLAVE, WAS CONDUCTED BY ME OR UNDER MY RESPONSIBLE CHARGE ON APRIL 4, 2024; THAT THE ACCOMPANYING PLAT ACCURATELY AND PROPERLY SHOWS SAID SUBDIVISION AND THE SURVEY THEREOF.

James Z. Gowan

JAMES Z. GOWAN COLORADO P.L.S. #29038
VICE PRESIDENT, FLATIRONS, INC.

DATE	REVISION
4-04-2024	1 - CITY REDLINES

THIRD REPLAT OF THE ENCLAVE
A REPLAT OF LOTS 2 AND 3, BLOCK 1

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Flatirons, Inc.
Land Surveying Services
www.Flatironsinc.com
3825 IRIS AVE, #268
BOULDER, CO 80301
(303) 443-7001
700 N. BROADWAY, STE. 340
DENVER, CO 80221
(303) 936-6997
LONGMONT, CO 80501
(303) 776-1733

COLORADO
JAMES Z. GOWAN
29038
4/4/24
PROFESSIONAL LAND SURVEYOR

JOB NUMBER:	23-80,548
DATE:	12-01-2023
DRAWN BY:	R. SLAGLE
CHECKED BY:	JZG, JJK, SB, TDH

SHEET 1 OF 1

EXHIBIT "A"

LOCATED IN THE SOUTHEAST QUARTER OF SECTION 12 AND THE SOUTHWEST QUARTER OF SECTION 7, TOWNSHIP 1 SOUTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF LOUISVILLE, COUNTY OF BOULDER, STATE OF COLORADO

VACATION OF A FIVE FOOT (5') WIDE EASEMENT FOR DRAINAGE PURPOSES UPON, OVER AND ACROSS LOTS 2 AND 3, BLOCK 1, AS SHOWN ON THE PLAT OF A REPLAT OF THE ENCLAVE AS DESCRIBED IN THE RECORDS OF BOULDER COUNTY AT REC. NO. 00898171, DATED JANUARY 14, 1988 BEING A PORTION OF THE SOUTHEAST QUARTER OF SECTION 12 AND THE SOUTHWEST QUARTER OF SECTION 7, TOWNSHIP 1 SOUTH, RANGE 70 WEST OF THE 6TH P.M., CITY OF LOUISVILLE, COUNTY OF BOULDER, STATE OF COLORADO, LYING TWO AND ONE HALF FEET (2.5') ON BOTH SIDES OF THE FOLLOWING DESCRIBED CENTERLINE:

THE COMMON LINE OF LOTS 2 & 3, AS DESCRIBED ON SAID PLAT.

SAID SIDELINES BEING SHORTENED AND LENGTHENED SO AS TO PREVENT GAPS OR OVERLAPS WITH THE PERIMETER BOUNDARY LINES OF SAID LOTS.

THE TOTAL AREA OF VACATED EASEMENT CONTAINS 1,057 SQUARE FEET, MORE OR LESS.

James Z. Gowan

Digitally signed by James Z. Gowan
DN: cn=James Z. Gowan, o=Flatirons, Inc., ou, email=zgowan@flatironsinc.com, c=US
Date: 2024.03.28 10:18:11 -06'00'

I, JAMES Z. GOWAN, A LAND SURVEYOR LICENSED IN THE STATE OF COLORADO, DO HEREBY STATE FOR AND ON BEHALF OF FLATIRONS, INC., THAT THIS PARCEL DESCRIPTION AND ATTACHED EXHIBIT, BEING MADE A PART THEREOF, WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, ARE ACCURATE TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, ARE IN ACCORDANCE WITH APPLICABLE STANDARDS OF PRACTICE AND ARE NOT A GUARANTY OR WARRANTY, EITHER EXPRESSED OR IMPLIED. SAID PARCEL DESCRIPTION AND EXHIBIT WERE PREPARED AT THE REQUEST OF THE CLIENT AND ARE NOT INTENDED TO REPRESENT A MONUMENTED LAND SURVEY OR SUBDIVIDE LAND IN VIOLATION OF STATE STATUTE.

COLORADO LICENSED JAMES Z. GOWAN 29038 PROFESSIONAL LAND SURVEYOR 3/28/24

JAMES Z. GOWAN
COLORADO P.L.S. #29038
VICE PRESIDENT, FLATIRONS, INC.

JOB NUMBER: 24-80548
DRAWN BY: W. BECKETT
DATE: MARCH 28, 2024

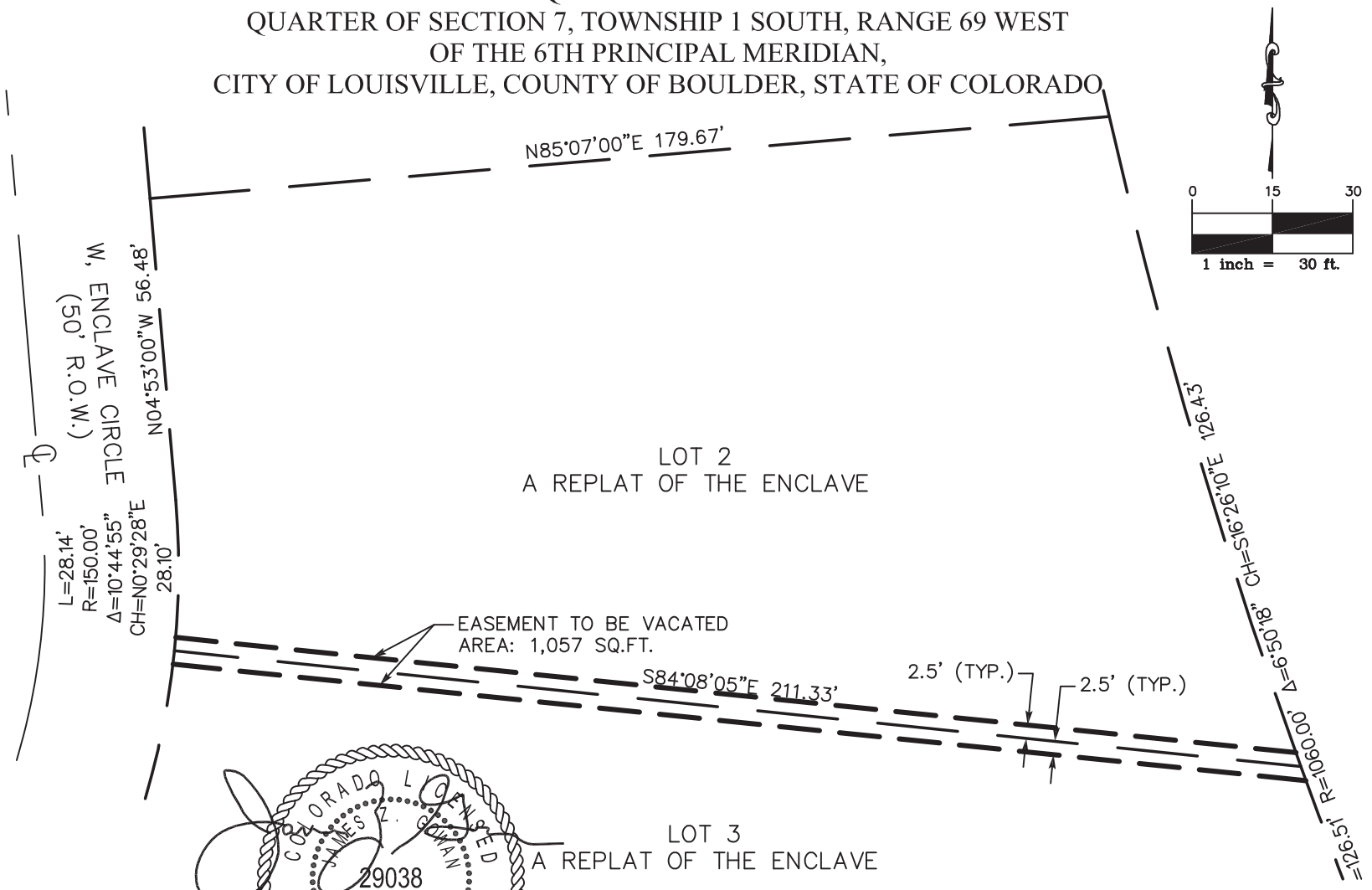
THIS IS NOT A "LAND SURVEY PLAT" OR "IMPROVEMENT SURVEY PLAT" AND THIS EXHIBIT IS NOT INTENDED FOR PURPOSES OF TRANSFER OF TITLE OR SUBDIVISIONS OF LAND. RECORD INFORMATION SHOWN HEREON IS BASED ON INFORMATION PROVIDED BY CLIENT.

Flatirons, Inc.
Land Surveying Services
3825 IRIS AVE,
SUITE 395
BOULDER, CO 80301
(303) 443-7001
www.FlatironsInc.com

BY:BBECKETT FILE:80548-EASEMENT VACATE.DWG DATE:3/28/2024 8:50 AM

EXHIBIT "A"

LOCATED IN THE SOUTHEAST QUARTER OF SECTION 12 AND THE SOUTHWEST QUARTER OF SECTION 7, TOWNSHIP 1 SOUTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF LOUISVILLE, COUNTY OF BOULDER, STATE OF COLORADO



COLORADO LICENSED JAMES Z. GOWAN 29038 PROFESSIONAL LAND SURVEYOR 3/28/24

JOB NUMBER: 24-80548
DRAWN BY: W. BECKETT
DATE: MARCH 28, 2024

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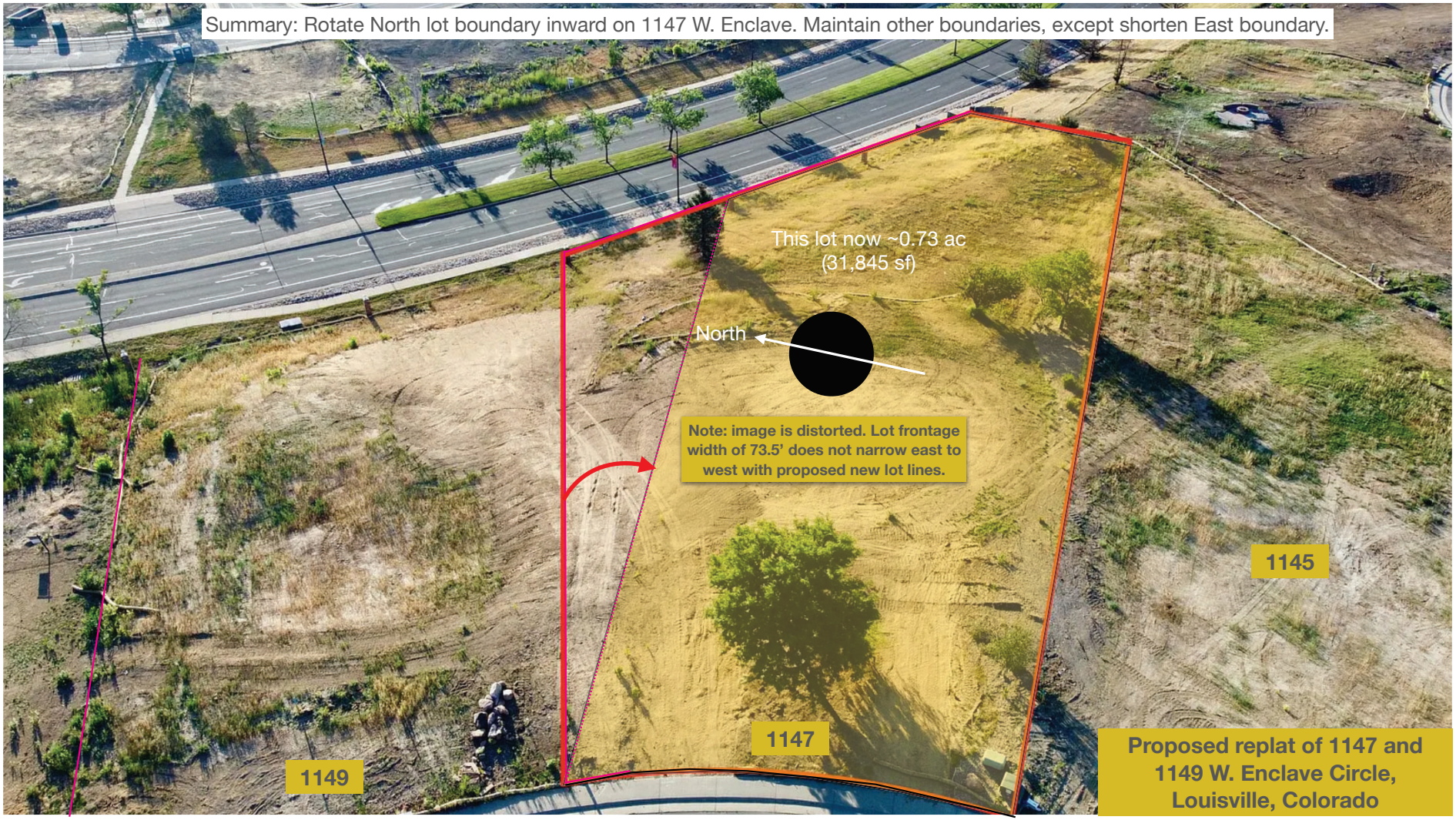
www.FlatironsInc.com

BY:BBECKETT FILE:80548-EASEMENT VACATE.DWG DATE:3/28/2024 10:08 AM


Summary: Rotate North lot boundary inward on 1147 W. Enclave. Maintain other boundaries, except shorten East boundary.
This lot now ~0.73 ac
(31,845 sf)
North
Note: image is distorted. Lot frontage width of 73.5' does not narrow east to west with proposed new lot lines.
1145
1147
1149
Proposed replat of 1147 and 1149 W. Enclave Circle, Louisville, Colorado

Narrative:

The purposes of the proposed re-plat of 1149 W. Enclave Circle and 1147 W. Enclave Circle, Louisville, Colorado 80027 are to accomplish the following goals:

1. Allow the new home on 1149 W. Enclave (post-Marshall Fire) to be rotated 20-25º toward the southeast to improve its solar potential. This has already been done, and the building permit was granted with this new placement. The home is completed and a Certificate of Occupancy was granted by the City of Louisville on 15 DEC 2023.

2. Regrade 1147 W. Enclave to eliminate a a prior drainage problem that had resulted in flood damage to 1149 W. Enclave Circle after the 2013 Flood, which was mitigated via structural engineers paid by the homeowners and for which a permit was obtained from the City of Louisville. This regrading has already been done and the final regrade has been approved by the City of Louisville.

3. Allow the new home at 1149 W. Enclave circle to be built with full daylight basement to remove expansive soils from against its south foundation. This required retaining walls to be constructed at 1149 W. Enclave that cross the existing property line between 1147 and 1149. This was approved by the City of Louisville and constructed according to the permit with follow-up inspection approved.

4. The existing property line between 1147 and 1149 West Enclave Circle must now be rotated to the southeast around the surveyed west end of their common lot boundary. This proposed new property line and the resulting lot boundaries are as shown on the survey document titled, “Third Replat of the Enclave: a Replat of Lots 2 and 3, Block 1,” submitted with this application.

5. Note that no new access points are being created, the general shape of both lots is being retained, the west boundary of both lots at West Enclave Circle are unchanged, and 1147 will remain an independent salable, buildable lot with existing utilities in place (water, sewer, natural gas, electrical and data). Following completion of the proposed replat, Lot 2 will become 0.66 acre and lot 3 will become 0.73 acre, both within the size limitations of the existing P.U.D. promulgated by the City of Louisville. Furthermore, note that some published surveys of 1147 W. Enclave show that lot to exceed the P.U.D. lot size limit of 0.94 acre (it is shown on multiple published documents as a 0.96 acre lot).

Detailed Summary of replat plan:

No change to W. Enclave Circle Frontage for either of the involved lots

No new access created to either of the involved lots.

South boundary of 1149 W. Enclave to be rotated to South as shown

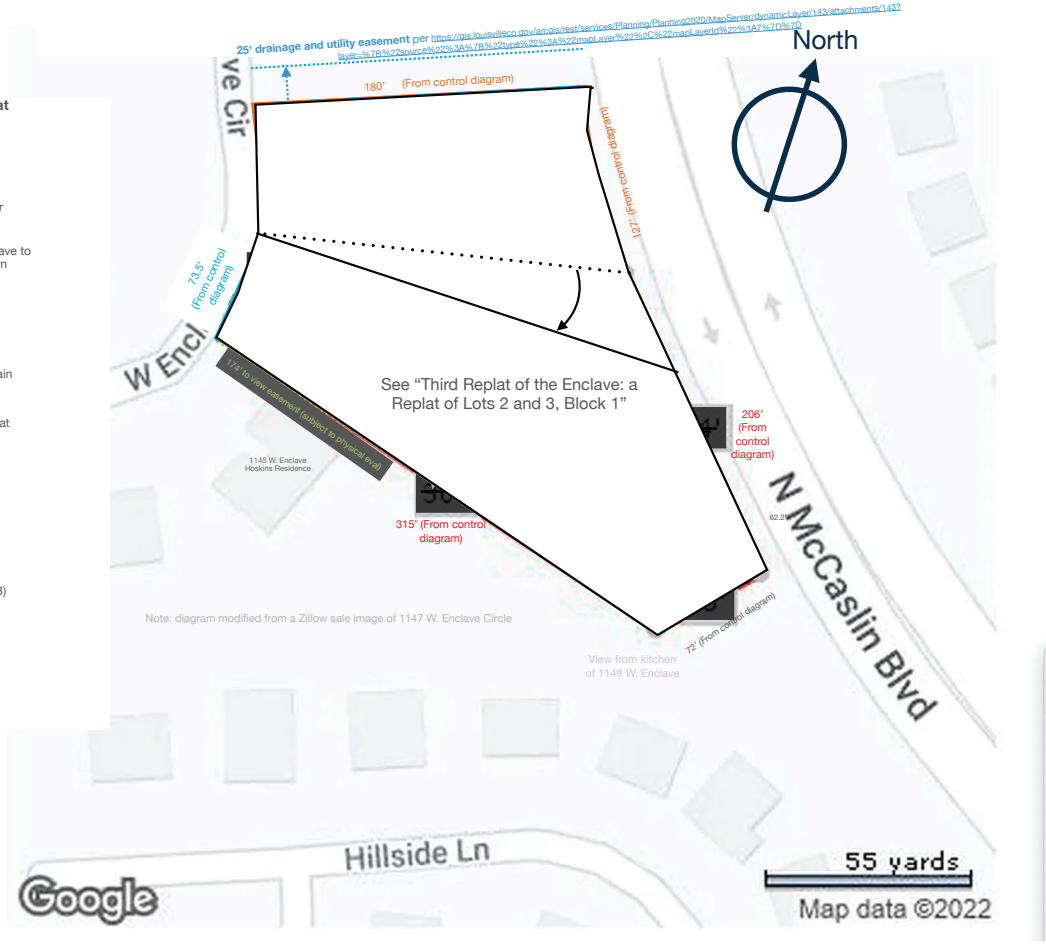
East boundary of 1147 W. Would be preserved though shorter by moving in the North lot line.

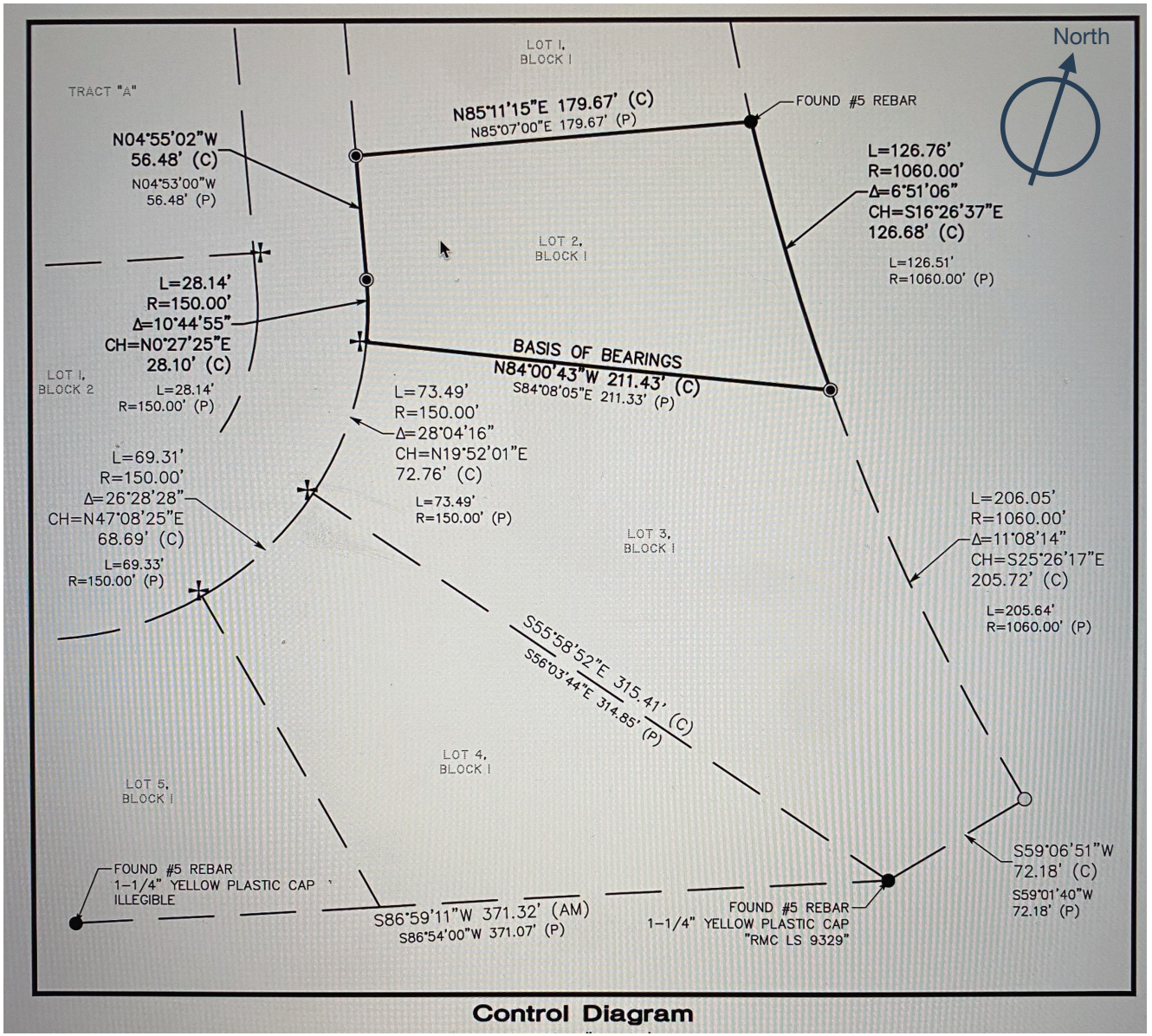
Other boundaries of 1147 to remain

New homes are already in place at 1145 and 1149 W. Enclave

Owners of 1149 also own 1147.
1147 is currently 0.94-.96 acre
1149 is currently 0.45-.47 acre
(Depending on source)

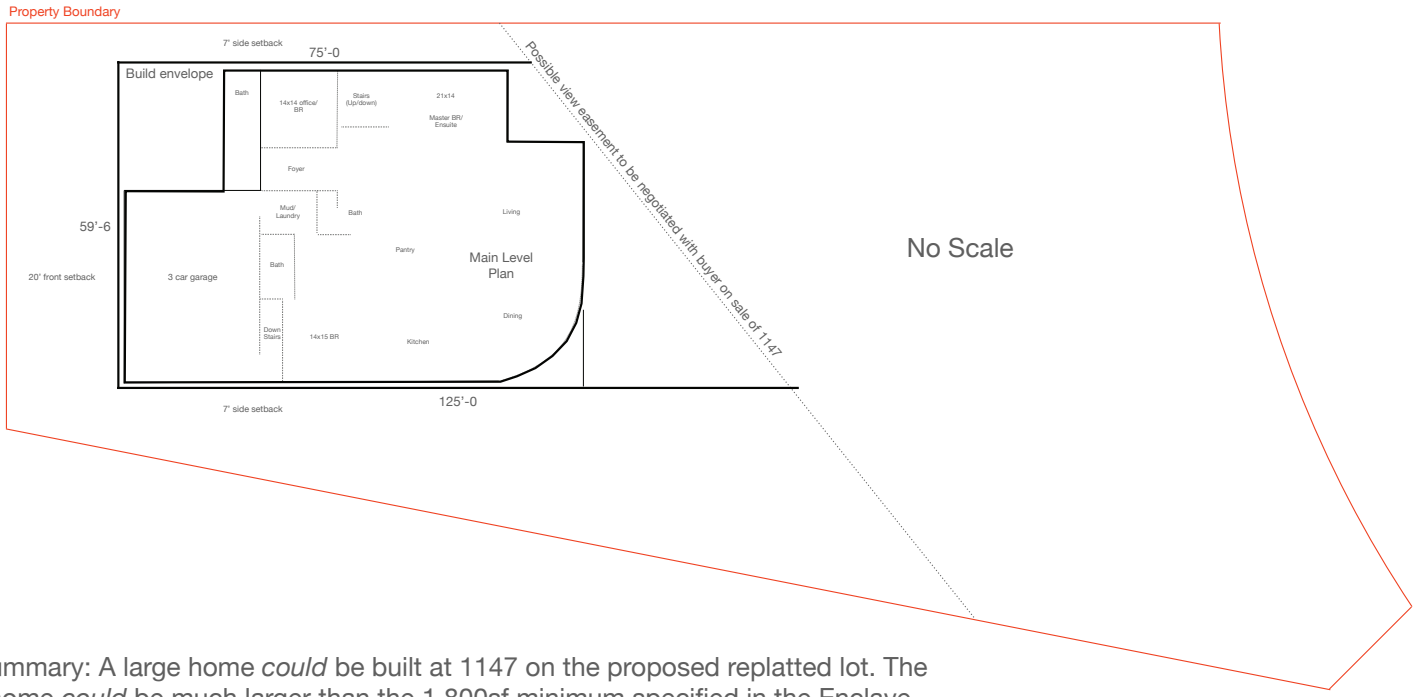
1147 will become ~0.73 acre
1149 will become ~0.66 acre
(Based on new survey NOV2023)





Control Diagram

1147 W. Enclave Build Envelope, Proposed
Nominally shown 60’ x 84’



Summary: A large home *could* be built at 1147 on the proposed replatted lot. The home *could* be much larger than the 1,800sf minimum specified in the Enclave Architectural Control Committee initial charter (which has long since been dissolved).

SUBJECT: **ORDINANCE NO. 1880, SERIES 2024 – AN ORDINANCE REPEALING SECTION 13.12.105 TO ELIMINATE A WATER USE REBATE PROGRAM – 2nd READING – PUBLIC HEARING (advertised *Daily Camera* 7/21/24)**

DATE: **AUGUST 6, 2024**

PRESENTED BY: **RYDER BAILEY, CPA, FINANCE DIRECTOR**

SUMMARY:
Staff is requesting City Council approval of consolidating two existing City utility assistance programs by expanding Sister Carmen's, a well-respected local Non-Profit since 1978, existing Utility Assistance program, and by eliminating the City Administered Annual Senior Water Rebate Program.

These programmatic updates were presented and supported by Finance Committee at their June 20th meeting.

BACKGROUND:
In 2007, City Council, by Resolution 1515, adopted the Annual Senior Water Rebate Program for Louisville residents over the age of 65 and a household income of less than $25,000. The Annual Rebate amount ($100) and the maximum household income have not been modified since 2007. City Staff administering the program has seen recent participation at an all-time low.

An update to the City's Water Utility Assistance program was initially presented at the May 16 Finance Committee meeting. At that meeting, City Staff who administer the Annual Senior Water Rebate Program proposed adjusting the annual rebate amount and maximum household income to adjust for inflation since 2007. Calculated using a Regional CPI from the Bureau of Labor Statistics (BLS), this would increase the annual rebate amount from $100 to $150, and also increase the maximum household income from $25,000 to $40,000. This level is approximately 30-35% of Boulder County Area Medium Income per Housing and Urban Development (HUD). Staff also proposed lowering the age eligibility criteria from 65 to 60, to better align with our City Senior offerings.

Based upon feedback from the Finance Committee at their May 16th meeting, the Committee requested options to assist Louisville households in need, regardless of age. Staff returned and presented the recommended option at the June 20 Finance Committee meeting. The Committee recommended option would consolidate the two existing utility assistance programs by expanding Sister Carmen's, a well-respected

local Non-Profit since 1978, existing Utility Assistance program, and by eliminating the City Administered Annual Senior Water Rebate Program.

The City of Louisville currently partners with Sister Carmen for Utility Assistance through the City's Non-Profit Grant Program. A portion of the City's annual funding awarded to Sister Carmen (roughly a third) at $5,000, is earmarked for the Utility Assistance Program. These funds are distributed to Louisville residents based on need, there are no age or income requirements. Sister Carmen staff have mentioned to the fill the gap in need it would require approximately an additional $5,000 - $10,000 in funding support.

Staff met with Sister Carmen staff on May 22nd to discuss the Sister Carmen administered Utility Assistance Program. Discussion around potentially expanding the program was well received, especially with recent utility rate increases. Sister Carmen administers their Utility Assistance program year-round, provides assistance based on need, not age. During the meeting, Sister Carmen staff noted the following;

- 73% of Louisville Heads of Households who received Utility Assistance the past two years were under 60 years of age.
- 91% of All Households assisted by Sister Carmen were at or below 30% of Area Medium Income.
- The amount of water utility assistance ranged between $200 and $400 per instance.

By expanding Sister Carmen's current no age restriction, need based, Utility Assistance Program, the following would be accomplished;

- The Assistance Program would be based on need, not age or household income.
- The Assistance Program would be available year-round.
- Sister Carmen would be able to connect persons in need to other available resources.
- Sister Carmen would be able to assist persons currently enrolled in the City's program.

FISCAL IMPACTS:
Staff is requesting an additional $5,000 in funding for a total of $10,000 in Sister Carmen Administered Utility Assistance Program funding available under Account 101121-538420- Contributions and Grants.

The net fiscal impact of consolidating the two existing programs and expanding Sister Carmen's existing no age restriction, need based Utility Assistance Program by providing additional assistance would result in an estimated cost increase of $3,800 to the City.

Additionally, there would be an immaterial amount of City administration savings, as Sister Carmen would administer this program as part of the City's current Non-Profit Grant assistance.

RECOMMENDATION:
Hold the public hearing and approve the ordinance on second reading.

ATTACHMENT:
1. Ordinance 1880, Series 2024

ORDINANCE NO. 1880
SERIES 2024

AN ORDINANCE REPEALING SECTION 13.12.105 TO ELIMINATE A WATER USE REBATE PROGRAM

WHEREAS, by Ordinance No 1515, Series 2007, the City Council recodified a "water rebate program" in Chapter 13.12 of the Louisville Municipal Code, known as the Annual Senior Water Rebate Program, and which Program has seen dwindling use over the years; and

WHEREAS, the City's Finance Committee has recommended that such Program be eliminated as a City rebate, to be replaced with donations from the City to a local non-profit that will administer assistance to those in need on a broader scale; and

WHEREAS, by this ordinance, the City Council desires to repeal Section 13.12.105 of the Louisville Municipal Code, making such funds available for such purpose.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

Section 1. Section 13.12.105 of the Louisville Municipal Code is hereby repealed.

Section 2. If any portion of this ordinance is held to be invalid for any reason, such decision shall not affect the validity of the remaining portions of this ordinance. The City Council hereby declares that it would have passed this ordinance and each part hereof irrespective of the fact that any one part be declared invalid.

Section 3. The repeal or modification of any provision of the Municipal Code of the City of Louisville by this ordinance shall not release, extinguish, alter, modify, or change in whole or in part any penalty, forfeiture, or liability, either civil or criminal, which shall have been incurred under such provision, and each provision shall be treated and held as still remaining in force for the purpose of sustaining any and all proper actions, suits, proceedings, and prosecutions for the enforcement of the penalty, forfeiture, or liability, as well as for the purpose of sustaining any judgment, decree, or order which can or may be rendered, entered, or made in such actions, suits, proceedings, or prosecutions.

Section 4. All other ordinances or portions thereof inconsistent or conflicting with this ordinance or any portion hereof are hereby repealed to the extent of such inconsistency or conflict.

INTRODUCED, READ, PASSED ON FIRST READING, AND ORDERED PUBLISHED this 16th day of July, 2024.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Meredyth Muth, City Clerk

APPROVED AS TO FORM:

_____
Kelly PC, City Attorney

PASSED AND ADOPTED ON SECOND AND FINAL READING, this 6th day of August, 2024.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Genny Kline, Interim City Clerk

Harper Lake

City of Louisville

Update to City Water Assistance Program

Kim Baker

August 6th, 2024

City of Louisville

Agenda

- Background
- Feedback from Finance Committee
- Sister Carmen Assistance Program
- Proposed Adjustment
- Recommendation

City of Louisville

Background of Existing Program

- In 2007, City Council Approved Resolution 1515 which established the $100 annual water use rebate program for Louisville residents over the age of 65, with a combined annual household income of less than $25,000.
- No adjustments to the rebate amount or household income has been made since 2007.
- Program is administered by Finance and Senior Center Staff.

Feedback from Finance Committee

- At the May 16th Finance Committee meeting, Staff was requested to return at a future Finance Committee meeting with an assistance program with no age eligibility restrictions.
- At the June 20th Finance Committee meeting, the recommended option would be to consolidate the two existing utility assistance programs by expanding Sister Carmen's, a well-respected local Non-Profit since 1978, existing Utility Assistance program, and eliminate the City Administered Annual Senior Water Rebate Program.

Sister Carmen

The City of Louisville currently funds Sister Carmen, a local non profit, $14,500 annually, by way of the City's Biennial Non-Profit Grant Program, of which, $5,000 is earmarked for Louisville residents water utility assistance.

Note: The City's Non-Profit Grant Program awards grantees funding every two years.

Sister Carmen Assistance Program

- The Assistance Program would be based on need, not age or household income.
- The Assistance Program would be available year-round.
- Sister Carmen would be able to connect persons to other available resources.

Proposed Adjustment

Consolidate Utility Assistance Programs;

- Expand Sister Carmen Program by increasing City provided funding assistance by $5,000 *(this would be subject to City Council approval of budgetary appropriations),* and;
- Eliminate the existing City Administered Annual Senior Water Rebate Program

Recommendation

- City Council has the final authority to approve the adjustments, if any, by modifying Ordinance No. 1515, Series 2007 in Summer 2024.
- City Council has the final authority to approve budgetary appropriations adjustments, if any.

Update to City Water Assistance Program

Thank you, any questions?

City of Louisville
COLORADO • SINCE 1878

CITY COUNCIL COMMUNICATION
AGENDA ITEM 10I

SUBJECT: **APPOINTMENT OF TWO COUNCILMEMBERS TO CONDUCT ANNUAL EVALUATIONS OF MUNICIPAL JUDGE AND PROSECUTING ATTORNEY**

DATE: **AUGUST 6, 2024**

PRESENTED BY: **MEREDYTH MUTH, INTERIM DEPUTY CITY MANAGER**

SUMMARY:
Each year the Council conducts an evaluation of those appointed officials who report directly to the Council. This includes the City Attorney, Prosecuting Attorney, and Municipal Judge. (The City Manager's evaluation is conducted separately.) Each of these officials is currently in the first year of a two-year contract.

The Council will need to choose two members who can evaluate the work of the prosecuting attorney and municipal judge. Court is in session the second Tuesday of each month; the two members will need to visit the municipal court during one of those sessions in August, September, or October to complete their evaluations.

The complete evaluation materials for all three positions will be brought to the Council for consideration in an executive session in October.

FISCAL IMPACT:
None

RECOMMENDATION:
Appoint two councilmembers to work on evaluations.

ATTACHMENT(S):
None

STRATEGIC PLAN IMPACT:

☐	**Financial Stewardship & Asset Management**	☒	**Reliable Core Services**
☐	**Vibrant Economic Climate**	☐	**Quality Programs & Amenities**
☐	**Engaged Community**	☐	**Healthy Workforce**
☐	**Supportive Technology**	☐	**Collaborative Regional Partner**