

If you would like to address City Council, please place your name on the sign-up sheet located at the back of the council room. You will be recognized to speak during the "audience participation" portion of the agenda.

## AGENDA

Regular Meeting

September 15, 2015 - 7:30 p.m.

City Council meeting packets are prepared several days prior to the meetings. This information is reviewed and studied by the Councilmembers, eliminating lengthy discussions to gain basic understanding. Timely action and short discussion on agenda items does not reflect lack of thought or analysis. An informational packet is available for public inspection on our website at [www.cityofevans.org](http://www.cityofevans.org) and posted immediately on the bulletin board adjacent to the Council Chambers.

1. CALL TO ORDER

2. PLEDGE

3. ROLL CALL

Mayor:	John Morris
Mayor Pro-Tem:	Jay Schaffer
Council:	Laura Brown
	Mark Clark
	Sherri Finn
	Lance Homann
	Brian Rudy

4. RECOGNITIONS

A. September Yard of the Month

5. AUDIENCE PARTICIPATION

*The City Council welcomes you here and thanks you for your time and concerns. If you wish to address the City Council, this is the time set on the agenda for you to do so. When you are recognized, please step to the podium, state your name and address then address City Council. Your comments will be limited to two (2) minutes. The City Council may not respond to your comments this evening, rather they may take your comments and suggestions under advisement and your questions may be directed to the appropriate staff person for follow-up. Thank you!*

6. APPROVAL OF AGENDA

7. CONSENT AGENDA

A. Approval of Minutes of the Regular Meeting of September 1, 2015

B. Ordinance No. 629-15 – Adoption of the Final Plat of IGO Subdivision (Weld County School District 6) – (2<sup>nd</sup> Reading)

8. OLD BUSINESS

- A. Approval of Impact Fee Study

9. NEW BUSINESS

- A. Ordinance No. 630-15 – Amending Title 2 and Title 15 of the Evans Municipal Code Regarding Emergency Response and Fire Protection
- B. Ordinance No. 631-15 – Amending Title 16 of the Evans Municipal Code Concerning Flood Damage Prevention
- C. Contract for Engineering Services with RockSol Consulting Group, Inc. for Permanent Repairs to Brantner Road, Industrial Parkway and 49<sup>th</sup> Street

10. REPORTS

- A. City Manager
- B. City Attorney

11. AUDIENCE PARTICIPATION (general comments)

*Please review the Audience Participation section listed at the beginning of the agenda for procedures on addressing City Council.*

12. ADJOURNMENT

**CITY OF EVANS – MISSION STATEMENT**

**“To deliver sustainable, citizen-driven services for the health, safety, and welfare of the community.”**

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## COUNCIL COMMUNICATION

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**DATE:** September 15, 2015

**AGENDA ITEM:** 7.A

**SUBJECT:** Approval of the Minutes of September 1<sup>st</sup> City Council Meeting

**PRESENTED BY:** City Clerk

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**AGENDA ITEM DESCRIPTION:**

Approval of minutes.

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**FINANCIAL SUMMARY:**

N/A

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**RECOMMENDATION:**

N/A

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**SUGGESTED MOTIONS:**

*"I move to approve the minutes as presented."*

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**MINUTES**  
**EVANS CITY COUNCIL**  
September 1, 2015

**CALL TO ORDER**

Mayor Morris called the meeting to order at 7:36 p.m.

**PLEDGE**

**ROLL CALL**

Present: Mayor Morris, Mayor Pro-Tem Schaffer, Council Members Brown, Clark, Finn, Homann, and Rudy

**AUDIENCE PARTICIPATION**

There was no audience participation.

**APPROVAL OF AGENDA**

Scott Krob, City Attorney, amended the agenda to add potential action by the City Council following the executive session under agenda item 10. Mr. Krob explained that a letter to the City of Greeley concerning the purchase of Windy Gap shares may be considered by City Council.

Council Member Clark made the motion, seconded by Council Member Rudy, to approve the agenda, as amended.  
The motion passed with all voting in favor thereof.

**CONSENT AGENDA**

**A. Approval of Minutes of the Regular Meeting of August 18, 2015.**

Council Member Rudy, made the motion, seconded by Council Member Brown, to approve the Consent Agenda. Council Member Clark abstained from the vote.  
The motion passed with all voting in favor thereof.

**NEW BUSINESS**

**A. Public Hearing – Ordinance No. 629-15 – Adoption of the Final Plat of IGO Subdivision (Weld County School District 6) – (1<sup>st</sup> Reading)**

Mayor Morris called the public hearing to order at 7:38 p.m.

Zach Ratkai, Flood Recovery, Building & Neighborhood Services Manager, presented Ordinance No. 629-15 concerning the adoption of the Final Plat of IGO Subdivision with Weld County School District 6. According to Mr. Ratkai, the intention of the final plat is to dedicate adjacent rights-of-way to the City of Evans for future roadway expansion. He explained that the site currently consists of 1 lot owned by the School District for future expansion of both 37<sup>th</sup> Street and 65<sup>th</sup> Avenue, which require right-of-way for the development of Prairie Heights Middle School.

Mr. Ratkai stated that staff has worked with the applicant to ensure all issues relating to this plat have been handled accordingly and all applicable review criteria and state statutes have been satisfied. Lastly, Mr. Ratkai explained the staff recommendation to approve Ordinance No. 629-15 with no conditions.

Mayor Morris asked if anyone from School District 6 was present.

Mr. Ratkai explained that Wayne Eads, from the School District, could not be present for the hearing, but he assured Mayor Morris that they supported the final plat.

Mayor Morris asked for any testimony in support or in opposition to the Ordinance—there was none.

Mayor Morris closed the public hearing at 7:41 p.m. and asked for a motion from the Council.

City Council Member Clark made the motion, seconded by Council Member Rudy to adopt Ordinance No. 629-15 on first reading approving the final plat for the IGO Subdivision. The motion passed with all voting in favor thereof.

**B. Public Hearing – Synergy Evans Wells Oil and Gas Use by Special Review (USR)**

Mayor Morris called the public hearing to order at 7:42 p.m.

Mr. Krob discussed the request for a USR by Synergy Evans Wells Oil and Gas. He explained that the Community Development Department had reviewed the request and felt that the review process may not be all-inclusive with some recent concerns and issues arising during the Planning Commission meeting on August 15, 2015. Due to the issues that needed to be addressed, both the applicant and staff requested that the public hearing be continued to October 20, 2015.

Mayor Morris asked if the applicant was present.

Adam Galloway, from Synergy, addressed City Council and stated that Synergy was willing to continue the hearing to October 20, 2015.

City Council Member Clark made the motion, seconded by Council Member Brown to continue the hearing concerning Synergy Evans Wells Oil and Gas Use by Special Review to the regular City Council meeting on October 20, 2015. The motion passed with all voting in favor thereof.

### **C. Award of Bid – Generator Installation Project**

David Burns, Emergency Management Coordinator, presented the bid award for the Generator Installation Project. Mr. Burns explained that this project consists of two smaller projects installing emergency generators at Evans Public Works Operation building (Project A) and Evans Fire station 2 (Project B). According to Mr. Burns, work will be carried out as outlined in the scope of work, which details the following work at both sites: installing generators, concrete pads, installing natural gas lines, and intercept the buildings wiring with power from the generators in the event of a power outage.

He discussed the City's procurement process and explained that the project was properly advertised and bids were opened on August 20, 2015 with results as follows:

<u>Contractor</u>	<u>Base Bid Amount</u>
Kenny Electric	\$ 195,554.00
Ward Electric	\$ 199,505.25
T-Bone Electric	\$ 211,819.00
Callahan Construction	\$ 388,735.50

According to Mr. Burns, the Evans Emergency Generator Installation project will be covered by two Grants—\$185,019 from a Hazard Mitigation Grant and \$26,431 from a Community Development Block Grant. Both grants became available through Presidential Disaster Declaration #4145 due to the September, 2013 floods. In all, the City of Evans has a total of \$211,450 available to cover the cost of installing both emergency generators through grant funds, and based on the lowest bids, there should not be any out of pocket cost to the city for either project.

Mr. Burns recommended that City Council award the Evans Emergency Generator Installation Project to Kenny Electric in the amount of \$195,554.

Council Member Clark asked about potential out of pocket costs for the City.

Mr. Burns explained that there should not be any out of pocket costs to the City, but there is some additional grant funds if this is the case.

Council Member Homann asked if Kenny Electric provided references and how long they have been in business.

Mr. Burns stated that they did not provide references, but staff could request them.

Mayor Morris asked for a motion.

City Council Member Brown, made the motion, seconded by Council Member Clark to award the Evans Emergency Generator Installation to Kenny Electric, and to authorize the Mayor's signature on an agreement in the amount of \$195,554. The motion passed with all voting in favor thereof.

## **REPORTS**

### **A. City Manager**

Ms. Gonifas, Deputy City Manager, welcomed back Council Member Clark from serving in California for the Wyoming Air National Guard then provided updates to City Council concerning the following issues:

- City water supply and utility rates;
- Evansfest (September 12<sup>th</sup>);
- City and Towns week (starting September 14<sup>th</sup>);
- upcoming public meetings concerning Highway 85 Corridor Projects;
- the Evans Shop Local Event (October 1<sup>st</sup>);
- upcoming presentations concerning the 2016 budget;
- new police officers;
- the ongoing Asphalt patching project;
- the ongoing bathroom park remodel project; and
- concrete repairs at City Park in preparation for Evansfest.

### **B. City Attorney**

Mr. Krob stated he would reserve his comments for the executive session.

## **AUDIENCE PARTICIPATION**

There was no audience participation.

## **EXECUTIVE SESSION**

**A. For the discussion of matters subject to negotiations related to Windy Gap Firing Project, pursuant to C.R.S. 24-6-402(4)(e).**

Mayor Pro-Tem Schaffer made the motion, seconded by Council Member Clark to adjourn into executive session for the discussion of matters subject to negotiations related to Windy Gap Firing Project, pursuant to C.R.S. 24-6-402(4)(e). The motion passed with all voting in favor thereof.

The City Council adjourned into Executive Session at 7:51 p.m.

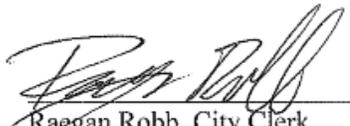
The Executive Session convened at 8:24 p.m.

Scott Krob, City Attorney, entered into the record that the reason for the Executive Session was satisfied according to the referenced state law and covered under attorney-client privilege.

Council Member Clark made a motion, seconded by Council Member Rudy, to authorize the Mayor to sign a letter, drafted by the City Attorney, to the City of Greeley concerning the purchase of Windy Gap shares.  
The motion passed with all voting in favor thereof.

### **ADJOURNMENT**

The meeting adjourned at 8:25 p.m.

  
Raegan Robb, City Clerk

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## CITY COUNCIL COMMUNICATION

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**DATE:** September 15, 2015

**AGENDA ITEM:** 7.B

**SUBJECT:** Public Hearing – Ordinance No. 629-15 – Adoption of the Final Plat of IGO Subdivision (Weld County School District 6) – 2<sup>nd</sup> Reading

**PRESENTED BY:** N. Zach Ratkai, Flood Recovery, Building & Neighborhood Services Manager

BACKGROUND INFORMATION		
<b>Location:</b>		IGO Subdivision, (southwest corner of 37 <sup>th</sup> Street and 65 <sup>th</sup> Avenue)
<b>Applicants:</b>		Weld County School District 6
<b>Existing Land Use:</b>		Institutional – School
<b>Proposed Land Use:</b>		Institutional – School
<b>Surrounding Land Use:</b>	<b>North</b>	Estate Residential (Weld County)
	<b>South</b>	Agricultural
	<b>East</b>	Agricultural
	<b>West</b>	Agricultural
<b>Existing Zoning:</b>		R-1
<b>Proposed Zoning:</b>		No change
<b>Surrounding Zoning:</b>	<b>North</b>	Weld County
	<b>South</b>	R-1
	<b>East</b>	C-2
	<b>West</b>	R-1
<b>Future Land Use Designation:</b>		Urban Residential

**PROJECT DESCRIPTION:** The City has received an application from Weld County District 6 as owner for review and approval of a Final Plat. The intention of the Final Plat is to dedicate adjacent rights-of-way to the City of Evans for future roadway expansion.

**RECOMMENDATION:** Staff recommends approval of the final plat to the City Council for the subject property.

**ANALYSIS:**

**1. Background:**

The site currently consists of 1 lot owned by Weld County School District 6.

*Right-of-Way*

Future expansion of both 37<sup>th</sup> Street and 65<sup>th</sup> Avenue requires that land be dedicated in association with the development of Prairie Heights Middle School

An exhibit outlining the proposed right-of-way to be dedicated is provided in this packet.

Appropriate City Staff and consultants have reviewed the proposed Final Plat and the documents associated with the right-of-way dedications.

**2. Issues:**

Staff has worked with the applicant to ensure all issues relating to this plat have been handled accordingly.

The applicant has provided all submittals in the required format and worked with staff on necessary resubmittals.

Notice of this public hearing was provided in accordance with the Municipal Code.

**FINDINGS OF FACT AND CONCLUSIONS**

After reviewing the request for approval of the requested final plat, the following findings of fact and conclusions have been determined:

All applicable review criteria and state statutes can be appropriately and sufficiently met as listed below.

**STAFF RECOMMENDATION:**

We recommend that the City Council approve Ordinance No. 629-15 with no conditions.

**RECOMMENDED CITY COUNCIL MOTION:**

*“On the issue of the final plat for the IGO Subdivision I move that Ordinance No. 629-15 be approved.”*

*“On the issue of the final plat for the IGO Subdivision I move Ordinance No. 629-15 be denied because it does not meet applicable state statutes and is not in the best interest of the citizens and City of Evans.”*

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CITY OF EVANS, COLORADO

ORDINANCE NO. 629-15

AN ORDINANCE APPROVING THE FINAL PLAT FOR THE IGO  
SUBDIVISION IN THE CITY OF EVANS, COLORADO

WHEREAS, Weld County School District 6 currently owns a piece of south of 37<sup>st</sup> Street and west of 65<sup>th</sup> Avenue known as the Igo Subdivision, and intend to develop that property as Prairie Heights Middle School; and

WHEREAS, the owner of the property has requested that the City file a final plat so that they may develop the land; and

WHEREAS, a final plat has been submitted for approval; and

WHEREAS, the final plat dedicates rights-of-way to the City of Evans for the purpose of roadway expansion; and

WHEREAS, to accommodate the property owners and allow them to develop the property, the City Council, after having reviewed the proposal, believes it would be in the best interests of the City of Evans to approve the final plat; and

WHEREAS, the City Council conducted a meeting, has carefully reviewed the request and finds that such request meets the final plat criteria, that it complies with the purpose of the subdivision codes, and otherwise promotes the health, safety and welfare of the City.

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

Section 1. Final Plat Approval: The Final Plat, titled IGO Subdivision, as drawn by Baseline Corporation, in the City of Evans, County of Weld, State of Colorado, is hereby approved.

Section 2. Recordation. The City Clerk shall record the Final Plat with the Weld County Clerk and Recorder within five (5) working days of the approval.

Section 3. Publication and Effective Date. This ordinance, after its passage on final reading, shall be numbered, recorded, published, and posted as required by the City Charter and the adoption, posting, and publication shall be authenticated by the signature of the Mayor and the City Clerk, and by the Certificate of Publication. This ordinance shall become effective upon final passage.

PASSED and APPROVED at a regular meeting of the City Council of the City of Evans on this 1<sup>st</sup> day of September, 2015.

CITY OF EVANS, COLORADO

By: \_\_\_\_\_  
Mayor

ATTEST:

\_\_\_\_\_  
City Clerk

PASSED, APPROVED AND ADOPTED ON SECOND READING this 15<sup>th</sup> day of September, 2015.

CITY OF EVANS, COLORADO

By: \_\_\_\_\_  
Mayor

ATTEST:

\_\_\_\_\_  
City Clerk

**Exhibit A**  
**Legal Description**

PROPERTY DESCRIPTION:

KNOW BY ALL MEN BY THESE PRESENT THAT I/WE \_\_\_\_\_, BEING THE OWNER(S), MORTGAGE OR LIENHOLDER OF CERTAIN LAND IN THE NORTHWEST QUARTER OF SECTION 28, TOWNSHIP 5 NORTH, RANGE 66 WEST OF THE 6TH P.M., CITY OF EVANS, COUNTY OF WELD, STATE OF COLORADO, DESCRIBED AS FOLLOW;

COMMENCING AT THE NORTH QUARTER CORNER OF SECTION 28;

THENCE S 00°03'05" E ALONG THE EAST LINE OF SAID NORTHWEST QUARTER A DISTANCE OF 251.06 FEET TO THE POINT OF BEGINNING;

THENCE S 00°03'05" E CONTINUING ALONG SAID EAST LINE A DISTANCE OF 1463.79 FEET TO THE SOUTHERLY LINE OF THAT PARCEL OF LAND AS DESCRIBED UNDER RECEPTION NUMBER 3027928;

THENCE ALONG SAID SOUTHERLY LINE THE FOLLOWING NINE (9) COURSES;

1. N 81°05'34" W A DISTANCE OF 64.18 FEET;
2. N 65°54'17" W A DISTANCE OF 62.19 FEET;
3. N 49°40'47" W A DISTANCE OF 82.48 FEET;
4. N 55°55'55" W A DISTANCE OF 124.97 FEET;
5. N 76°40'27" W A DISTANCE OF 81.06 FEET;
6. N 87°36'34" W A DISTANCE OF 233.89 FEET;
7. N 86°26'03" W A DISTANCE OF 219.45 FEET;
8. S 87°51'08" W A DISTANCE OF 396.99 FEET;
9. S 88°16'13" W A DISTANCE OF 198.94 FEET;

THENCE N 00°28'50" W A DISTANCE OF 1523.02 FEET TO THE NORTH LINE OF SAID SECTION 28;

THENCE N 89°31'10" E ALONG SAID NORTH LINE A DISTANCE OF 1231.52 FEET TO THE EAST LINE OF THAT PARCEL OF LAND AS DESCRIBED UNDER RECEPTION NUMBER 3027928;

THENCE ALONG SAID EAST AND NORTH LINE THE FOLLOWING TWO (2) COURSES;

1. S 00°34'47" E A DISTANCE OF 248.42 FEET;
2. S 89°41'55" E A DISTANCE OF 191.21 FEET TO THE POINT OF BEGINNING;

CONTAINING 2,146,583 SQUARE FEET OR 49.279 ACRES MORE OR LESS:

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# IGO SUBDIVISION

A PORTION OF THE NORTHWEST QUARTER OF SECTION 28, TOWNSHIP 5 NORTH,  
RANGE 66 WEST OF THE 6TH P.M., CITY OF EVANS, COUNTY OF WELD, STATE OF COLORADO



**VICINITY MAP**  
SCALE: 1" = 2000'

**PROPERTY DESCRIPTION:**

KNOW BY ALL MEN BY THESE PRESENT THAT I/WE \_\_\_\_\_, BEING THE OWNER(S), MORTGAGEE OR LIENHOLDER OF CERTAIN LAND IN THE NORTHWEST QUARTER OF SECTION 28, TOWNSHIP 5 NORTH, RANGE 66 WEST OF THE 6TH P.M., CITY OF EVANS, COUNTY OF WELD, STATE OF COLORADO, DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTH QUARTER CORNER OF SECTION 28;

THENCE S 00°03'05" E ALONG THE EAST LINE OF SAID NORTHWEST QUARTER A DISTANCE OF 251.06 FEET TO THE POINT OF BEGINNING;

THENCE S 00°03'05" E CONTINUING ALONG SAID EAST LINE A DISTANCE OF 1463.79 FEET TO THE SOUTHERLY LINE OF THAT PARCEL OF LAND AS DESCRIBED UNDER RECEPTION NUMBER 3027928;

THENCE ALONG SAID SOUTHERLY LINE THE FOLLOWING NINE (9) COURSES;

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THENCE ALONG SAID EAST AND NORTH LINE THE FOLLOWING TWO (2) COURSES;

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2. S 89°41'55" E A DISTANCE OF 191.21 FEET TO THE POINT OF BEGINNING;

CONTAINING 2,146,583 SQUARE FEET OR 49.279 ACRES MORE OR LESS:

HAVE BY THESE PRESENTS LAID OUT, PLATTED AND SUBDIVIDED THE SAME INTO LOTS AND BLOCKS, AS SHOWN ON THIS PLAT, UNDER THE NAME AND STYLE OF IGO SUBDIVISION, AND DO HEREBY DEDICATE TO THE PUBLIC ALL WAYS AND OTHER PUBLIC RIGHTS-OF-WAY AND EASEMENTS FOR THE PURPOSE SHOWN HEREON.

EXECUTED THIS \_\_\_\_ DAY OF \_\_\_\_\_, A.D. \_\_\_\_\_

OWNER, MORTGAGES OR LIENHOLDER

NOTARY:

STATE OF COLORADO )  
COUNTY OF WELD ) §

THE FOREGOING DEDICATION WAS ACKNOWLEDGED BEFORE ME THIS \_\_\_\_ DAY OF \_\_\_\_\_, A.D. \_\_\_\_\_ BY \_\_\_\_\_

WITNESS MY HAND AND OFFICIAL SEAL.

MY COMMISSION EXPIRES: \_\_\_\_\_

NOTARY PUBLIC

EXECUTED THIS \_\_\_\_ DAY OF \_\_\_\_\_, A.D. \_\_\_\_\_

LIENHOLDER

NOTARY:

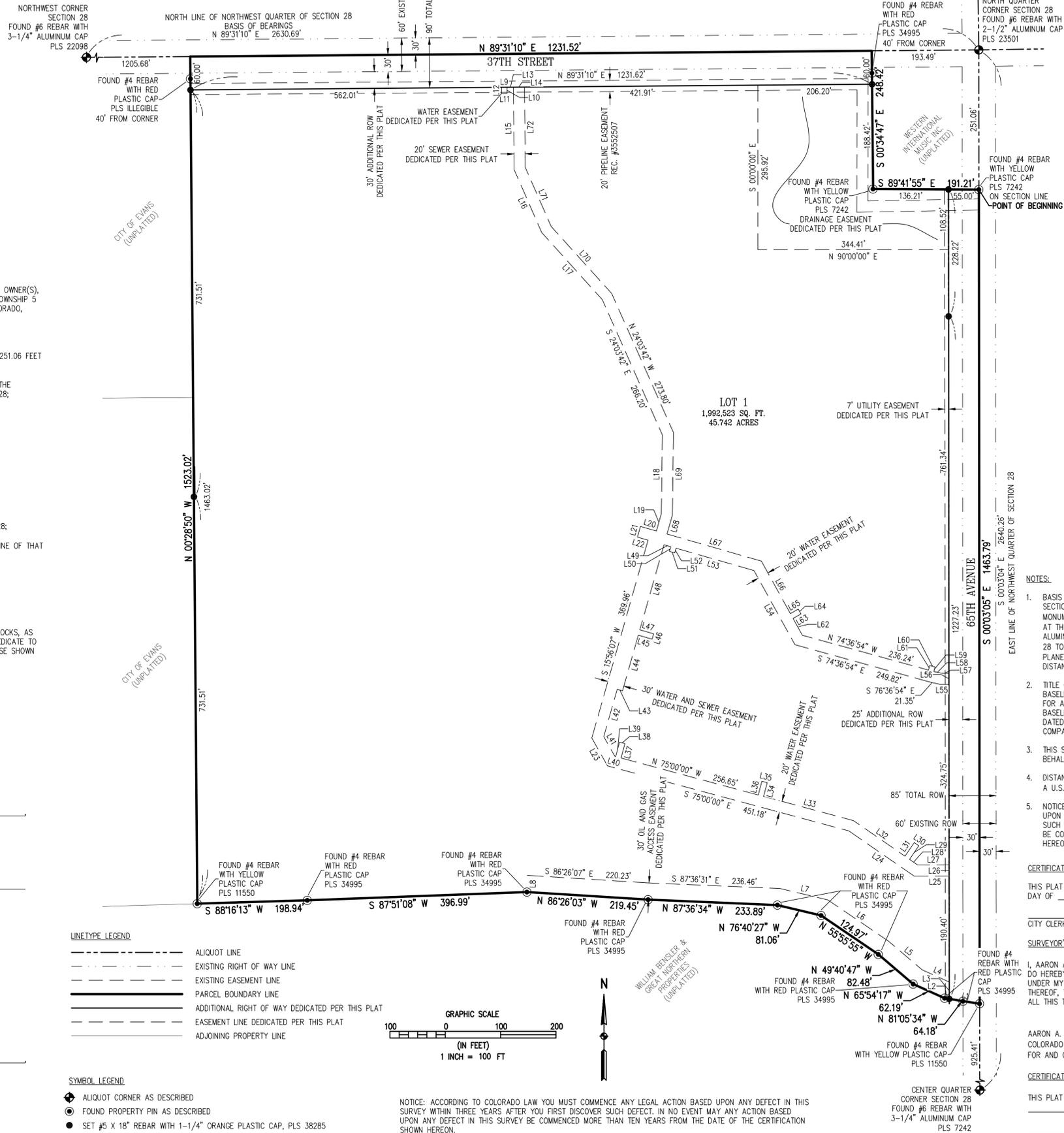
STATE OF COLORADO )  
COUNTY OF WELD ) §

THE FOREGOING DEDICATION WAS ACKNOWLEDGED BEFORE ME THIS \_\_\_\_ DAY OF \_\_\_\_\_, A.D. \_\_\_\_\_ BY \_\_\_\_\_

WITNESS MY HAND AND OFFICIAL SEAL.

MY COMMISSION EXPIRES: \_\_\_\_\_

NOTARY PUBLIC

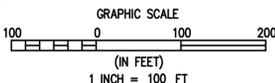


**LINE TYPE LEGEND**

- ALIQUOT LINE
- EXISTING RIGHT OF WAY LINE
- EXISTING EASEMENT LINE
- PARCEL BOUNDARY LINE
- ADDITIONAL RIGHT OF WAY DEDICATED PER THIS PLAT
- EASEMENT LINE DEDICATED PER THIS PLAT
- ADJOINING PROPERTY LINE

**SYMBOL LEGEND**

- ALIQUOT CORNER AS DESCRIBED
- FOUND PROPERTY PIN AS DESCRIBED
- SET #5 X 18" REBAR WITH 1-1/4" ORANGE PLASTIC CAP, PLS 38285



NOTICE: 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.

LINE #	BEARING	LENGTH
L1	N 81°05'34" W	55.68'
L2	N 81°05'34" W	8.50'
L3	S 00°03'05" E	30.45'
L4	S 65°54'17" E	53.68'
L5	S 49°40'47" E	79.84'
L6	S 55°55'55" E	132.10'
L7	S 76°40'27" E	89.42'
L8	N 01°27'37" E	30.04'
L9	S 89°31'10" W	10.00'
L10	N 00°28'50" W	11.00'
L11	N 89°31'10" E	10.00'
L12	N 00°28'50" W	11.00'
L13	S 89°31'10" W	11.50'
L14	S 89°31'10" W	20.00'
L15	S 00°28'49" E	148.03'
L16	S 23°45'01" E	123.69'
L17	S 42°13'25" E	162.98'
L18	S 00°43'42" W	141.47'
L19	S 15°56'08" W	32.65'
L20	N 74°03'53" W	30.00'
L21	S 15°56'07" W	20.00'
L22	S 74°03'53" E	20.00'
L23	S 29°31'56" E	57.66'
L24	S 55°30'00" E	143.58'
L25	N 89°56'55" E	63.07'
L26	N 00°03'05" W	20.00'
L27	S 89°56'55" W	56.85'
L28	N 55°30'00" W	17.85'
L29	N 34°30'00" E	29.73'
L30	N 55°30'00" W	10.00'
L31	S 34°30'00" W	29.73'
L32	N 55°30'00" W	112.94'
L33	N 75°00'00" W	168.09'
L34	N 15°00'00" E	25.50'
L35	N 75°00'00" W	10.00'
L36	S 15°00'00" W	25.50'

LINE #	BEARING	LENGTH
L37	N 15°00'00" E	26.92'
L38	N 75°00'00" W	10.00'
L39	S 15°00'00" W	26.92'
L40	N 75°00'00" W	1.50'
L41	N 29°31'56" W	40.90'
L42	N 15°56'07" E	88.49'
L43	S 74°03'52" E	10.00'
L44	N 15°56'08" E	104.02'
L45	S 74°03'53" E	25.95'
L46	N 15°56'07" E	10.00'
L47	N 74°03'53" W	25.95'
L48	N 15°56'08" E	159.07'
L49	S 74°03'53" E	12.76'
L50	S 15°56'07" W	8.68'
L51	S 74°03'53" E	10.00'
L52	N 15°56'07" E	8.68'
L53	S 74°03'53" E	146.30'
L54	S 29°03'53" E	152.56'
L55	N 89°56'55" W	16.58'
L56	N 00°03'05" W	20.00'
L57	S 89°56'55" W	14.23'
L58	N 76°36'54" W	13.47'
L59	N 15°23'06" E	8.50'
L60	N 74°36'54" W	10.00'
L61	S 15°23'06" W	8.68'
L62	N 29°03'53" W	34.64'
L63	N 60°56'07" E	16.41'
L64	N 29°03'53" W	10.00'
L65	S 60°56'07" W	16.41'
L66	N 29°03'53" W	107.81'
L67	N 74°03'53" W	177.35'
L68	N 15°56'08" E	35.32'
L69	N 00°43'42" E	148.53'
L70	N 42°13'25" W	162.93'
L71	N 23°45'01" W	116.31'
L72	N 00°28'49" W	143.92'

**NOTES:**

1. BASIS OF BEARINGS: ASSUMING THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 28, TOWNSHIP 5 NORTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, AS MONUMENTED BY A #6 REBAR WITH A 3-1/4 INCH ALUMINUM CAP STAMPED LS 22098 AT THE NORTHWEST CORNER OF SAID SECTION 28 AND A #6 REBAR WITH A 2-1/2 INCH ALUMINUM CAP STAMPED LS 23501 AT THE NORTH QUARTER CORNER OF SAID SECTION 28 TO BEAR NORTH 89°31'10" EAST, BEING A GRID BEARING OF THE COLORADO STATE PLANE COORDINATE SYSTEM, NORTH ZONE, NORTH AMERICAN DATUM 1983/2007, A DISTANCE OF 2630.69 FEET WITH ALL BEARINGS CONTAINED HEREIN RELATIVE THERETO.
2. TITLE COMMITMENT NOTE: THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY BASELINE ENGINEERING CORP. TO DETERMINE OWNERSHIP OR EASEMENTS OF RECORD. FOR ALL INFORMATION REGARDING EASEMENTS, RIGHTS OF WAY AND TITLE OF RECORDS, BASELINE ENGINEERING CORP. RELIED UPON TITLE COMMITMENT NUMBER 33700-15-0788, DATED JUNE 23, 2015 AT 7:30 A.M. AS PREPARED BY NORTH AMERICAN TITLE INSURANCE COMPANY TO DELINEATE THE AFORESAID INFORMATION.
3. THIS SUBDIVISION PLAT WAS PREPARED BY AARON A. DEMO, PLS 38285, FOR AND ON BEHALF OF BASELINE CORPORATION, 710 11TH AVENUE, SUITE 105, GREELEY, CO 80631.
4. DISTANCES ON THIS PLAT ARE EXPRESSED IN U.S. SURVEY FEET AND DECIMALS THEREOF. A U.S. SURVEY FOOT IS DEFINED AS EXACTLY 1200/3937 METERS.
5. NOTICE: 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.

**CERTIFICATE OF APPROVAL BY THE CITY CLERK:**

THIS PLAT IS HEREBY APPROVED BY THE CITY CLERK OF EVANS, COLORADO, THIS \_\_\_\_ DAY OF \_\_\_\_\_, A.D. \_\_\_\_\_

CITY CLERK

**SURVEYOR'S STATEMENT:**

I, AARON A. DEMO, A LICENSED PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY STATE THAT THIS SUBDIVISION PLAT WAS PREPARED FROM AN ACTUAL SURVEY UNDER MY PERSONAL SUPERVISION, AND THAT THIS PLAT IS AN ACCURATE REPRESENTATION THEREOF, THAT THE MONUMENTATION AS INDICATED HEREON WAS FOUND OR SET AS SHOWN, ALL THIS TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF.

AARON A. DEMO  
COLORADO LICENSED PROFESSIONAL LAND SURVEYOR NO. 38285  
FOR AND ON BEHALF OF BASELINE CORPORATION.

**CERTIFICATE OF APPROVAL BY THE DEPARTMENT OF PUBLIC WORKS:**

THIS PLAT IS HEREBY APPROVED BY THE DEPARTMENT OF PUBLIC WORKS THIS \_\_\_\_ DAY OF \_\_\_\_\_, A.D. \_\_\_\_\_

DIRECTOR

Engineering - Planning - Surveying

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DRAWN BY AAD	CHECKED BY MRE	DATE	REVISION DESCRIPTION
			CITY OF EVANS
			COUNTY OF WELD
			65TH AVENUE AND 37TH STREET
			CITY OF EVANS
			IGO SUBDIVISION
			CITY OF EVANS
			COUNTY OF WELD
			65TH AVENUE AND 37TH STREET
			CITY OF EVANS

DRAWING SIZE 24" X 36"

JOB NO. C015209A

DRAWING NAME 15209A - SUB PLAT.dwg

SHEET 1 OF 1

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# COUNCIL COMMUNICATION

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**DATE:** September 15, 2015

**AGENDA ITEM:** 8.A

**SUBJECT:** Approval of Impact Fee Study

**PRESENTED BY:** Sheryl Trent, Economic Development Director

---

**AGENDA ITEM DESCRIPTION:**

In 2014, in the context of reviewing the proposed budget, the City Council directed staff to undertake a review of the City's methodology and approach to establishing impact fees and prepare a report and recommendation for possible modifications to the impact fee model. After a Request for Proposal process, the firm of Tischler-Bise was selected to undertake this review. Transmitted with this staff report is the analysis prepared in response to this request, and Mr. Bise will present the basis for imposition of development impact fees and the methodology used to create the fees.

The report presents recommendations for adjustments to the current impact fee model, based on infrastructure needs and growth assumptions. In two cases (water and storm water) a fee could NOT be established as the master plan and accompanying capital projects had not been updated in too many years. In those cases a formula has been recommended and those plans will be updated in the next twelve months in order to have a well-researched impact fee, and that fee returned to the City Council for approval.

Some of the basic philosophies that were integrated into the Impact Fee Study were:

**Infrastructure Requirements / Needs Assessment:**

- Capital infrastructure projects included in the project plans for purposes of establishing development impact fees should be fully-integrated into a citywide capital improvement program. This will provide a better context for the improvements identified as necessary to support growth in the community as well as assist in prioritizing citywide improvements and funding needs.
- Long-term master plans and capital project plans should be reviewed and updated periodically to ensure that the projects are still appropriate and that cost estimates are reasonable and realistic.

**Policy Considerations:**

- While the City has a genuine interest in providing appropriate incentives and disincentives for particular development, there are legal limitations that restrict the City's ability to factor these into the establishment of development impact fees. Any discounting of fees or credits imposed on certain forms of development deemed desirable run the risk of creating significant unfunded components of the capital infrastructure plan as these costs cannot be "shifted" to other categories of development.

- Staff is recommending that the Development Impact Fee Model be updated to provide the maximum “legally justifiable” fee, based on appropriate assessment of infrastructure capacity and the land uses that most closely generate the demand for additional infrastructure. Additional policy considerations can, within limits, be factored into the analysis; however, consideration should be given to means available to further policy objectives without undermining the overall intent of the impact fee model.

As a part of our annual budget approval process, the fees are updated each October. Should the Council approve this study, the corresponding fees will be brought during that same time frame for consideration as usual.

---

**FINANCIAL SUMMARY:**

This is an informational report and as such there are no direct fiscal implications. However, the issues and recommendations discussed in the report could impact how the City assesses the infrastructure needed to support planned growth in the City and the means by which Development Impact Fees are established to mitigate these impacts.

In general, Development Impact Fees continue to be a major source in support of the City’s capital improvement plan, with several million in costs identified for specific projects and tens of millions in additional potential improvements. The annual budget does not anticipate annual impact fee revenues until they are received and audited. These revenues may be revised as the City re-assesses its growth plans, related infrastructure requirements and impact fee structure.

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**RECOMMENDATION:**

Staff recommends the City Council:

- 1) Accept the report and staff recommendations related to the City’s Development Impact Fees Methodology and Fee Structure;

---

**SUGGESTED MOTIONS:**

*“I move to approve acceptance of the July, 2015 Impact Fee Study.”*

*“I move to deny acceptance of the July, 2015 Impact Fee Study.”*

*“I move to deny the approval of Ordinance No. 516-11 on first reading.”*

---

# **Draft - Impact Fee Study:** **City of Evans, Colorado**

*Prepared for:*  
*City of Evans, CO*

*July 22, 2015*



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Bethesda, MD  
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## 2015 IMPACT FEE STUDY CITY OF EVANS, COLORADO

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## EXECUTIVE SUMMARY

The City of Evans, Colorado retained TischlerBise, Inc. to update the impact fees imposed on new development to meet the new demand generated for five types of public facilities in the City:

- Parks, Recreation and Trails
- Fire/Rescue
- Police
- Transportation
- Wastewater

*Impact fees for Water and Stormwater are also part of our contract with the City of Evans. However, key assumptions for future capital facility needs are still be formulated and considered and will be presented subsequently in a separate report.*

This report presents the methodologies and calculations used to generate current levels of service and updated maximum allowable impact fees. It is intended to serve as supporting documentation for future updates to impact fees in the City of Evans.

The purpose of 2015 Impact Fee Study is to demonstrate the City's compliance with the Colorado Revised Statute 29-20-104.5. Consistent with the authorization, it is the intent of the City of Evans to:

- Collect impact fees to fund capital improvements required to serve growth, and
- To use revenue generated from impact fees to benefit new development by maintaining current levels of service.

Impact fees are one-time payments used to construct system improvements needed to accommodate new development. An impact fee represents new growth's fair share of capital facility needs. By law, impact fees can only be used for *capital* expansions, not operating or maintenance costs. Impact fees are subject to legal standards, which require fulfillment of three key elements: **need**, **benefit** and **proportionality**.

- First, to justify a fee for necessary public services, it must be demonstrated that new development will create a **need** for capital improvements.
- Second, new development must derive a **benefit** from the payment of the fees (i.e., in the form of public facilities constructed within a reasonable timeframe).
- Third, the fee paid by a particular type of development should not exceed its **proportionate** share of the capital cost for system improvements.

TischlerBise evaluated possible methodologies and documented appropriate demand indicators by type of development for the levels of service and impact fees. Local demographic data and improvement costs were used to identify specific capital costs attributable to growth. This report includes summary tables indicating the specific factors, referred to as level of service standards, used to derive the impact fees.

## METHODOLOGIES AND CREDITS

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Development impact fees can be calculated by any one of several legitimate methods. The choice of a particular method depends primarily on the service characteristics and planning requirements for each facility type. Each method has advantages and disadvantages in a particular situation, and to some extent can be interchangeable, because each allocates facility costs in proportion to the needs created by development.

Reduced to its simplest terms, the process of calculating development impact fees involves two main steps: (1) determining the cost of development-related capital improvements, and (2) allocating those costs equitably to various types of development. In practice, the calculation of impact fees can become quite complicated because of the many variables involved in defining the relationship between development and the need for facilities. The following paragraphs discuss three basic methods for calculating development impact fees, and how each method can be applied.

*Plan-Based Fee Calculation.* The plan-based method allocates costs for a specified set of improvements to a specified amount of development. Facility plans identify needed improvements, and land use plans identify development. In this method, the total cost of relevant facilities is divided by total demand to calculate a cost per unit of demand. Then, the cost per unit of demand is multiplied by the amount of demand per unit of development (e.g., housing units or square feet of building area) in each category to arrive at a cost per specific unit of development (e.g., single family detached unit).

*Cost Recovery or Buy-In Fee Calculation.* The rationale for the cost recovery approach is that new development is paying for its share of the useful life and remaining capacity of facilities already built or land already purchased from which new growth will benefit. This methodology is often used for systems that were oversized such as sewer and water facilities.

*Incremental Expansion Fee Calculation.* The incremental expansion method documents the current level of service (LOS) for each type of public facility in both quantitative and qualitative measures, based on an existing service standard (such as square feet per student). This approach ensures that there are no existing infrastructure deficiencies or surplus capacity in infrastructure. New development is only paying its proportionate share for growth-related infrastructure. The level of service standards are determined in a manner similar to the current replacement cost approach used by property insurance companies. However, in contrast to insurance practices, the fee revenues would not be for renewal and/or replacement of existing facilities. Rather, revenue will be used to expand or provide additional facilities, as needed, to accommodate new development. An incremental expansion cost method is best suited for

public facilities that will be expanded in regular increments, with LOS standards based on current conditions in the community.

*Credits.* Regardless of the methodology, a consideration of “credits” is integral to the development of a legally valid impact fee methodology. There are two types of “credits,” each with specific and distinct characteristics, but both of which should be addressed in the calculation of development impact fees. The first is a credit due to possible double payment situations. This could occur when contributions are made by the property owner toward the capital costs of the public facility covered by the impact fee. This type of credit is integrated into the impact fee calculation. The second is a credit toward the payment of a fee for dedication of public sites or improvements provided by the developer and for which the facility fee is imposed. This type of credit is addressed in the administration and implementation of a facility fee program.

**FEE METHODOLOGIES**

The following table summarizes the method(s) used to derive the impact fee for each type of public facility in Evans.

**Figure 1: Summary of Impact Fee Methodologies**

Type of Public Facility	Methodology		
	Cost Recovery (Past)	Incremental Expansion (Present)	Plan Based (Future)
Parks	Not Applicable	<ul style="list-style-type: none"> <li>• Park Land and Open Space and Recreation Improvements</li> </ul>	
Fire/Rescue		<ul style="list-style-type: none"> <li>• Fire Station Space</li> <li>• Apparatus</li> </ul>	
Police		<ul style="list-style-type: none"> <li>• Police Space</li> <li>• Police Vehicles</li> </ul>	
Transportation			<ul style="list-style-type: none"> <li>• Road Improvements</li> </ul>
Wastewater			<ul style="list-style-type: none"> <li>• Wastewater Treatment Plant</li> </ul>

**MAXIMUM ALLOWABLE IMPACT FEES BY TYPE OF LAND USE**

Figure 2 provides a schedule of the maximum allowable impact fees by type of land use for the City of Evans. *As mentioned previously, this does not include the City’s impact fees for Water and Stormwater.* The fees represent the highest amount allowable for each type of applicable land use, and represents new growth’s fair share of the cost for capital facilities. The City may adopt fees that are less than the amounts shown. However, a reduction in impact fee revenue will necessitate an increase in other revenues, a decrease in planned capital expenditures, and/or a decrease in levels of service.

The fees for residential development are to be assessed per housing unit and should be collected when building permits are issued. For nonresidential development, the fees are assessed per square foot of floor area, and should be collected when building permits are issued. Nonresidential development categories are consistent with the terminology and definitions contained in the reference book, Trip Generation 9<sup>th</sup> Edition, published by the Institute of Transportation Engineers.

**Figure 2: Summary of Maximum Allowable Impact Fees by Land Use**

**Maximum Supportable Impact Fees**

Land Use Category	Parks	Police	Fire/Rescue	Transportation	Wastewater	PROPOSED Impact Fee
<b>Residential</b>						
<i>Per Housing Unit</i>						
Single Unit	\$4,594	\$274	\$930	\$4,317	\$4,354	<b>\$14,469</b>
2+ Unit	\$3,587	\$214	\$726	\$3,511	\$3,400	<b>\$11,438</b>
Manufactured Home	\$3,569	\$212	\$723	\$6,141	\$3,383	<b>\$14,028</b>
<b>Nonresidential</b>						
<i>Per Square Foot of Floor Area</i>						
Commercial	\$0.00	\$0.28	\$1.00	\$5.61		<b>\$6.89</b>
Office/Institutional	\$0.00	\$0.11	\$0.39	\$2.42		<b>\$2.92</b>
Industrial/Flex	\$0.00	\$0.07	\$0.25	\$1.53		<b>\$1.85</b>

Utility Meter Size and Type	PROPOSED Wastewater Impact Fee
<b>Meters</b>	
0.75" Displacement	<b>\$3,400</b>
1.00" Displacement	<b>\$7,394</b>
1.50" Displacement	<b>\$14,354</b>
2.00" Displacement/Compound	<b>\$23,054</b>
3.00" Displacement/Compound	<b>\$46,544</b>
4.00" Displacement/Compound	<b>\$72,644</b>

Please note, calculations throughout this technical memo are based on an analysis conducted using Excel software. Results are discussed in the memo using one-and two-digit places (in most cases), which represent rounded figures. However, the analysis itself uses figures carried to their ultimate decimal places; therefore the sums and products generated in the analysis may not equal the sum or product if the reader replicates the calculation with the factors shown in the report (due to the rounding of figures shown, not in the analysis).

## PARKS , RECREATIONAL FACILITIES AND TRAILS

### OVERVIEW

An incremental expansion cost methodology was used to calculate the community parkland, open space, park improvements, multi-use trails, and recreational facilities components of the Parks and Recreational Facilities Impact Fees. Therefore, the assumption is that as population in the City increases, the City will continue to make investments in the system-wide inventory. Parks, Recreational Facilities and Trails Impact Fees are assessed only against residential development.

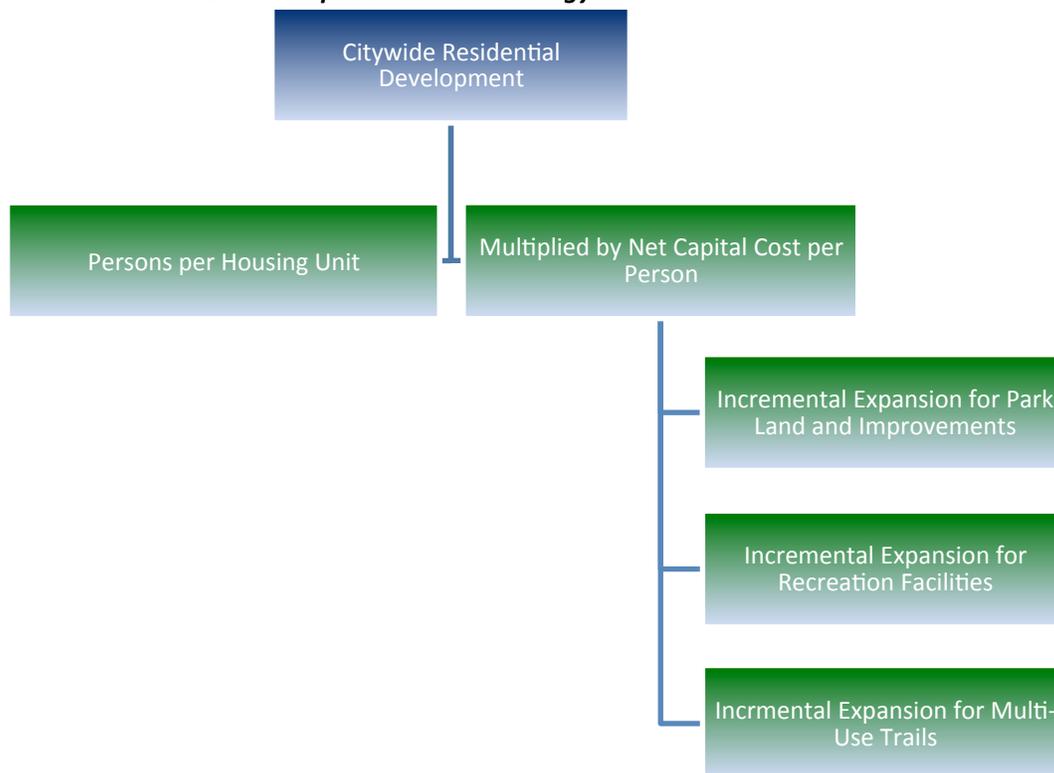
### Service Area

The City of Evans plans to provide a uniform level of service and equal service for all community Parks, Recreational Facilities and Trails throughout the City. As a result, the service area for the category is citywide.

### METHODOLOGY

As shown in Figure 3, all capital costs for Parks and Recreational Facilities Impact Fees have been allocated 100 percent to residential development. The impact fees are calculated on a per capita basis, and then they are converted to an appropriate amount for each housing unit type, based on *Persons per Housing Unit* indicators.

Figure 3: Parks and Recreation Impact Fee Methodology Chart



## PARKS AND RECREATIONAL FACILITIES IMPROVEMENTS AND COSTS

---

### Community Parkland and Open Space

Community parkland and open space is based on the *incremental expansion* methodology. As shown in Figure 4 the City has 173.4 acres of community parkland and open space. This includes all the acreage associated with Riverside Park, although a portion as damaged by the recent flood. Since the City has secured alternative revenues to restore Riverside Park to full operations, and impact fee revenue will not be used to restore the park to its original condition, it is included as part of the City's inventory. Impact fee revenue will be used to prepare other open space for community park improvements.

The City plans to maintain the level of service for parkland that it provides to existing development. Thus, the incremental expansion methodology is used to calculate this component. Based on the assumption that population generates demand for parks and open space, the formula to determine level of service for residential development is as follows:  $(173.4 \text{ acres} \times 100\% \text{ proportionate share}) / 19,200 \text{ population} = 0.0090 \text{ acres per capita}$ .

According to projected cost estimates in the 2014 Riverside Park Master Plan, it costs approximately \$120,000 to purchase and develop an acre of land. To calculate the cost to purchase and develop park and open space per demand unit, the cost per acre of \$120,000 is multiplied by the per service unit LOS (0.0090) resulting in a cost per capita of \$1,083.75.

**Figure 4: Incremental Expansion – Community Parkland and Open Space**

Community Parkland and Open Space	Acres	Cost per Acre [1]	Total Value
City Park	2.95	\$120,000	\$354,000
Driftwood Park	6.70		\$804,000
Evans Community Complex	3.25		\$390,000
EMOC Greenbelt	3.50		\$420,000
Pheasant Crt ISD	0.25		\$30,000
Freedom Park	7.25		\$870,000
Grapevine Hollow Green Space	4.25		\$510,000
Municipal Pool	0.85		\$102,000
Green Meadows	2.30		\$276,000
Riverside Park	88.70		\$10,644,000
Riverside Sports Park	12.30		\$1,476,000
Vineyard Park	4.25		\$510,000
Renaissance Park	1.00		\$120,000
Dante Park	1.00		\$120,000
35th Avenue	2.50		\$300,000
Village Park	3.10		\$372,000
Prairie View Park	10.00		\$1,200,000
Ridge Park	9.00		\$1,080,000
Pioneer Park	10.25		\$1,230,000
<b>TOTAL</b>	<b>173.40</b>		

Source: City of Evans

[1] Based on Projected Cost Estimates from Riverside Park Master Plan, 16Dec14.

Assumes dedication of acres ( no land purchase)

Land Use	Proportionate Share	2014 Demand Units	Developed Acres per Demand Unit	Cost per Demand Unit
Residential	100%	19,200 Population	0.0090	<b>\$1,083.75</b>

### Park Improvements

The City of Evans provides active and passive park improvements for use by the current population. Park improvements include playgrounds, sports fields and courts, and a skate park.

The City plans to maintain the level of service for park improvements that it provides to existing development. Thus, the incremental expansion methodology is used to calculate this component. Based on the assumption that population generates demand for Parks and Recreational Facilities, the formula to determine LOS for residential development is as follows: (32 units X 100% proportionate share) / 19,200 population = 0.002 units per capita.

According to discussion with staff and projected cost estimates in the 2014 Riverside Park Master Plan, the average park improvement costs \$113,631. To calculate the cost of park improvements per service unit, the cost per unit (\$113,631) is multiplied by the per demand unit LOS (0.002) resulting in a park improvements cost per capita of \$189.39.

**Figure 5: Incremental Expansion – Park Improvements**

Park Improvements	Units	Cost per Unit [1]	Total Value
Baseball Fields	5	\$135,000	\$675,000
Skate Parks	1	\$350,000	\$350,000
Volleyball	2	\$30,000	\$60,000
Basketball/Tennis Courts	7	\$21,600	\$151,200
Sports Fields	4	\$200,000	\$800,000
Playgrounds	9	\$100,000	\$900,000
Restrooms and Concessions	4	\$175,000	\$700,000
<b>TOTAL</b>	<b>32</b>	<b>\$113,631</b>	<b>\$3,636,200</b>

Source: City of Evans

[1] Based on Projected Cost Estimates from Riverside Park Master Plan, 16Dec14

Land Use	Proportionate Share	2014 Demand Units	Developed Acres per Demand Unit	Cost per Demand Unit
Residential	100%	19,200 Population	0.002	<b>\$189.39</b>

### Multi-Use Paths

The City of Evans provides 5 miles of 10' concrete walks in developed Community parks. The City plans to maintain the level of service for the multi-use path that it provides to existing development. Thus, the incremental expansion methodology is used to calculate this component. Based on the assumption that population generates demand for Parks and Recreational Facilities, the formula to determine LOS for residential development is as follows: (5 miles X 100% proportionate share) / 19,200 population = 0.0003 units per capita.

According to discussion with staff and projected cost estimates in the 2014 Riverside Park Master Plan, the average costs per mile of multi-use path is \$264,061. To calculate the cost of multi-use paths per service unit, the cost per mile (\$264,061) is multiplied by the per demand unit LOS (0.0003) resulting in a multi-use path cost per capita of \$68.77.

**Figure 6: Incremental Expansion – Multi-Use Paths**

Multi-Use Paths	Mile	Cost per Mile [1]	Total Value
Maintained Paths	5.00	\$264,061	\$1,320,306

Source: City of Evans

[1] Based on 2.45 miles of 10' concrete walks in Riverside Park plan with a cost of \$646,950

Land Use	Proportionate Share	2014 Demand Units	Miles per Demand Unit	Cost per Demand Unit
Residential	100%	19,200 Population	0.0003	<b>\$68.77</b>

### Recreational Facilities

The City of Evans owns and operates the Evans Community Complex, which includes 20,443 square feet of community recreation space. The existing facility is sufficient to serve the current community and the City plans to maintain the level of service as new development occurs. Thus, the incremental expansion

methodology is used to calculate this component. Based on the assumption that population generates demand for Parks and Recreational Facilities, the formula to determine LOS for residential development is as follows: (20,443 miles X 100% proportionate share) / 19,200 population = 1.065 square feet per capita.

According to discussion with staff the approximate cost per square foot for a similar facility is \$136 and the recreation portion of the complex building requires approximately 5 acres of land. Assuming \$600,000 in land development costs, the cost per square foot for recreation facilities is \$166. To calculate the cost of recreation facilities per service unit, the cost per square foot (\$166) is multiplied by the per service unit LOS (1.065) resulting in a multi-use path cost per capita of \$176.58.

**Figure 7: Incremental Expansion – Recreational Facilities**

Recreation Facilities	Square Feet	Cost per Sq. Ft. [1]	Total Value
Evans Community Complex	20,443	\$166	\$3,390,265

Source: City of Evans

[1] Total Value includes \$600,000 for 5 acres of land (i.e., the recreation portion of the total 7 acre Evans Community Complex site).

Land Use	Proportionate Share	2014 Demand Units	Developed Acres per Demand Unit	Cost per Demand Unit
Residential	100%	19,200 Population	1.065	<b>\$176.58</b>

**PARKS, RECREATIONAL FACILITIES AND TRAIL CAPITAL IMPROVEMENT NEEDS TO SERVE GROWTH**

Ten-year growth projections for the City of Evans suggest the City will add 4,205 new residents (an increase of approximately 22 percent). In order to maintain current levels of service for developed parkland, park improvements, multi-use paths, and recreation facilities the City will need to make incremental investments. Shown in Figure 8 below are the acres and units needed to maintain current levels of service for each component and the total investment necessary based on 10-years of population growth.

**Figure 8: Projected Demand for Parks, Recreational Facilities and Trails**

Demand Unit		Land (acres)	Park Improvements (units)	Multi-Use Trails (miles)	Recreational Facilities (square feet)
per Person		0.0090	0.002	0.0003	1.065
Average Cost per Component		<b>\$120,000</b>	<b>\$113,631</b>	<b>\$264,061</b>	<b>\$166</b>

		Projected Demand (Rounded)				
		Demand Units Population	Land (acres)	Park Improvements (units)	Multi-Use Trails (miles)	Recreational Facilities (square feet)
Base	2014	19,200	173.40	32	5.00	20,443
1	2015	19,584	176.87	33	5.10	20,852
2	2016	19,976	180.41	33	5.20	21,269
3	2017	20,375	184.01	34	5.31	21,694
4	2018	20,783	187.70	35	5.41	22,128
5	2019	21,198	191.44	35	5.52	22,570
6	2020	21,622	195.27	36	5.63	23,022
7	2021	22,055	199.18	37	5.74	23,483
8	2022	22,496	203.17	37	5.86	23,952
9	2023	22,946	207.23	38	5.98	24,432
10	2024	23,405	211.38	39	6.10	24,920
<b>Ten Yr Total</b>		<b>4,205</b>	<b>38</b>	<b>7</b>	<b>1.10</b>	<b>4,477</b>
<b>Cost of Developed Parkland</b>		<b>\$4,557,169</b>				
<b>Cost of Park Improvements</b>		<b>\$795,419</b>				
<b>Cost of Multi-Use Trails</b>		<b>\$289,161</b>				
<b>Cost of Recreation Facilities</b>		<b>\$742,503</b>				

**CREDIT EVALUATION**

A credit for future revenue generated by new development is only necessary if there is potential double payment for system improvements. In Evans, impact fee revenue will be used exclusively for growth-related capacity improvements. If elected make a legislative policy decision to fully fund growth-related improvements from impact fees, a credit for other revenue sources is unnecessary.

**PARKS, RECREATIONAL FACILITIES AND TRAILS INPUT VARIABLES AND IMPACT FEES**

Figure 9 provides a summary of the input variables (described in the chapter sections above) used to calculate the net capital cost per person for each Parks and Recreational Facilities component.

The residential Parks, Recreational Facilities and Trails Impact Fees are the product of persons per type of housing unit multiplied by the total net capital cost per person. An example of the calculation for an average single family unit is: the net capital cost per person (\$1,524.99) multiplied by the persons per housing unit (3.01) to arrive at the impact fee per average single family unit of \$4,594. Also shown is a comparison with the City’s current fees.

**Figure 9: Parks, Recreation Facilities and Trails Input Variables and Maximum Allowable Impact Fees**

<i>Parks and Recreational Facilities Capital Costs</i>	<i>Per Person</i>
Improved Parkland	\$1,083.75
Park Improvements	\$189.39
Multi-Use Trails	\$68.77
Recreational Facilities	\$176.58
Impact Fee Study	\$6.50
<b>GROSS CAPITAL COST</b>	<b>\$1,524.99</b>
<b>Revenue Credit</b>	<b>\$0.00</b>
<b>NET CAPITAL COST</b>	<b>\$1,524.99</b>

<i>Parks and Recreational Facilities Impact Fee Schedule</i>		<i>Impact Fee per Housing Unit</i>		
<i>Unit Type</i>	<i>Persons per Housing Unit [1]</i>	<i>Proposed Fee</i>	<i>Current Fee [2]</i>	<i>Increase (Decrease)</i>
Single Unit	3.01	\$4,594	\$4,604	(\$10)
2+ Unit	2.35	\$3,587	\$4,604	(\$1,017)
Manufactured Home	2.34	\$3,569	\$4,604	(\$1,035)

[1] TischlerBise. 2014 Impact Fee Demographic Data and Development Projections

[2] City of Evans, City Code Title 15 Buildings and Construction

**CASH FLOW PROJECTIONS**

This section summarizes the potential cash flow to the City, if the Parks, Recreational Facilities and Trails Impact Fees are implemented at the maximum allowable amounts. The cash flow projections are based on the assumptions detailed in this chapter. The summary provides an indication of the impact fee revenue generated by new development projected over the next ten years, and capital expenditures necessary to meet the demand for new Park and Recreational Facilities brought about by new development.

**Figure 10: Cash Flow Summary for Parks and Recreation**

**Ten-Year Growth-Related Costs for Parks and Recreational Facilities**

Improved Parkland	\$4,557,169
Park Improvements	\$795,419
Multi-Use Trails	\$289,161
Recreational Facilities	\$742,503
Impact Fee Study	\$7,898
<b>Total Projected Costs</b>	<b>\$6,392,150</b>

		<i>per Housing Unit</i>	
		<i>Single Unit</i>	<i>2+ Units</i>
		\$4,594	\$3,587
		<i>Housing Units Added</i>	
	<i>Year</i>		
	Base 2014	5,350	1,509
	Year 1 2015	5,438	1,534
	Year 2 2016	5,547	1,565
	Year 3 2017	5,658	1,596
	Year 4 2018	5,771	1,628
	Year 5 2019	5,887	1,660
	Year 6 2020	6,004	1,694
	Year 7 2021	6,125	1,727
	Year 8 2022	6,247	1,762
	Year 9 2023	6,372	1,797
	Year 10 2024	6,499	1,833
	<i>Ten-Yr Increase</i>	1,149	324
	Projected Fees (Rounded)=>	\$5,278,506	\$1,162,188
	<b>Total Projected Revenues</b>	<b>\$6,440,694</b>	
	Cumulative Net Surplus/(Deficit)	\$48,544	

## **POLICE**

### **OVERVIEW**

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The Police Impact Fee addresses the need for additional facilities, vehicles, and equipment that would be needed to support the greater demand for law enforcement services and facilities due to future residential and nonresidential development in Evans. The impact fee is derived using the incremental expansion methodology, meaning that the impact fee is calculated based on the cost of maintaining the City's current level of service to residential and nonresidential development. Figure 12 shows the methodology chart used for the Police Impact Fee.

### **Service Area**

The City of Evans provides a uniform level of Police service throughout the City. As a result, the service area for the category is citywide.

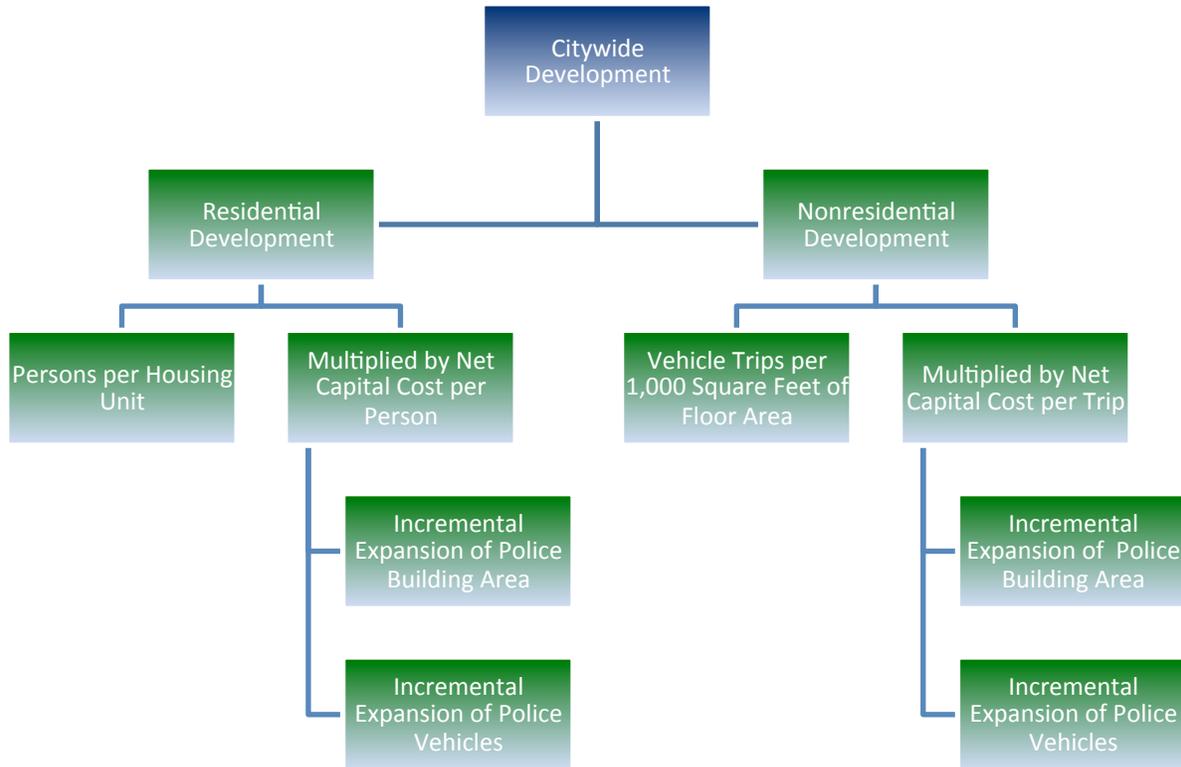
### **METHODOLOGY**

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Figure 11 shows that Police Impact Fees use different demand indicators for residential and nonresidential development. Residential impact fees are calculated on a per capita basis and then converted to a proportionate fee amount by type of housing, based on the number of persons per housing unit.

For nonresidential impact fees, TischlerBise recommends using nonresidential vehicle trips as the best demand indicator for Police facilities and equipment. Trip generation rates are used for nonresidential development because vehicle trips are highest for commercial developments, such as shopping centers, and lowest for industrial/warehouse development. Office and institutional trip rates fall between the other two categories. This ranking of trip rates is consistent with the relative demand for Police services from nonresidential development. Other possible nonresidential demand indicators, such as employment or floor area, will not accurately reflect the demand for service. For example, if employees per thousand square feet were used as the demand indicator, Police Impact Fees would be too high for office and institutional development because offices typically have more employees per 1,000 square feet than retail uses. If floor area were used as the demand indicator, Police Impact Fees would be too high for industrial development.

**Figure 11: Police Impact Fee Methodology Chart**



**PROPORTIONATE SHARE**

As shown in Figure 12, the Police Impact Fee uses functional population to determine the proportionate cost share for residential and nonresidential development. For residential development, the proportionate share factor is based on estimated person hours of non-working residents, plus the non-working hours of resident workers. Based on 2011 U.S. Census Bureau data, approximately 56% of Evan’s population worked in 2011. For resident workers, two-thirds of a day (i.e., annualized average) was allocated to residential demand. Time spent at work (i.e., annualized average of 8 hours per day) was allocated to nonresidential development. In 2011, the U.S. Census Bureau’s OnTheMap4 web application indicated that 391 town residents also worked in Evans, but 95% of workers commuted to out-of-town jobs. Total jobs located in Evans include 2,723 inflow commuters. Based on estimated person hours, the cost allocation for residential development is 82% while nonresidential development accounts for 18% of the demand for infrastructure.

**Figure 12: Proportionate Share Determination**

	Demand Units in 2011	Demand Hours/Day	Person Hours	Proportionate Share
<b>Residential</b>				
Estimated Residents	18,943			
56% Residents Not Working	10,694	20	213,880	
44% Employed Residents	8,249			
5% Employed in Service Area	391	14	5,474	
95% Employed outside Service Area	7,858	14	110,012	
<i>Residential Subtotal</i>			329,366	<b>82%</b>
<b>Nonresidential</b>				
Non-working Residents	10,694	4	42,776	
Jobs in Service Area	3,114			
Residents Employed in Service Area	391	10	3,910	
Non-Resident Workers (inflow Commuters)	2,723	10	27,230	
<i>Nonresidential Subtotal</i>			73,916	<b>18%</b>
<b>TOTAL</b>			<b>403,282</b>	<b>100%</b>

Source: 2011 population estimate from Colorado State Demography Office; U.S. Census Bureau, OnTheMap 6.1.1 Application and LEHD Origin-Destination Employment Statistics

**POLICE FACILITIES/VEHICLES AND COSTS**

**Police Buildings**

The City of Evans community is protected by a complement of 29 police officers who provide service 24-hours a day. Police Department offices are housed in the Evans Community Complex, which is located at 1100 37th Street.

The City plans to maintain the level of service for Police buildings in the future. There are several options for increasing space, including a new stand-alone Police Headquarters or a joint use facility with the Fire District. It is anticipated that more concrete plans will be made in the next few years. Therefore, an incremental expansion methodology is used to calculate this component until a new Police Station is programmed in the Capital Improvement Plan, which ensures new growth’s share of the cost is captured.

As shown in Figure 13, the Police Department currently occupies 6,168 square feet of the Evans Community Complex. Figure 13 also indicates residential/nonresidential proportionate share factors (from Figure 13 above), current level of service (LOS) standards, and cost per demand unit. The current

residential level of service is derived by multiplying the total square footage of Police space by the residential proportionate share factor and dividing by the estimated 2014 populations (6,168 X 82% / 19,200) resulting in a level of service of 0.263 square feet per person. Similarly, nonresidential level of service (LOS) is derived by multiplying total square footage by the proportionate share and dividing by total nonresidential vehicle trips (6,168 X 18% / 18,130) resulting in a level of service of .061 sq. ft. per nonresidential trip.

The cost per demand unit is derived using the total cost per square foot (\$236) and existing levels of service discussed above. For residential development, the cost per demand unit is \$62.17 per person. The cost per demand unit for nonresidential development is \$14.45 per nonresidential vehicle trip.

**Figure 13: Incremental Expansion – Police Buildings**

Facility	Total Square Feet	Cost per Square Foot [1]	Total Value
Evans Community Complex - Police Portion	6,168	\$236.00	\$1,455,648

Source: City of Evans, Police Department

[1] Based on 2003 cost per square foot of \$177.61 adjusted for inflation using BLS Consumer Price Index, plus \$20 per square foot multiplier for land

Land Use	Proportionate Share	2014 Demand Units	Square Feet per Demand Unit	Cost per Demand Unit
Residential	82%	19,200 Population	0.263	<b>\$62.17</b>
Nonresidential	18%	18,130 Nonres Vehicle Trips	0.061	<b>\$14.45</b>

### Police Vehicles Levels of Service Standards and Cost Factors

Figure 14 indicates the City’s current patrol car inventory, residential/nonresidential proportionate share factors, current level of service (LOS) standards, and cost per demand unit. In accordance with Colorado Impact Fee Act (SB15), Police vehicles qualify as an eligible cost component, given their five-year useful life. The current residential level of service is derived by multiplying the total vehicle inventory by the residential proportionate share factor and dividing by the total residential proportionate share factor and dividing by the estimated 2014 populations (10 X 82% / 19,200) resulting in a level of service of 0.00043 vehicles per person. Similarly, nonresidential level of service (LOS) is derived by multiplying total vehicles by the proportionate share and dividing by total nonresidential vehicle trips (10 X 18% / 18,130) resulting in a level of service of .00010 vehicles per nonresidential trip.

The cost per demand unit is derived using the average vehicle value (\$55,034) and existing levels of service discussed above. For residential development, the cost per demand unit is \$23.50 per person. The cost per demand unit for nonresidential development is \$5.46 per nonresidential vehicle trip.

**Figure 14: Incremental Expansion – Police Vehicles**

Vehicles	Units in Service	Unit Price	Total Value
Marked Patrol Cars	10	\$55,034	\$550,340

Source: City of Evans Police Department

Land Use	Proportionate Share	2014 Demand Units	Vehicles per Demand Unit	Cost per Service Unit
Residential	82%	19,200 Population	0.00043	<b>\$23.50</b>
Nonresidential	18%	18,130 Nonres Vehicle Trips	0.00010	<b>\$5.46</b>

**POLICE FACILITIES CAPITAL IMPROVEMENT NEEDS TO SERVE GROWTH**

Ten-year growth projections for the City of Evans suggest the City will add 4,205 new residents and 2,138 nonresidential vehicle trips. In order to maintain current levels of service for Police space and vehicles the City will need to make incremental investments. Shown in Figure 15 below is the square footage and vehicles needed to maintain current levels of service for each component and the total investment necessary based on 10-years of population growth.

**Figure 15: Projected Demand for Police Space and Vehicles**

		Demand Units		Facilities per Demand Unit	Vehicles per Demand Unit
Res LOS		Persons		0.26	0.00043
	Nonres LOS	Nonresidential Vehicle Trips		0.06	0.00010
		Average Cost per Unit		<b>\$236</b>	<b>\$55,034</b>

		Projected Demand (Rounded)			
		Projected Demand Units		Facilities (square feet)	Vehicles (units)
		Persons	Nonres. Vehicle Trips		
Base	2014	19,200	18,130	6,168	10
1	2015	19,584	18,326	6,281	10
2	2016	19,976	18,536	6,397	10
3	2017	20,375	18,749	6,515	11
4	2018	20,783	18,955	6,636	11
5	2019	21,198	19,168	6,758	11
6	2020	21,622	19,382	6,883	11
7	2021	22,055	19,604	7,010	11
8	2022	22,496	19,821	7,140	12
9	2023	22,946	20,044	7,272	12
10	2024	23,405	20,268	7,407	12
<b>Ten Yr Total</b>		<b>4,205</b>	<b>2,138</b>	<b>1,239</b>	<b>2</b>
<b>Cost of Facilities</b>		<b>\$292,316</b>			
<b>Cost of Vehicles</b>		<b>\$110,068</b>			

## **CREDIT EVALUATION**

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A credit for future revenue generated by new development is only necessary if there is potential double payment for system improvements. In Evans, impact fee revenue will be used exclusively for growth-related capacity improvements. If elected officials make a legislative policy decision to fully fund growth-related improvements from impact fees, a credit for other revenue sources is unnecessary.

## **POLICE FACILITIES INPUT VARIABLES AND IMPACT FEES**

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Figure 16 provides a summary of the input variables (described in the chapter sections above) used to calculate the net capital cost per person for each Police component.

The residential Police Impact Fees are the product of persons per type of housing unit multiplied by the total net capital cost per person. An example of the calculation for an average single family unit is: the net capital cost per person (\$91) multiplied by the persons per housing unit (3.01) to arrive at the impact fee per average single family unit of \$274. Figure 16 indicates proposed nonresidential Police Impact Fees for Evans. The average daily vehicle trips per 1,000 square feet (42.70 for commercial space) is multiplied by trip adjustment factor (33 percent) and the capital cost of \$19.99 per vehicle trip and divided by 1,000, which yields a Police Impact Fee of \$.28 per square foot.

**Figure 16: Police Input Variables and Maximum Allowable Impact Fees**

<i>Residential Capital Costs</i>	<u>Per Person</u>
Police Space	\$62.17
Police Vehicles	\$23.50
Impact Fee Study	\$5.33
<b>GROSS CAPITAL COST</b>	<b>\$91.00</b>
Revenue Credit	\$0.00
<b>NET CAPITAL COST</b>	<b>\$91.00</b>

<i>Police Impact Fee Schedule</i>		<u>Impact Fee per Housing Unit</u>		
<u>Unit Type</u>	<u>Persons per Housing Unit [1]</u>	<u>Proposed Fee</u>	<u>Current Fee [2]</u>	<u>Increase</u>
Single Unit	3.01	\$274	\$0	\$274
2+ Unit	2.35	\$214	\$0	\$214
Manufactured Home	2.34	\$212	\$0	\$212

[1] TischlerBise. 2014 Impact Fee Land Use Assumptions

[2] The City of Evans currently does not collect a Police impact fee

<i>Nonresidential Capital Costs</i>	<u>Per Trip</u>
Police Space	\$14.45
Police Vehicles	\$5.46
Impact Fee Study	\$0.07
<b>GROSS CAPITAL COST</b>	<b>\$19.99</b>
Revenue Credit	\$0.00
<b>NET CAPITAL COST</b>	<b>\$19.99</b>

<i>Police Impact Fee Schedule</i>			<u>Impact Fee per Square Foot of Floor Area</u>		
<u>Nonresidential Land Use</u>	<u>Trips [3]</u>	<u>Trip Rate Adj. Factors</u>	<u>Proposed Fee</u>	<u>Current Fee [4]</u>	<u>Increase (Decrease)</u>
	<i>(per 1,000 SF)</i>		<i>(Per 1,000 Square Feet of Floor Area)</i>		
Commercial	42.70	33%	\$0.28	\$0.00	\$0.28
Office/Institutional	11.03	50%	\$0.11	\$0.00	\$0.11
Industrial/Flex	6.97	50%	\$0.07	\$0.00	\$0.07

[3] Institute of Transportation Engineers. (2012). Trip Generation Manual 9th Edition.

[4] City of Evans, City Code Title 15 Buildings and Construction

**CASH FLOW PROJECTIONS**

This section summarizes the potential cash flow to the City, if the Police Impact Fees are implemented at the maximum allowable amounts. The cash flow projections are based on the assumptions detailed in this chapter. The summary provides an indication of the impact fee revenue generated by new development projected over the next ten years, and capital expenditures necessary to meet the demand for new Police space and vehicles brought about by new development.

**Figure 17: Cash Flow Summary for Police**

**Ten-Year Growth-Related Costs for Police Facilities**

Police Space	\$292,316
Police Vehicles	\$110,068
Impact Fee Study	\$7,898
<b>TOTAL</b>	<b>\$410,282</b>

		<i>per Housing Unit</i>		<i>Per Square Foot of Floor Area</i>		
		<i>Single Unit</i>	<i>2+ Units</i>	<i>Commercial</i>	<i>Office/Inst.</i>	<i>Industrial</i>
		<b>\$274</b>	<b>\$214</b>	<b>\$0.28</b>	<b>\$0.11</b>	<b>\$0.07</b>
		<i>Housing Units Added</i>		<i>Square Feet Added (1,000)</i>		
Base	2014	5,350	1,509	733	1,043	628
Year 1	2015	5,438	1,534	741	1,054	635
Year 2	2016	5,547	1,565	750	1,066	642
Year 3	2017	5,658	1,596	759	1,079	649
Year 4	2018	5,771	1,628	768	1,091	657
Year 5	2019	5,887	1,660	777	1,103	664
Year 6	2020	6,004	1,694	785	1,116	671
Year 7	2021	6,125	1,727	793	1,128	679
Year 8	2022	6,247	1,762	802	1,141	686
Year 9	2023	6,372	1,797	811	1,153	694
Year 10	2024	6,499	1,833	820	1,166	702
	<i>Ten-Yr Increase</i>	1,149	324	87	123	74
	Projected Fees (Rounded)=>	\$314,826	\$69,336	\$25,000	\$14,000	\$5,000
	<b>Total Projected Revenues</b>			<b>\$428,162</b>		
	Cumulative Net Surplus/(Deficit)			\$17,880		

## **FIRE/RESCUE**

### **OVERVIEW**

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The Fire/Rescue Impact Fee addresses the need for additional facilities, apparatus and equipment that would be needed to support the greater demand for Fire/Rescue services and facilities due to future residential and nonresidential development in Evans. The impact fee is derived using the incremental expansion methodology, meaning that the impact fee is calculated based on the cost of maintaining the City's current level of service to residential and nonresidential development. Figure 19 shows the methodology chart used for the Fire/Rescue Impact Fee.

### **Service Area**

Fire and emergency services are provided to City of Evans residents through the Evans Fire Protection District. There is a small area within the City boundaries south of the South Platte River, which is in the LaSalle Fire Protection District. Due to mutual aid, a uniform level of Fire/Rescue service is provided throughout the City. As a result, the service area for the category is citywide.

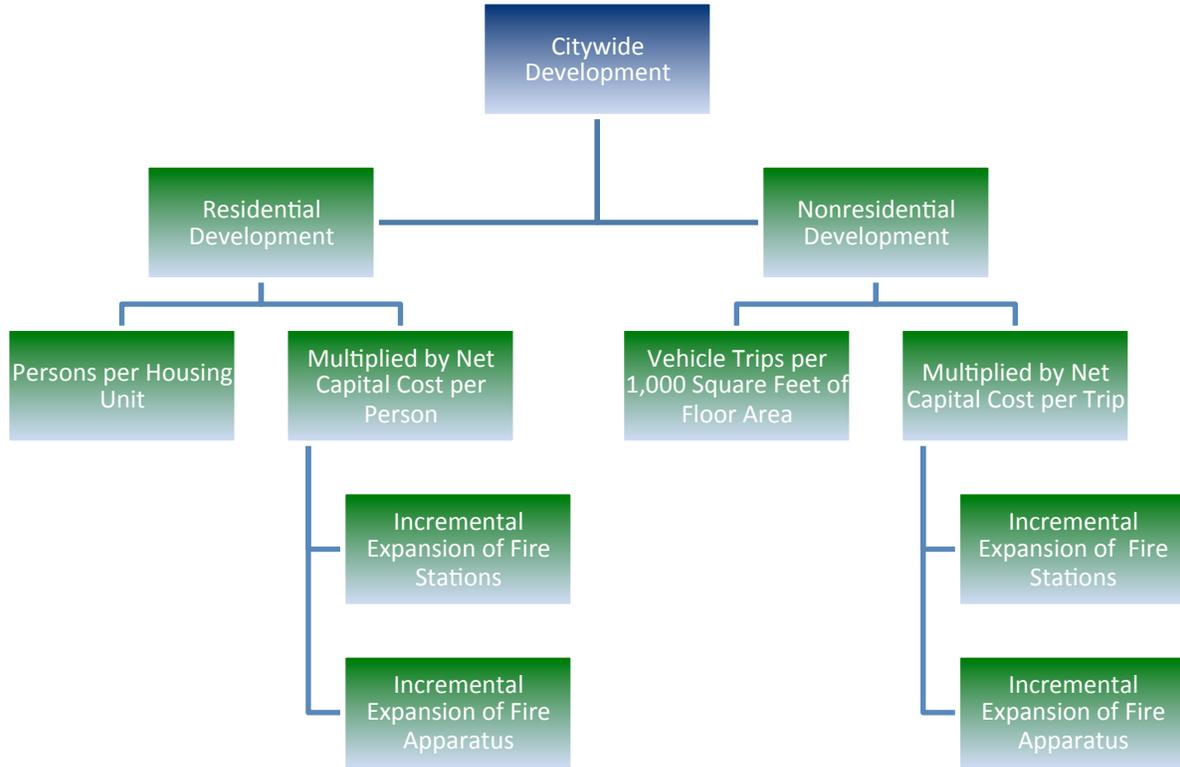
### **METHODOLOGY**

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Figure 18 below shows that Fire/Rescue impact fees use different demand indicators for residential and nonresidential development. Residential impact fees are calculated on a per capita basis and then converted to a proportionate fee amount by type of housing, based on the number of persons per housing unit.

According to discussions with District staff, the majority of calls for service are for emergency services responses, rather than fire protection, and the need for emergency services is driven by the presence of people. Therefore, TischlerBise recommends using nonresidential vehicle trips as the best demand indicator of demand for Fire/Rescue resulting from nonresidential development. This method will show that demand will be highest for commercial developments, such as shopping centers, and lowest for industrial/warehouse development. Office and institutional trip rates fall between the other two categories. This ranking of trip rates is consistent with the relative demand for Fire/Rescue from nonresidential development. Other possible nonresidential demand indicators, such as employment or floor area, will not accurately reflect the demand for service. For example, if employees per thousand square feet were used as the demand indicator, police impact fees would be too high for office and institutional development because offices typically have more employees per 1,000 square feet than retail uses. If floor area were used as the demand indicator, Fire/Rescue impact fees would be too high for industrial development.

**Figure 18: Fire/Rescue Impact Fee Methodology Chart**



**PROPORTIONATE SHARE**

Similar to Police, the Fire/Rescue impact fee uses functional population to determine the proportionate cost share for residential and nonresidential development. For residential development, the proportionate share factor is based on estimated person hours of non-working residents, plus the non-working hours of resident workers. Based on 2011 U.S. Census Bureau data, approximately 56% of Evan’s population worked in 2011. For resident workers, two-thirds of a day (i.e., annualized average) was allocated to residential demand. Time spent at work (i.e., annualized average of 8 hours per day) was allocated to nonresidential development. In 2011, the U.S. Census Bureau’s OnTheMap web application indicated that 391 town residents also worked in Evans, but 95% of workers commuted to out-of-town jobs. Total jobs located in Evans include 2,723 inflow commuters. Based on estimated person hours, the cost allocation for residential development is 82% while nonresidential development accounts for 18% of the demand for infrastructure.

**Figure 19: Proportionate Share Determination**

	Demand Units in 2011	Demand Hours/Day	Person Hours	Proportionate Share
<b>Residential</b>				
Estimated Residents	18,943			
56% Residents Not Working	10,694	20	213,880	
44% Employed Residents	8,249			
5% Employed in Service Area	391	14	5,474	
95% Employed outside Service Area	7,858	14	110,012	
<i>Residential Subtotal</i>			329,366	<b>82%</b>
<b>Nonresidential</b>				
Non-working Residents	10,694	4	42,776	
Jobs in Service Area	3,114			
Residents Employed in Service Area	391	10	3,910	
Non-Resident Workers (inflow Commuters)	2,723	10	27,230	
<i>Nonresidential Subtotal</i>			73,916	<b>18%</b>
<b>TOTAL</b>			<b>403,282</b>	<b>100%</b>

Source: 2011 population estimate from Colorado State Demography Office; U.S. Census Bureau, OnTheMap 6.1.1 Application and LEHD Origin-Destination Employment Statistics

**FIRE/RESCUE STATIONS/APPARATUS AND COSTS**

**Fire Stations**

The Evans Fire Protection District delivers fire and emergency services out of two fire stations (primarily Fire Station No. 2) within the City limits of Evans. Administrative and support offices for the department are located in Fire Station No. 2.

The District intends to maintain the level of service for Fire/Rescue stations in the future. There are several options for increasing space, somewhat dependent on where and when development and annexation occur. Therefore, an incremental expansion methodology is used to calculate the Station component of the impact fee.

As shown in Figure 20, the Evans Fire Protection District’s two stations total 14,612 square feet. Figure 21 also indicates residential/nonresidential proportionate share factors (from Figure 19 above), current level of service (LOS) standards, and cost per demand unit. The current residential level of service is

derived by multiplying the total square footage of Fire/Rescue space by the residential proportionate share factor and dividing by the estimated 2014 populations (14,612 X 82% / 19,200) resulting in a level of service of 0.624 square feet per person. Similarly, nonresidential level of service (LOS) is derived by multiplying total square footage by the proportionate share and dividing by total nonresidential vehicle trips (14,612 X 18% / 18,130) resulting in a level of service of .145 sq. ft. per nonresidential trip.

The cost per demand unit is derived using the total cost per square foot (\$360) and existing levels of service discussed above. For residential development, the cost per demand unit is \$224.65 per person. The cost per demand unit for nonresidential development is \$52.22 per nonresidential vehicle trip.

**Figure 20: Incremental Expansion – Fire/Rescue Stations**

Stations	Square Feet	Total Cost to Construct Today	Cost per Square Foot
Station 1	3,660	\$1,317,600	\$360
Station 2	10,952	\$3,942,720	\$360
<b>TOTAL</b>	<b>14,612</b>	<b>\$5,260,320</b>	<b>\$360</b>

Source: City of Evans

Land Use	Proportionate Share	2014 Demand Units	Square Feet per Demand Unit	Cost per Demand Unit
Residential	82%	19,200 Population	0.624	<b>\$224.65</b>
Nonresidential	18%	18,130 Nonres Vehicles Trips	0.145	<b>\$52.22</b>

### Fire/Rescue Apparatus Levels of Service Standards and Cost Factors

Figure 21 indicates the Evans Fire Protection District’s current inventory of apparatus, residential/nonresidential proportionate share factors, current level of service (LOS) standards, and cost per demand unit. The current residential level of service is derived by multiplying the total apparatus inventory by the residential proportionate share factor and dividing by the total residential proportionate share factor and dividing by the estimated 2014 populations (18X 82% / 19,200) resulting in a level of service of 0.00034 apparatus per person. Similarly, nonresidential level of service (LOS) is derived by multiplying total apparatus by the proportionate share and dividing by total nonresidential vehicle trips (8 X 18% / 18,130) resulting in a level of service of .00008 apparatus per nonresidential trip.

The cost per demand unit is derived using the average apparatus value (\$231,250) and existing levels of service discussed above. For residential development, the cost per demand unit is \$79.01 per person. The cost per demand unit for nonresidential development is \$18.37 per nonresidential vehicle trip.

**Figure 21: Incremental Expansion – Fire/Rescue Apparatus**

Vehicles and Apparatus	Units in Service	Cost per Unit	Total Value
Rosenbauer 78' Quint	1	\$700,000	\$700,000
Rosenbauer Engine	1	\$390,000	\$390,000
ALF Engine	1	\$400,000	\$400,000
Brush Truck/EMS Response	1	\$160,000	\$160,000
SUV/Trucks	4	\$50,000	\$200,000
<b>TOTAL</b>	<b>8</b>	<b>\$231,250</b>	<b>\$1,850,000</b>

Source: Evans Fire Protection District

Land Use	Proportionate Share	2014 Demand Units	Vehicles per Demand Units	Cost per Demand Unit
Residential	82%	19,200 Population	0.00034	<b>\$79.01</b>
Nonresidential	18%	18,130 Nonres Vehicles Trips	0.00008	<b>\$18.37</b>

**FIRE/RESCUE FACILITIES CAPITAL IMPROVEMENT NEEDS TO SERVE GROWTH**

Ten-year growth projections for the City of Evans suggest the City will add 4,205 new residents and 2,138 nonresidential vehicle trips. In order to maintain current levels of service for Police space and vehicles the City will need to make incremental investments. Shown in Figure 22 below is the square footage and vehicles needed to maintain current levels of service for each component and the total investment necessary based on 10-years of population growth.

**Figure 22: Projected Demand for Fire/Rescue Space and Apparatus**

	Demand Units	Facilities (square feet)	Apparatus (units)
Res LOS	Units Per Person	0.62405	0.00034
Nonres LOS	Units Per Vehicle Trip	0.14507	0.00008
	Average Cost per Component	<b>\$360</b>	<b>\$231,250</b>

		Projected Demand (Rounded)			
		Projected Demand Units		Facilities (square feet)	Apparatus (units)
		Persons	Nonres. Vehicle Trips		
Base	2013	19,200	18,130	14,612	8
1	2014	19,584	18,326	14,880	8
2	2015	19,976	18,536	15,155	8
3	2016	20,375	18,749	15,435	8
4	2017	20,783	18,955	15,720	9
5	2018	21,198	19,168	16,009	9
6	2019	21,622	19,382	16,305	9
7	2020	22,055	19,604	16,608	9
8	2021	22,496	19,821	16,914	9
9	2022	22,946	20,044	17,227	9
10	2023	23,405	20,268	17,546	10
<b>Ten Yr Total</b>		<b>4,205</b>	<b>2,138</b>	<b>2,934</b>	<b>2</b>
<b>Cost of Facilities</b>		<b>\$1,056,240</b>			
<b>Cost of Vehicles</b>					<b>\$462,500</b>

### CREDIT EVALUATION

A credit for future revenue generated by new development is only necessary if there is potential double payment for system improvements. In Evans, impact fee revenue will be used exclusively for growth-related capacity improvements. If elected make a legislative policy decision to fully fund growth-related improvements from impact fees, a credit for other revenue sources is unnecessary.

### FIRE/RESCUE FACILITIES INPUT VARIABLES AND IMPACT FEES

Figure 23 provides a summary of the input variables (described in the chapter sections above) used to calculate the net capital cost per person for each Police component.

The residential Fire/Rescue impact fees are the product of persons per type of housing unit multiplied by the total net capital cost per person. An example of the calculation for an average single family unit is: the net capital cost per person (\$363.23) multiplied by the persons per housing unit (3.01) to arrive at the impact fee per average single family unit of \$1,094. Figure 23 indicates proposed nonresidential Fire/Rescue impact fees for Evans. The average daily vehicle trips per 1,000 square feet (42.70 for commercial space) is multiplied by trip adjustment factor (33 percent) and the capital cost of \$83.27 per vehicle trip and divided by 1,000, which yields a Fire/Rescue impact fee of \$1.17 per square foot.

**Figure 23: Fire/Rescue Input Variables and Maximum Allowable Impact Fees**

<b>Residential Capital Costs</b>	<b>Per Person</b>
Fire Facilities	\$79.01
Fire Vehiles	\$224.65
Impact Fee Study	\$5.33
<b>GROSS CAPITAL COST</b>	<b>\$308.99</b>
<b>Revenue Credit</b>	<b>\$0.00</b>
<b>NET CAPITAL COST</b>	<b>\$308.99</b>

<b>Fire Impact Fee Schedule</b>		<b>Impact Fee per Housing Unit</b>		
<b>Unit Type</b>	<b>Persons per Housing Unit [1]</b>	<b>Proposed Fee</b>	<b>Current Fee [2]</b>	<b>Increase (Decrease)</b>
Single Unit	3.01	\$930	\$805	\$125
2+ Unit	2.35	\$726	\$805	(\$79)
Manufactured Home	2.34	\$723	\$805	(\$82)

[1] TischlerBise. 2014 Impact Fee Land Use Assumptions

[2] City of Evans, City Code Title 15 Buildings and Construction

<b>Nonresidential Capital Costs</b>	<b>Per Trip</b>
Fire Facilities	\$18.37
Fire Vehiles	\$52.22
Impact Fee Study	\$0.07
<b>GROSS CAPITAL COST</b>	<b>\$70.66</b>
<b>Revenue Credit</b>	<b>\$0.00</b>
<b>NET CAPITAL COST</b>	<b>\$70.66</b>

<b>Impact Fee Schedule</b>			<b>Impact Fee per Square Foot of Floor Area</b>		
<b>Nonresidential Land Use</b>	<b>Trips [3]</b>	<b>Trip Rate Adj. Factors</b>	<b>Proposed Fee</b>	<b>Current Fee [4]</b>	<b>Increase (Decrease)</b>
	<i>(per 1,000 SF)</i>		<i>(Per Square Feet of Floor Area)</i>		
Commercial	42.70	33%	\$1.00	\$0.46	\$0.54
Office/Institutional	11.03	50%	\$0.39	\$0.46	(\$0.07)
Industrial/Flex	6.97	50%	\$0.25	\$0.46	(\$0.21)

[3] Institute of Transportation Engineers. (2012). Trip Generation Manual 9th Edition.

[4] City of Evans, City Code Title 15 Buildings and Construction

## CASH FLOW PROJECTIONS

This section summarizes the potential cash flow to the City, if the Fire/Rescue impact fees are implemented at the maximum allowable amounts. The cash flow projections are based on the assumptions detailed in this chapter. The summary provides an indication of the impact fee revenue generated by new development projected over the next ten years, and capital expenditures necessary to meet the demand for new Police space and vehicles brought about by new development.

**Figure 24: Cash Flow Summary for Fire/Rescue Buildings**

**Ten-Year Growth-Related Costs for Fire Facilities**

Fire Facilities	\$1,056,240
Fire Vehicles	\$462,500
Impact Fee Study	\$7,898
<b>TOTAL</b>	<b>\$1,526,638</b>

		per Housing Unit		Per Square Foot of Floor Area		
		Single Unit \$930	2+ Units \$726	Commercial \$1.00	Office/Instit. \$0.39	Industrial \$0.25
		Housing Units Added		Square Feet Added (1,000)		
Base	2013	5,350	1,509	733	1,043	628
Year 1	2014	5,438	1,534	741	1,054	635
Year 2	2015	5,547	1,565	750	1,066	642
Year 3	2016	5,658	1,596	759	1,079	649
Year 4	2017	5,771	1,628	768	1,091	657
Year 5	2018	5,887	1,660	777	1,103	664
Year 6	2019	6,004	1,694	785	1,116	671
Year 7	2020	6,125	1,727	793	1,128	679
Year 8	2021	6,247	1,762	802	1,141	686
Year 9	2022	6,372	1,797	811	1,153	694
Year 10	2023	6,499	1,833	820	1,166	702
	<i>Ten-Yr Increase</i>	1,149	324	87	123	74
	Projected Fees (Rounded)=>	\$1,068,570	\$235,224	\$87,000	\$48,000	\$18,000
<b>Total Projected Revenues</b>		<b>\$1,456,794</b>				
Cumulative Net Surplus/(Deficit)		(\$69,844)				

# TRANSPORTATION

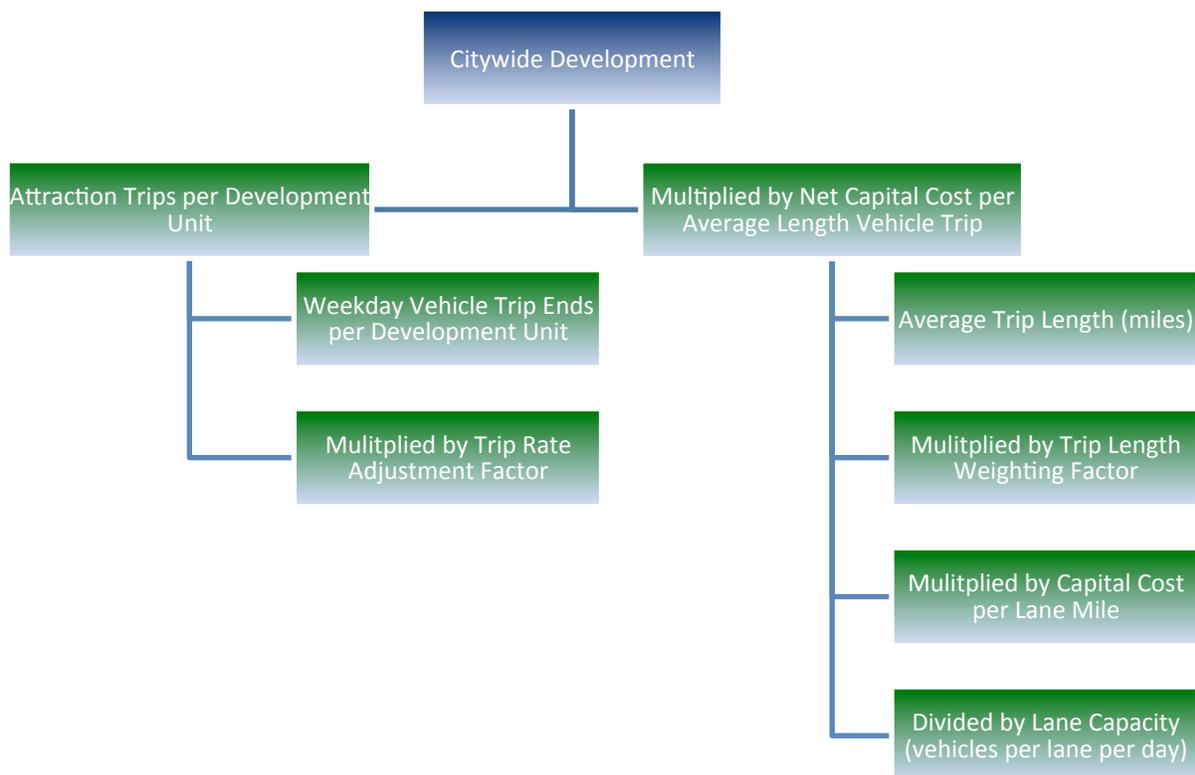
## METHODOLOGY

The City of Evans Transportation impact fees are calculated using a plan-based approach for system improvements, including arterial roads, and signalized intersections. As shown in Figure 25, trip generation rates by type of development are multiplied by the total capital cost per unit of trip capacity to yield the impact fees. The plan based approach for road improvements in Evans reflects those planned improvements that will increase system-wide capacity.

### Service Area

The City’s transportation network functions on a citywide basis. As a result, the service area for this impact fee category is citywide.

Figure 25: Transportation Impact Fee Methodology Chart



## EXISTING LEVELS OF SERVICE FOR TRANSPORTATION

The City currently maintains 69.52 lane miles of arterial and collector roads in the city owned and maintained system.

**Figure 26: City of Evans Transportation System Inventory**

Existing Lane Miles				
Existing Roadways	Lanes	Miles	Lane Miles	Daily Per-Lane Capacity
Arterials	2.00	13.66	27.33	6,000
Arterials	4.00	4.60	18.41	8,000
Collectors	2.00	7.08	14.15	5,000
Collectors	4.00	2.41	9.63	5,000
<b>TOTAL</b>	<b>12.00</b>	<b>27.75</b>	<b>69.52</b>	

Source: GIS Centerline Roads.

The steps to calculate a current level of service for the City’s street network involve calibrating existing development to the system network. To do so, development units by type are multiplied by adjusted vehicle trip ends per development unit. The factors used to calculate the current level of service expressed in Vehicle Miles of Travel (VMT) are discussed below, and shown in Figure 30 after the discussion.

**Trip Generation Rates**

Trip generation rates are from the reference book *Trip Generation* (Institute of Transportation Engineers, 2012). City of Evans Transportation Impact Fees are based on average weekday vehicle trip ends. A vehicle trip end represents a vehicle either entering or exiting a development (as if a traffic counter were placed across a driveway). To calculate the impact fees, trip generation rates are adjusted to avoid double counting each trip at both the origin and destination points. Therefore, the basic trip adjustment factor is 50 percent. As discussed below, the impact fee methodology includes additional adjustments to make the fees proportionate to the infrastructure demand for particular types of development.

### Residential Vehicle Trip Ends

As an alternative to simply using the national average trip generation rate for residential development, the Institute of Transportation Engineers (ITE) publishes regression curve formulas that may be used to derive custom trip generation rates using local demographic data. Key independent variables needed for the analysis (i.e., vehicles available, housing units, households, and persons) are only available from the ACS Estimates for Evans. This data was used to derive custom average weekday vehicle trip ends by type of housing, as shown in Figure 27.

**Figure 27: Average Weekday Vehicle Trip Ends by Housing Type**

	Vehicles Available [1]	Households by Structure Type[2]			Vehicles per Household by Tenure
		Single Unit	2+ Units	Total	
	A	B	C	D = B+C	E = A/D
Owner-occupied	7,134	3,419	131	3,550	2.01
Renter-occupied	4,610	1,350	1,176	2,526	1.83
<b>TOTAL</b>	<b>11,744</b>	<b>4,769</b>	<b>1,307</b>	<b>6,076</b>	<b>1.93</b>

[1] Vehicles available by tenure from Table B25046, American Community Survey, 2012.

[2] Households by tenure and units in structure from Table B25032, American Community Survey, 2012.

	Persons in Households [3]	Trip Ends [4]	Vehicles by Type of Housing	Trip Ends [5]	Average Trip Ends	Housing Units [6]	Trip Ends per Unit	
	F	G	H=Owner(B*E)+ Renter (B*E)	I	J = Avg of G,I	K	L= J/K	M
Single Units	15,040	38,927	9,335	53,954	46,440	5,115	9.10	9.52
2+ Units	3,465	11,959	2,409	9,787	10,873	1,473	7.40	6.65
<b>TOTAL</b>	<b>18,505</b>	<b>50,886</b>	<b>11,744</b>	<b>63,741</b>	<b>57,313</b>	<b>6,588</b>	<b>8.70</b>	

[3] Total population in households from Table 25033, American Community Survey, 2012.

[4] Vehicle trips ends based on persons using formulas from Trip Generation (ITE 2012). For single units (ITE 210), the fitted curve equation is  $EXP(0.91*LN(persons)+1.52)$ . To approximate the average population of the ITE studies, persons were divided by 27 and the equation result multiplied by 27. For 2+ units (ITE 220), the fitted curve equation is  $(3.47*persons)-64.48$ .

[5] Vehicle trip ends based on vehicles available using formulas from Trip Generation (ITE 2012). For single units (ITE 210), the fitted curve equation is  $EXP(0.99*LN(vehicles)+1.81)$ . To approximate the average number of vehicles in the ITE studies, vehicles available were divided by 36 and the equation result multiplied by 36. For 2+ units (ITE 220), the fitted curve equation is  $(3.94*vehicles)+293.58$ .

[6] Housing units from Table B25024, American Community Survey, 2012.

[7] Trip Generation, Institute of Transportation Engineers, 9th Edition (2012).

### Nonresidential Vehicle Trip Ends

Vehicle Trip Ends for nonresidential development are from the reference book, *Trip Generation* (Institute of Transportation Engineers, 2012). The shaded categories in Figure 28 represent the proxy categories for use in determining existing and projected trips from nonresidential development in Evans.

**Figure 28: The Institute of Transportation Engineers, Nonresidential Trip Ends, 2012**

ITE Code	Land Use	Demand Unit	Wkdy Trip Ends Per 1,000 Sq Ft [1]	Wkdy Trip Ends Per Employee [1]	Emp Per 1,000 Sq Ft	Sq Ft Per Emp [2]
<b>Industrial</b>						
110	Light Industrial	1,000 Sq Ft	6.97	3.02	2.31	433
130	Industrial Park	1,000 Sq Ft	6.83	3.34	2.04	489
140	Manufacturing	1,000 Sq Ft	3.82	2.13	1.79	558
150	Warehousing	1,000 Sq Ft	3.56	3.89	0.92	1,093
254	Assisted Living	bed	2.66	3.93	0.68	na
320	Motel	room	5.63	12.81	0.44	na
<b>Institutional</b>						
520	Elementary School	1,000 Sq Ft	15.43	15.71	0.98	1,018
530	High School	1,000 Sq Ft	12.89	19.74	0.65	1,531
540	Community College	student	1.23	15.55	0.08	na
550	University/College	student	1.71	8.96	0.19	na
565	Day Care	student	4.38	26.73	0.16	na
610	Hospital	1,000 Sq Ft	13.22	4.50	2.94	340
620	Nursing Home	1,000 Sq Ft	7.60	3.26	2.33	429
<b>Office</b>						
710	General Office (avg size)	1,000 Sq Ft	11.03	3.32	3.32	301
760	Research & Dev Center	1,000 Sq Ft	8.11	2.77	2.93	342
770	Business Park	1,000 Sq Ft	12.44	4.04	3.08	325
857	Discount Club	1,000 Sq Ft	41.80	32.21	1.30	771
<b>Commercial</b>						
820	Shopping Center (avg size)	1,000 Sq Ft	42.70	na	2.00	500

[1] Trip Generation, Institute of Transportation Engineers, 2012.

[2] Square feet per employee calculated from trip rates except for Shopping Center data, which are derived from the Urban Land Institute's Development Handbook and Dollars and Cents of Shopping Centers.

### Adjustment for Journey-To-Work Commuting

Residential development in the City of Evans has a larger trip adjustment factor of 65 percent to account for commuters leaving Evans for work. According to the National Household Travel Survey (2009), home-based work trips are typically 31 percent of “production” trips, also known as out-bound trips (which are 50 percent of all trip ends). Data from the LEHD for 2011 indicate that 95 percent of Evan’s employed residents travel outside the City for work. In combination, these factors ( $0.31 \times 0.50 \times 0.95 = 0.15$ ) account for 15 percent (rounded) of additional production trips. The total adjustment factor for residential includes attraction trips (50% of trip ends) plus the journey-to-work commuting adjustment for a total of 65 percent.

**Figure 29: Adjustment for Journey-to-Work Commuting**

<b>Trip Adjustment Factor for Commuters [1]</b>	
Employed Residents	8,249
Residents Working in City	391
Residents Commuting Outside City for Work	7,858
<b>Percent Commuting out of the City</b>	<b>95%</b>
Additional Production Trips [2]	15%
<b>Residential Trip Adjustment Factor</b>	<b>65%</b>

[1] U.S. Census Bureau, 2011 OnTheMap Application (version 6) and LEHD Origin-Destination Employment Statistics

[2] Outbound trip statistics from National Household Travel Survey, 2009: Table 30

### Adjustment for Pass-By Trips

For commercial and institutional development, the trip adjustment factor is less than 50 percent because these land uses attract vehicles as they pass by. For example, when someone stops at a convenience store or school on the way home from work, the convenience store is not the primary destination. For the average shopping center, the ITE data indicate that 34 percent of the vehicles that enter are passing-by on their way to some other primary destination. The remaining 66 percent of attraction trips have the commercial site as their primary destination. Because attraction trips are half of all trips, the trip adjustment factor is 66 percent multiplied by 50 percent, or approximately 33 percent of the trip ends. These factors are shown to derive inbound vehicle trips for each type of nonresidential land use.

### Trip Length Weighting Factor by Type of Land Use

The Transportation Impact Fees methodology includes a percentage adjustment, or weighting factor, to account for trip length variation by type of land use. As documented in Table 6 of the 2009 National Household Travel Survey, vehicle trips from residential development are approximately 121 percent of the average trip length. The residential trip length adjustment factor includes data on home-base work trips, social, and recreational purposes. Conversely, shopping trips associated with commercial development are roughly 66 percent of the average trip length while other nonresidential development typically accounts for trips that are 73 percent of the average for all trips.

### Lane Capacity

Transportation impact fees are based on established daily per-lane capacities for each classification of roadways. According to the 2004 City of [Evans Transportation Plan](#) completed for the City by Felsburg, Holt and Ullevig, the daily per-lane capacity of major arterials in Evans is 8,000. Minor arterials were established to have a daily per-lane capacity of 6,000. Collectors were established to each have a 5,000 daily per-lane capacity.

### **Summary of Demand Model Inputs**

Figure 30 shows the calibration of existing development to the City’s current street network of 2-lane arterial roads. Knowing the current lane miles of 2-lane arterial streets (27.33), TischlerBise determined a weighted-average trip length of 3.67 miles on the current system using a series of spreadsheet iterations. As shown in Figure 30 below, based on the trip generation, trip adjustment, and trip length factors discussed above, existing development within Evans attracted an estimated 218,676 Vehicle Miles of Travel (VMT) in 2014. A VMT is a measurement unit equal to one vehicle traveling one mile. In the aggregate, VMT is the product of vehicle trips multiplied by the average trip length<sup>1</sup>. The current infrastructure standard is 1.25 lane miles per 10,000 vehicle miles of travel (i.e., 27.33 lane miles divided by 218,676 VMT expressed in ten-thousands).

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<sup>1</sup> Typical VMT calculations for development-specific traffic studies, along with most transportation models of an entire urban area, are derived from traffic counts on particular road segments multiplied by the length of that road segment. For the purpose of impact fees, VMT calculations are based on attraction (inbound) trips to development located in the service area, with the trip lengths calibrated to the road network considered to be system improvements. This refinement eliminates pass-through or external- external trips, and travel on roads that are not system improvements (e.g. interstate highways).

**Figure 30: Existing Level of Service on the City Street Network**

		[A]	[B]	[A]X[B]=[C]	X[D]
Development Type [1]	Dev. Unit	Avg Wkdy Veh Trip Ends per Dev. Unit [2]	Trip Adjustment Factors [3]	Trip Length	Trip Length Weighting Factor [4]
<b>RESIDENTIAL</b>					
Single Units	HU	9.10	65%	5.92	121%
2+ Units	HU	7.40	65%	4.81	121%
<b>NONRESIDENTIAL</b>					
Commercial	KSF	42.70	33%	14.09	66%
Office/ Other	KSF	11.03	50%	5.52	73%
Industrial	KSF	6.97	50%	3.49	73%
Institutional	KSF	15.43	33%	5.09	73%
Average Trip Length (Miles) [5]		3.67			
Capacity per Lane		8,000			
Base Year 2014					

Development Unit	
Single Units	5,350
2+ Units	1,509
Commercial KSF	733
Office/ Other KSF	719
Industrial KSF	628
Institutional KSF	324
Vehicle Trips	
Single Units	31,645
2+ Units	7,258
Commercial KSF	10,329
Office KSF	3,964
Industrial KSF	2,188
Institutional KSF	1,649
TOTAL Trips	57,033
Vehicle Miles of Travel (VMT)	218,676
Total Arterial Lane Miles (2 Lanes)	27.33
Lane Miles per 10,000 VMT	1.25

[1] KSF = square feet of floor area in thousands.

[2] Residential: TischlerBise Impact Fee Land Use Assumptions; Nonresidential: Trip Generation, Institute of Transportation Engineers, 2012.

[3] On an average weekday, half of all trip ends are inbound. Retail and institutional include 34% pass-by adjustment (i.e. 66% are primary trips) half of which are trip ends. The residential adjustment factor accounts for 65% of employed residents commuting to jobs outside the Community.

[4] Table 6, National Household Travel Survey, 2009.

[5] TischlerBise

## PROJECTED TRAVEL DEMAND

The projected need for system lane miles is a function of the ten-year development forecast (see Appendix A) and the existing infrastructure standards discussed above. A typical vehicle trip, such as a person leaving their home and traveling to work, generally begins on a local street that connects to a collector street, which connects to an arterial road and eventually to a state or interstate highway. For the purpose of impact fees, this progression of travel up and down the functional classification chain narrows the average trip length determination to the following question, “what is the average vehicle

trip length on Transportation Impact Fee system improvements (i.e., the same type of streets used to document current infrastructure standards)?”

As shown in Figure 31 below, new development increases vehicle miles of travel on 2-lane arterials from 218,675 in 2014 to 261,196 in 2024, for a net increase of 42,521 VMT. When VMT is compared to the current infrastructure (existing level of service) standards discussed previously new development generates the need for an additional 5.32 lane miles of City-maintained roads in the next 10 years in order to maintain the current level of service.

**Figure 31: Transportation Improvement Demand Model**

	Base Yr	1	2	3	4	5	10
Year->	2014	2015	2016	2017	2018	2019	2024
<b>DEMAND DATA</b>							
SINGLE UNIT	5,350	5,438	5,547	5,658	5,771	5,887	6,499
2+ UNIT	1,509	1,534	1,565	1,596	1,628	1,660	1,833
SINGLE UNIT TRIPS	31,645	32,166	32,811	33,467	34,135	34,822	38,442
2+ UNIT TRIPS	7,258	7,379	7,528	7,677	7,831	7,985	8,817
<b>RES TRIPS</b>	<b>38,903</b>	<b>39,545</b>	<b>40,339</b>	<b>41,144</b>	<b>41,966</b>	<b>42,807</b>	<b>47,259</b>
COMMERCIAL KSF	733	741	750	758	767	775	820
OFFICE KSF	719	727	735	743	752	760	804
INDUSTRIAL KSF	628	635	642	649	656	664	702
INSITUTIONAL KSF	324	327	331	335	338	342	361
COMMERCIAL TRIPS	10,329	10,441	10,561	10,681	10,801	10,921	11,548
OFFICE TRIPS	3,964	4,009	4,054	4,100	4,145	4,192	4,434
INDUSTRIAL TRIPS	2,188	2,212	2,236	2,262	2,288	2,313	2,446
INSTITUTIONAL TRIPS	1,649	1,664	1,685	1,706	1,721	1,742	1,840
<b>NONRES TRIPS</b>	<b>18,130</b>	<b>18,326</b>	<b>18,536</b>	<b>18,749</b>	<b>18,955</b>	<b>19,168</b>	<b>20,268</b>
<b>Total VMT on Planned Improv.</b>	<b>218,675</b>	<b>222,022</b>	<b>226,080</b>	<b>230,195</b>	<b>234,366</b>	<b>238,640</b>	<b>261,196</b>
Lane Miles	27.33	27.75	28.26	28.77	29.30	29.83	32.65
Annual Lane Mile Increase		0.42	0.51	0.51	0.52	0.53	0.58
<b>Cumulative Lane Miles</b>		<b>0.42</b>	<b>0.93</b>	<b>1.44</b>	<b>1.96</b>	<b>2.50</b>	<b>5.32</b>

Source: TischlerBise

**COST PER LANE MILE AND POTENTIAL IMPACT FEE ELIGIBLE PROJECTS**

Figure 32 summarizes a list of potential transportation system improvement projects the City will fund through impact fees. The projects are from the Evans Transportation Plan. This list of projects is also used to determine the cost per lane mile factor used in the impact fee calculation. As shown in Figure 32 potential impact fee funded projects total \$34.9 million. When this total is compared to the increase in lane miles (26.7), the cost per lane mile \$1,310,261.

**Figure 32: Summary of Growth-Related Transportation Projects (10-Year Plan)**

Location	From	To	Lanes 2014	Future Lane Miles	LaneMi Miles	Increase	City Cost	\$/LnMi
35th Ave Widening	Prairie View	49th St	2	4	0.7	1.4	\$1,700,000	\$1,246,667
35th Ave	CR 394	Hwy 85	2	4	3.0	6.0	\$7,000,000	\$1,169,620
23rd Ave	42nd St	49th St	2	4	0.5	0.9	\$400,000	\$422,400
47th Ave Widening	32nd St	37th St	2	4	0.5	1.0	\$750,000	\$754,286
35th Ave Widening	Prairie View	49th St	2	4	0.7	1.4	\$1,700,000	\$1,246,667
37th St Widening	47th Ave	65th Ave	2	4	1.5	3.0	\$3,200,000	\$1,056,000
65th Ave Widening	37th St	N City Limits	2	4	0.5	1.0	\$800,000	\$804,571
49th St Widening	35th Ave	65th Ave	2	4	3.0	2.7	\$7,860,795	\$2,911,406
65th Ave Widening	49th St	54th St	2	4	0.8	1.5	\$1,900,000	\$1,254,000
37th St Widening	35th Ave	47th Ave	2	4	1.1	2.3	\$3,363,637	\$1,480,000
65th Ave Widening	37th Ave	S City Limits	2	4	1.0	2.0	\$1,504,545	\$749,434
23rd Ave Widening	37th St	42nd St	2	4	0.5	1.0	\$2,273,864	\$2,286,858
Two Rivers Parkway	37th St	49th St	2	4	1.0	2.0	\$1,488,637	\$744,319
35th Ave Widening	37th St	Prairie View	2	4	0.3	0.5	\$1,040,000	\$1,961,143
Subtotal						26.7	\$34,981,478	\$1,310,261
Cost Per Lane Mile							\$1,310,261	

**TRANSPORTATION INPUT VARIABLES AND IMPACT FEES**

Figure 15 provides a summary of the input variables (described in the chapter sections above) used to calculate the net capital cost per vehicle mile of travel for Transportation improvements.

The residential Transportation Impact Fees are the product of adjusted residential vehicle miles of travel multiplied by the total net capital cost per VMT (\$164.38). Also shown is a comparison with the City’s current fees. For example, the net capital cost per VMT (\$164.20) multiplied by the single unit Vehicle Miles Travel factor (26.27) resulting in a Transportation Impact Fee of \$4,317 per housing unit. The nonresidential Transportation Impact Fees are calculated in the same way. Fees are provided for three categories of nonresidential land use. TischlerBise used 2012 weekday vehicle trip ends factors published by The Institute of Transportation Engineers in Trip Generation, 9<sup>th</sup> Edition for the *Weekday Vehicle Trip Ends* factors by land use.

**Figure 33: Transportation Input Variables and Maximum Allowable Impact Fees**

**Street Level Of Service and Capital Costs**

Lane Miles Needed to Maintain LOS	5.32
Cost Per Lane Mile	\$1,310,261
Total Cost of System Improvements	\$6,964,239
Net Increase in VMT	42,521
<b>Cost per VMT</b>	<b>\$163.78</b>
Impact Fee Study Cost per VMT	\$0.59
<b>NET CAPITAL COST</b>	<b>\$164.38</b>

**Residential Schedule**

	[A]	[B]	[C]	[D]	VMT = [A] x [B] x [C] x [D]			
	Weekday Vehicle Trip Ends	Trip Rate Adjustment Factors	Avg Miles per Veh. Trip on System	Trip Length Weighting Factors	VMT	Proposed Impact Fee	Current Fee	Increase (Decrease)
Unit Type					per unit	(Per Housing Unit)		
Single Unit	9.10	65%	3.67	121%	26.27	\$4,317	\$1,894	\$2,423.00
2+ Unit	7.40	65%	3.67	121%	21.36	\$3,511	\$1,306	\$2,205.00
Manufactured Home	9.10	65%	5.22	121%	37.36	\$6,141	\$1,894	\$4,247.00

**Nonresidential Schedule**

	[A]	[B]	[C]	[D]	VMT = [A] x [B] x [C] x [D]			
	Weekday Vehicle Trip Ends	Trip Rate Adjustment Factors	Avg Miles per Veh. Trip on System	Trip Length Weighting Factors	VMT	Proposed Impact Fee	Current Fee	Increase (Decrease)
					(Per 1,000 sq. ft.)	(Per Square Foot of Floor Area)		
Commercial	42.70	33%	3.67	66%	34.13	\$5.61	\$2.36	\$3.26
Office/Institutional	11.03	50%	3.67	73%	14.78	\$2.42	\$1.82	\$0.60
Industrial	6.97	50%	3.67	73%	9.34	\$1.53	\$0.55	\$0.98

**CASH FLOW PROJECTIONS**

This section summarizes the potential cash flow to the City of Evans, if the Transportation Impact Fees are implemented at the maximum allowable amounts. The cash flow projections are based on the assumptions detailed in this chapter. To the extent the rate of development either accelerates or slows down from those detailed in Appendix A, there will be a corresponding change in the impact fee revenue available for the prioritized projects.

The cash flow summary provides an indication of the impact fee revenue generated by new development over the next ten years, and capital expenditures necessary to meet existing and new demand for new Transportation system improvements.

**Figure 34: Cash Flow Summary for Transportation**

**Ten-Year Growth-Related Costs for Transportation Improvements**

Total Cost of System Improvements	\$6,964,239
Impact Fee Study	\$11,847
<b>TOTAL</b>	<b>\$6,976,086</b>

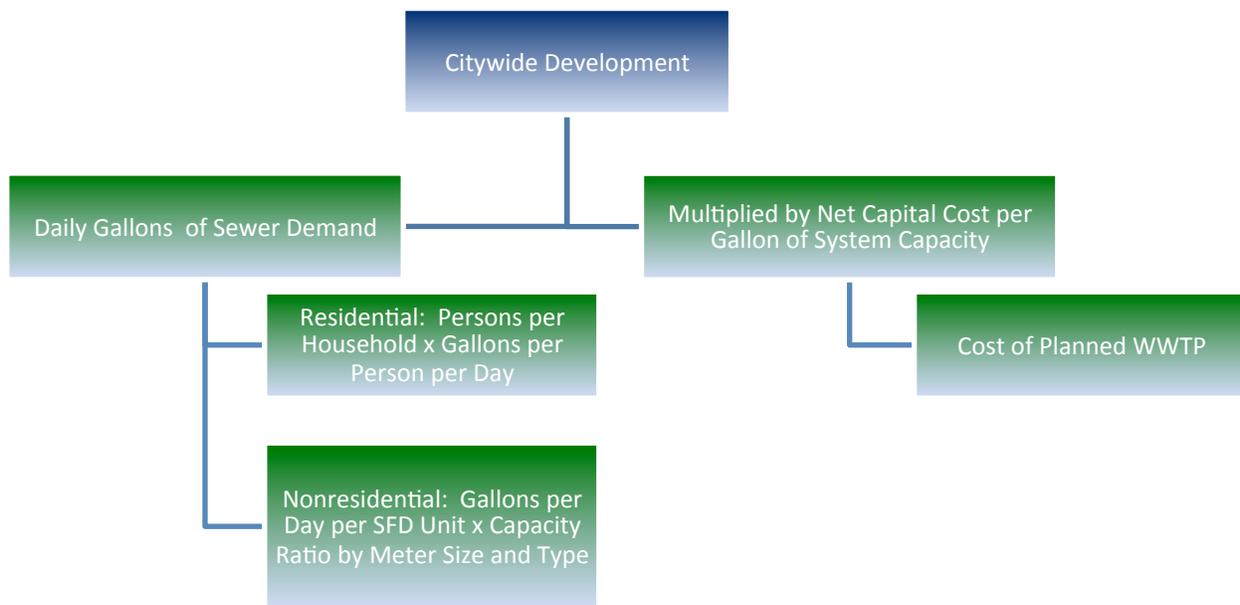
		<i>per Housing Unit</i>		<i>Per Square Foot of Floor Area</i>		
		<i>Single Unit</i>	<i>2+ Units</i>	<i>Commercial</i>	<i>Office/Inst.</i>	<i>Industrial</i>
		<b>\$4,317</b>	<b>\$3,511</b>	<b>\$5.61</b>	<b>\$2.42</b>	<b>\$1.53</b>
		<i>Housing Units Added</i>		<i>Square Feet Added (1,000)</i>		
Base	2014	5,350	1,509	733	1,043	628
Year 1	2015	5,438	1,534	741	1,054	635
Year 2	2016	5,547	1,565	750	1,066	642
Year 3	2017	5,658	1,596	759	1,079	649
Year 4	2018	5,771	1,628	768	1,091	657
Year 5	2019	5,887	1,660	777	1,103	664
Year 6	2020	6,004	1,694	785	1,116	671
Year 7	2021	6,125	1,727	793	1,128	679
Year 8	2022	6,247	1,762	802	1,141	686
Year 9	2023	6,372	1,797	811	1,153	694
Year 10	2023	6,499	1,833	820	1,166	702
<i>Ten-Yr Increase</i>		1,149	324	87	123	74
Projected Fees (Rounded)=>		\$4,960,233	\$1,137,564	\$488,000	\$298,000	\$113,000
<b>Total Projected Revenues</b>		<b>\$6,996,797</b>				
Cumulative Net Surplus/(Deficit)		\$20,711				

## WASTEWATER

### METHODOLOGY

Wastewater Impact Fees are derived using a plan-based approach. As shown in Figure 35, the impact fees are based on the average daily gallons of sewage flow demand for a single-family housing unit and the net capital cost per gallon of system capacity. Wastewater Impact Fees are based on the cost of the proposed wastewater treatment plant. Impact fees paid by nonresidential development are derived from capacity ratios according to the size of the new customer’s water meter. Capacity ratios were obtained from the American Water Works Association (AWWA).

Figure 35. Wastewater Impact Fee Methodology



### LEVEL OF SERVICE/PROPORTIONATE SHARE ANALYSIS FOR WASTEWATER DEMAND

Wastewater use by current customers was determined from the City’s utility billing records. The City of Evans does not track wastewater consumption by customer, so water consumption by customer is used as a proxy for wastewater demand. The number of utility customers (the City does not differentiate between water and sewer customers) and use for 2013 is shown in Figure 36. As shown in Figure 36, Evans has 6,557 connections with average daily demand of 1.74 million gallons per day. This equates to average daily demand of 266 gallons per day per connection and 253 gallons per day per residential connection.

**Figure 36. Average Day Utility System Demand**

Current Usage	Customer Connections	Average Day	Average Day	Gallons Per Day Per Person*
		Gallons per Land Use	Gallons per Connection	
Residential	6,316	1,186,921	253	90
Nonresidential	241	559,779	2,323	
<b>TOTAL 6,557</b>		<b>1,746,700</b>	<b>266</b>	

Source: Evans Finance Department

\*Gallons per day per person based on an average persons per housing unit of 2.81

### PROJECTION OF WASTEWATER SYSTEM DEMAND

Annual wastewater demand projections are shown in Figure 37 for informational purposes. Projected utility demand is a function of the development projections (discussed in Appendix A) and the wastewater demand factors shown above in Figure 35 (266 gallons per day per customer). Based on the increase in utility customers shown below, wastewater system demand will be approximately 2.16 million gallons per day (MGD) by 2024.

**Figure 37. Projected Wastewater System Demand**

		Demand Unit: Connections				Service Unit: MGD			
		Housing Units	Jobs	Residential	Nonresidential	Total	Residential	Nonresidential	Total
Year				0.92 Con/HU	23 Jobs/Con		253 Gal/Con	2,323 Gal/Con	
Base	2014	6,859	5,621	6,316	241	6,557	1.19	0.56	1.75
1	2015	6,972	5,684	6,420	244	6,664	1.21	0.57	1.78
2	2016	7,112	5,748	6,549	246	6,795	1.25	0.57	1.82
3	2017	7,254	5,813	6,680	249	6,929	1.28	0.58	1.86
4	2018	7,399	5,878	6,813	252	7,065	1.31	0.59	1.90
5	2019	7,547	5,944	6,950	255	7,205	1.35	0.59	1.94
6	2020	7,698	6,011	7,089	258	7,347	1.38	0.60	1.98
7	2021	7,852	6,079	7,230	261	7,491	1.42	0.61	2.02
8	2022	8,009	6,147	7,375	264	7,639	1.45	0.61	2.07
9	2023	8,169	6,216	7,522	267	7,789	1.49	0.62	2.11
10	2024	8,332	6,286	7,672	270	7,942	1.53	0.63	2.16
<b>Ten Yr Increase</b>		<b>1,473</b>	<b>665</b>	<b>1,356</b>	<b>29</b>	<b>1,385</b>	<b>0.343</b>	<b>0.067</b>	<b>0.410</b>

### PLANNED WASTEWATER SYSTEM IMPROVEMENTS

#### Treatment

As Figure 38 indicates, the City currently has two wastewater treatment facilities, totaling 1.70 million gallons of daily treatment capacity. These two facilities are presently at capacity.

**Figure 38. Sewer Capital Improvement Program-Treatment**

Existing Facilities				
<i>Wastewater Treatment</i>	<i>Total Capacity (MGD)</i>	<i>Usage (MGD)</i>	<i>Remaining</i>	<i>Today's Value</i>
Evans System	1.20	1.20	0.00	\$12,000,000
Hill n/ Park System	0.50	0.50	0.00	\$5,000,000

Figure 39 indicates the City’s capital plan for increasing wastewater treatment capacity. As Figure 39 indicates, the City plans on constructing a new wastewater treatment plant with 3.0 millions of gallons of daily capacity, with a total cost of \$30 million. The cost per demand unit of \$10.00 per gallon of capacity was determined by dividing the future treatment plant cost (\$30,000,000) by the increase in treatment capacity.

**Figure 39. Wastewater Treatment Projects**

<i>Wastewater Treatment</i>	<i>Total Capacity (MGD)</i>	<i>Cost</i>	<i>Cost per Gallon</i>
New Wastewater Treatment Plant	3.00	\$30,000,000	\$10.00

**Collection**

Figure 40 indicates the City’s capital plan for sewer collection projects over the next ten years. As the Figure indicates, collection projects total \$7,883,000. These cost estimates were provided by the City of Evans Finance Department. The cost per demand unit of \$6.06 per gallon was determined by dividing the future collection improvement costs (\$7,883,000) by the increase in system capacity provided by these pipes (1,300,000 gallons per day).

**Figure 40. Collection Projects**

<i>Collection</i>	<i>Total Capacity (MGD)</i>	<i>Original Cost</i>	<i>Cost per Gallon</i>
40th and Pueblo Street-Phase I		\$1,502,000	
43rd Street		\$2,080,000	
37th Street Area		\$617,000	
49th Street		\$3,684,000	
	1.30	<b>\$7,883,000</b>	<b>\$6.06</b>

**WASTEWATER INPUT VARIABLES AND IMPACT FEES**

Input variables for the Wastewater Impact Fees are shown in the upper section of Figure 41. Residential fees are calculated by multiplying the number of persons per housing unit by type of housing unit by the

average number of gallons per person per day. The average number of gallons per housing unit is then multiplied by the net capital cost per gallon of system capacity. For example, the calculation for a single family housing unit is 3.01 persons per housing unit x 90 gallons per person per day = 271 gallons per day per housing unit. This figure is then multiplied by the net capital cost per gallon of \$16.06 for a Wastewater Impact Fee of \$4,354.

Nonresidential fees are based on size and type of meter and their restrictive capacity. The capacity ratios by meter size and type are from the American Water Works Association (AWWA). The demands of an average single family housing unit are used as the basis of the calculation.

**Figure 41. Wastewater Input Variables and Maximum Allowable Impact Fees**

<b>Level Of Service</b>		<i>Standards:</i>		
Gallons per Person per Day			90	
Capital Cost per Gallon-Treatment			\$10.00	
Capital Cost per Gallon-Collection			\$6.06	
Net Capital Cost per Gallon			<b>\$16.06</b>	

<b>Residential Impact Fees per Housing Unit</b>				
Unit Type	Persons per Housing Unit	Impact Fee Per Housing Unit	Current Fee	Increase (Decrease)
Single Unit	3.01	\$4,354	\$4,024	\$330
2+ Unit	2.35	\$3,400	\$4,024	(\$624)
Manufactured Home	2.34	\$3,383	\$4,024	(\$641)

<b>Nonresidential</b>				<b>Per Meter</b>	<b>Current Fee</b>	<b>Increase (Decrease)</b>
Meter Size (inches)*		Capacity Ratio	Proposed Fee			
0.75	Displacement	1.00	\$3,400	\$4,024	(\$624)	
1.00	Displacement	1.70	\$7,394	\$6,721	\$673	
1.50	Displacement	3.30	\$14,354	\$13,401	\$953	
2.00	Compound	5.30	\$23,054	\$21,450	\$1,604	
3.00	Compound	10.70	\$46,544	\$42,940	\$3,604	
4.00	Compound	16.70	\$72,644	\$67,086	\$5,558	

\* Fees for meters larger than four inches will be based on annualized average day demand and the net capital cost per gallon of capacity.

**APPENDIX A: DEMOGRAPHIC DATA AND DEVELOPMENT PROJECTIONS**

The population, housing unit, job, and nonresidential floor area projections discussed in this document provide the foundation for the Impact Fee Study. To evaluate the demand for growth-related infrastructure from various types of development, TischlerBise prepared documentation on population, housing units by type, jobs, floor area by type of nonresidential development, and average weekday vehicle trip generation rates. These metrics (explained further below) are the service units and demand indicators that will be used in the Impact Fee Study.

The demographic data and development projections will be used to demonstrate proportionality and anticipate the need for future infrastructure. Demographic data reported by the U.S. Census Bureau, and data provided by the City, are used to calculate base year estimates and annual projections for a 10-year horizon. Typically, impact fee studies look out five to ten years, with the expectation that fees will be periodically updated (every three to five years).

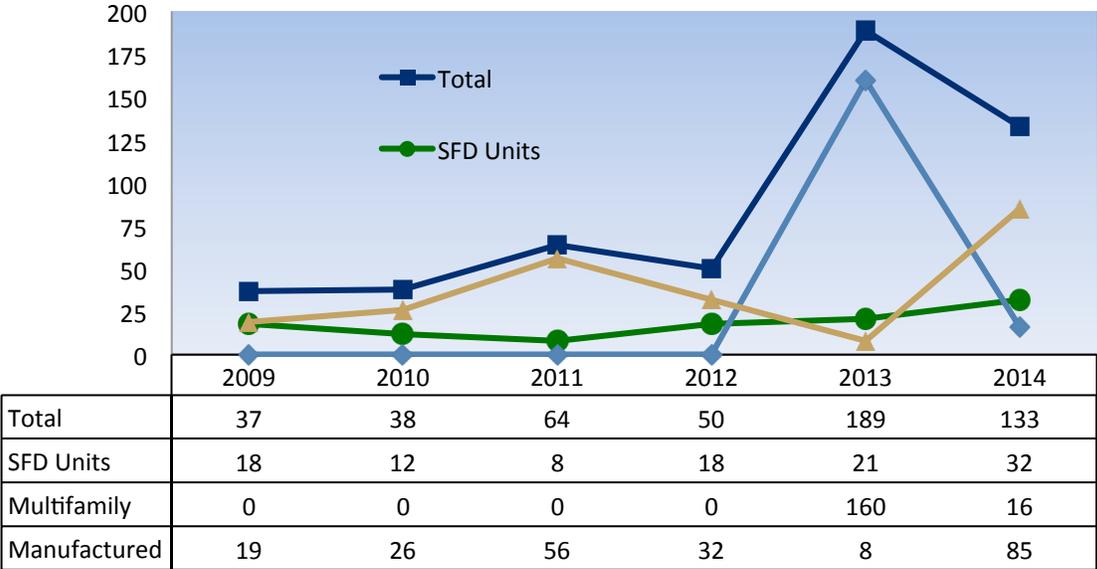
**RESIDENTIAL DEVELOPMENT**

Current estimates and future projections of residential development are detailed in this section, including population and housing units by type.

**Recent Residential Construction**

Figure A1 shows residential building permit trends since 2009 by type of housing unit (tracked by the City of Evans). Recent building activity suggests increasing market demand, which is reflected in the residential development projections discussed in the next section.

**Figure A1: Residential Building Permits in the City of Evans, 2009-2014**



• Source: City of Evans

## Residential Estimates and Projections

Based on an analysis of base year estimates provided by the City, data compiled by the City of Evans for its 2010 Comprehensive Plan Update, and recent residential building trends, over the next decade, the City is projected to add population at a compound annual growth rate of two percent. This equates to an additional 4,205 persons above the 2014 base year estimate of 19,200, which was provided by the City.

Given the expectation that impact fees are updated every three to five years, TischlerBise held constant base year demographic indicators, including the average *Persons per Housing Unit* (PPHU) factor of 2.81, derived from 2012 American Community Survey 5-Year Estimates for Evans. As discussed further below, TischlerBise recommends the use of PPHU to derive impact fees.

The base year housing unit estimate is calculated as follows: 19,200 [population] / 2.81[PPHU] = 6,835 [housing units]. To calculate housing unit projections for each year past the base, the annual population projection is divided by the PPHU factor of 2.81. Next, to calculate the annual projections of housing units by type, the annual total unit projection is multiplied by the 2012 ACS Estimates housing stock distribution of 78 percent single unit dwellings, and 22 percent units in multi-unit structures (see Figure A12). The City is projected to gain 1,497 new housing units between 2014 and 2024, at an average annual increase of 150 units.

**Figure A2: Residential Development in the City of Evans**

		Dec 31 <sup>st</sup> ==>							Five-Year Increment		
		Base Yr	1	2	3	4	5	10	2014-2024 Cumulative		
		2014	2015	2016	2017	2018	2019	2024			
<b>POPULATION</b>		<i>Growth Rate [1]</i>									
Total Population [1]	2.00%	19,200	19,584	19,976	20,375	20,783	21,198	23,405	4,205		
Persons per Housing Unit	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81			
<b>RESIDENTIAL DEVELOPMENT</b>		<i>Distribution [2]</i>									
<b>Housing Units</b>											
Single Unit	78%	5,307	5,413	5,522	5,632	5,745	5,860	6,469	1,162		
2+ Unit	22%	1,528	1,559	1,590	1,622	1,654	1,687	1,863	335		
Total Residential Units [1]	2.00%	6,835	6,972	7,112	7,254	7,399	7,547	8,332	1,497		
<b>ANNUAL INCREASES</b>								<b>Average Annual Increases</b>			
		2015	2016	2017	2018	2019	2024	5-Years	10-Years		
Year-Round Population		384	392	399	408	415	459	400	421		
Total Residential Units		137	140	142	145	148	163	142	150		
Jobs		63	64	65	65	66	70	65	67		
Commercial Sq. Ft. (x1,000)		8	9	9	9	9	9	8	9		
Office/Other Services Sq. Ft. (x1,000)		8	8	8	8	8	9	8	9		
Industrial Sq. Ft. (x1,000)		7	7	7	7	7	8	7	7		
Institutional Sq. Ft. (x1,000)		3	4	4	3	4	4	4	4		
Total Nonres Floor Area Sq. Ft. (x1,000)		26	28	28	27	28	30	28	28		

[1] Base year estimate as of 31Dec14: City of Evans.  
Annual projections based on recent building trends  
[2] 2012 American Community Survey 5-Year Estimates

## NONRESIDENTIAL DEVELOPMENT

Current estimates and future projections of nonresidential development are detailed in this section, including employment and square footage by industry type.

### Nonresidential Square Footage Development

TischlerBise uses the term “jobs” to refer to employment by place of work. Job estimates by industry type are used to calculate nonresidential square footage based on nationally recognized average *Square Feet per Employee* data published by The Institute of Transportation Engineers (ITE), and shown in Figure A3 below. The four land uses highlighted in grey serve as nonresidential prototypes that will be used by TischlerBise to derive average weekday vehicle trips, vehicle miles of travel, and the projected increase in nonresidential floor area. Current Floor area estimates for commercial, office/other services, industrial, and institutional land uses are documented in the next section.

**Figure A3: Nonresidential Service Units per Development Unit**

ITE Code	Land Use	Demand Unit	Wkdy Trip Ends Per 1,000 Sq Ft [1]	Wkdy Trip Ends Per Employee [1]	Emp Per 1,000 Sq Ft	Sq Ft Per Emp [2]
<b>Industrial</b>						
110	Light Industrial	1,000 Sq Ft	6.97	3.02	2.31	433
130	Industrial Park	1,000 Sq Ft	6.83	3.34	2.04	489
140	Manufacturing	1,000 Sq Ft	3.82	2.13	1.79	558
150	Warehousing	1,000 Sq Ft	3.56	3.89	0.92	1,093
254	Assisted Living	bed	2.66	3.93	0.68	na
320	Motel	room	5.63	12.81	0.44	na
<b>Institutional</b>						
520	Elementary School	1,000 Sq Ft	15.43	15.71	0.98	1,018
530	High School	1,000 Sq Ft	12.89	19.74	0.65	1,531
540	Community College	student	1.23	15.55	0.08	na
550	University/College	student	1.71	8.96	0.19	na
565	Day Care	student	4.38	26.73	0.16	na
610	Hospital	1,000 Sq Ft	13.22	4.50	2.94	340
620	Nursing Home	1,000 Sq Ft	7.60	3.26	2.33	429
<b>Office</b>						
710	General Office (avg size)	1,000 Sq Ft	11.03	3.32	3.32	301
760	Research & Dev Center	1,000 Sq Ft	8.11	2.77	2.93	342
770	Business Park	1,000 Sq Ft	12.44	4.04	3.08	325
857	Discount Club	1,000 Sq Ft	41.80	32.21	1.30	771
<b>Commercial</b>						
820	Shopping Center (avg size)	1,000 Sq Ft	42.70	na	2.00	500

[1] Trip Generation, Institute of Transportation Engineers, 2012.

[2] Square feet per employee calculated from trip rates except for Shopping Center data, which are derived from the Urban Land Institute's Development Handbook and Dollars and Cents of Shopping Centers.

### Jobs by Type of Nonresidential Development

TischlerBise reviewed data prepared by the U.S. Census Bureau, the Colorado Department of Local Affairs, and the North Front Range Metropolitan Planning Organization (NFRMPO) to calculate a 2014 estimate of jobs, and used a four-step process summarized below to estimate base year jobs and annual projections by industry type.

- First, TischlerBise used the U.S. Census 2011 distribution of Weld County jobs in Evans, organized by industry sector, and the State’s 2012 Weld County jobs estimate of 113,032 to calculate a cumulative 2012 City jobs estimate of 5,497.
- Second, the 2012 City estimate and County jobs projections, reported by NFRMPO, were used to calculate a 1.12 percent (rounded) projected jobs growth rate for the City, which was then used to calculate total City jobs estimates for each year past the base.
- Third, the U.S. Census Bureau 2011 distribution of jobs in the City of Evans organized by industry type (shown below in Figure A4) was applied to the 2014 jobs estimate of 5,621 (based on the 1.12% growth rate) to establish base year rounded estimates of jobs by industry type.
- Lastly, TischlerBise used the annual total jobs projection for each year past the base, and the distribution of jobs by industry, to calculate the jobs by industry for each year past the base (see Figure A5).

As shown in Figure A4, 26 percent of jobs located in Evans in 2014 are assumed to be commercial jobs, 42 percent were office/other services jobs, 26 percent were industrial jobs, and 6 percent of all jobs in the City were estimated to be institutional jobs, which includes both government and education jobs. Also shown in Figure A4 is an estimate of the current nonresidential floor area calculated by multiplying the 2014 jobs by industry estimates, by the ITE *Square Feet per Employee* factors from Figure A3 above.

**Figure A4: Distribution of Jobs by Industry Type**

	2011 Distribution by Industry [1]		Base Year 2014 Estimate Jobs by Industry [2]	Square Feet Per Employee [3]	Nonresidential Floor Area
Commercial	812	26%	1,466	500	733,000
Office/Other Services	1,323	42%	2,388	301	718,782
Industrial	803	26%	1,449	433	627,831
Institutional	176	6%	318	1,018	323,771
<b>TOTAL</b>	<b>3,114</b>	<b>100%</b>	<b>5,621</b>	<b>428</b>	<b>2,403,383</b>

[1] OnTheMap 6.1.1 Application and LEHD Origin-Destination Employment Statistics

[2] TischlerBise; North Front Range Metropolitan Planning Organization

[3] Trip Generation Manual, Institute of Transportation Engineers, 9th Edition (2012).

## Jobs and Nonresidential Development Projections

Based on data compiled by the U.S. Census Bureau, Colorado Department of Local Affairs, and the NFRMPO, over the next decade, the City is projected to add jobs at an annual growth rate of 1.12 percent. This equates to an additional 665 jobs above the 2014 base year estimate of 5,621.

To calculate jobs projections for each year past the base, the 1.12 percent projected job growth rate calculated from NFRMPO data was held constant for the 10-year projection period, as was the distribution of jobs by industry type, shown in Figure A4. The City is projected to gain an average of 67 jobs a year for the next ten years.

Using Commercial development as an example, the annual square footage by industry type is calculated as follows: 1,466 [2014 Commercial jobs] X 500 [ITE SF per Emp. Factor] = 733 square feet [expressed in thousands]. This calculation is repeated for each industry type and for each year of the 10-year projection period. To keep pace with job growth, the City should expect to add roughly 28,000 square feet of nonresidential development each year.

**Figure A5: Nonresidential Development in the City of Evans**

	Dec 31 <sup>st</sup> ==>	Five-Year Increment							2014-2024 Cumulative
		Base Yr 2014	1 2015	2 2016	3 2017	4 2018	5 2019	10 2024	
<b>NONRESIDENTIAL DEVELOPMENT</b>									
<b>Employment By Type</b>									
	Share of Ttl [3]								
Commercial	26%	1,466	1,482	1,499	1,516	1,533	1,550	1,639	173
Office/Other Services	42%	2,388	2,415	2,442	2,470	2,497	2,525	2,671	283
Industrial	26%	1,449	1,466	1,482	1,499	1,516	1,533	1,621	172
Institutional	6%	318	321	325	329	332	336	355	37
Total Jobs [4]	1.12%	5,621	5,684	5,748	5,813	5,878	5,944	6,286	665
Jobs to Housing Ratio		0.82	0.82	0.81	0.80	0.79	0.79	0.75	
<b>Nonres Floor Area (x1,000 Sq. Ft.)</b>									
	Sq.Ft./Emp. [5]								
Commercial	500	733	741	750	758	767	775	820	87
Office/Other Services	301	719	727	735	743	752	760	804	85
Industrial	433	628	635	642	649	656	664	702	74
Institutional	1,018	324	327	331	335	338	342	361	38
Total Nonresidential Square Feet (x1,000)		2,403	2,430	2,457	2,486	2,513	2,541	2,687	283
Avg. Sq. Ft. per Job		428	427	427	428	427	427	427	
Avg. Jobs per KSF		2.34	2.34	2.34	2.34	2.34	2.34	2.34	
<b>ANNUAL INCREASES</b>									
								Average Annual Increases	
	Jobs	63	64	65	65	66	70	65	67
	Commercial Sq. Ft. (x1,000)	8	9	9	9	9	9	8	9
	Office/Other Services Sq. Ft. (x1,000)	8	8	8	8	8	9	8	9
	Industrial Sq. Ft. (x1,000)	7	7	7	7	7	8	7	7
	Institutional Sq. Ft. (x1,000)	3	4	4	3	4	4	4	4
	Total Nonres Floor Area Sq. Ft. (x1,000)	26	28	28	27	28	30	28	28

[3] U.S. Census, 2011 OnTheMap 6.1.1 Application and LEHD Origin-Destination Employment Statistics

[4] TischlerBise; State of Colorado, North Front Range Metropolitan Planning Organization

[5] Trip Generation Manual, Institute of Transportation Engineers, 9th Edition (2012)

## DETAILED LAND USE ASSUMPTIONS – RESIDENTIAL AND NONRESIDENTIAL

Demographic data summarized in Figure A6 are the key inputs for the Impact Fee Study. Cumulative data are shown at the top and projected annual increases by type of development are shown at the

bottom of the figure. The annual increases for the demographic indicators increase over the ten-year projection period, which is reflected by the 5-year and 10-year average annual increases shown at the bottom of Figure A6.

These projections will be used to estimate impact fee revenue and to indicate the anticipated need for growth-related infrastructure. However, impact fee methodologies are designed to reduce sensitivity to accurate development projections in the determination of the proportionate share fee amounts. If actual development is slower than projected, impact fee revenue will decline, but so will the need for growth-related infrastructure. In contrast, if development is faster than anticipated, the City will receive an increase in impact fee revenue, but will also need to accelerate capital improvements to keep pace with development.

**Figure A6: Annual Demographic Data, 2014-2024, City of Evans**

		Dec 31 <sup>st</sup> ==>							Five-Year Increment		
		Base Yr	1	2	3	4	5	10	2014-2024		
		2014	2015	2016	2017	2018	2019	2024	Cumulative		
<b>POPULATION</b>											
		<i>Growth Rate [1]</i>									
Total Population [1]	2.00%	19,200	19,584	19,976	20,375	20,783	21,198	23,405	4,205		
Persons per Housing Unit		2.81	2.81	2.81	2.81	2.81	2.81	2.81			
<b>RESIDENTIAL DEVELOPMENT</b>											
<b>Housing Units</b>											
		<i>Distribution [2]</i>									
Single Unit	78%	5,307	5,413	5,522	5,632	5,745	5,860	6,469	1,162		
2+ Unit	22%	1,528	1,559	1,590	1,622	1,654	1,687	1,863	335		
Total Residential Units [1]	2.00%	6,835	6,972	7,112	7,254	7,399	7,547	8,332	1,497		
<b>NONRESIDENTIAL DEVELOPMENT</b>											
<b>Employment By Type</b>											
		<i>Share of Ttl [3]</i>									
Commercial	26%	1,466	1,482	1,499	1,516	1,533	1,550	1,639	173		
Office/Other Services	42%	2,388	2,415	2,442	2,470	2,497	2,525	2,671	283		
Industrial	26%	1,449	1,466	1,482	1,499	1,516	1,533	1,621	172		
Institutional	6%	318	321	325	329	332	336	355	37		
Total Jobs [4]	1.12%	5,621	5,684	5,748	5,813	5,878	5,944	6,286	665		
Jobs to Housing Ratio		0.82	0.82	0.81	0.80	0.79	0.79	0.75			
<b>Nonres Floor Area (x1,000 Sq. Ft.)</b>											
		<i>Sq.Ft./Emp. [5]</i>									
Commercial	500	733	741	750	758	767	775	820	87		
Office/Other Services	301	719	727	735	743	752	760	804	85		
Industrial	433	628	635	642	649	656	664	702	74		
Institutional	1,018	324	327	331	335	338	342	361	38		
Total Nonresidential Square Feet (x1,000)		2,403	2,430	2,457	2,486	2,513	2,541	2,687	283		
Avg. Sq. Ft. per Job		428	427	427	428	427	427	427			
Avg. Jobs per KSF		2.34	2.34	2.34	2.34	2.34	2.34	2.34			
<b>ANNUAL INCREASES</b>											
		2015	2016	2017	2018	2019	2024	Average Annual Increases			
								5-Years	10-Years		
Year-Round Population		384	392	399	408	415	459	400	421		
Total Residential Units		137	140	142	145	148	163	142	150		
Jobs		63	64	65	65	66	70	65	67		
Commercial Sq. Ft. (x1,000)		8	9	9	9	9	9	8	9		
Office/Other Services Sq. Ft. (x1,000)		8	8	8	8	8	9	8	9		
Industrial Sq. Ft. (x1,000)		7	7	7	7	7	8	7	7		
Institutional Sq. Ft. (x1,000)		3	4	4	3	4	4	4	4		
Total Nonres Floor Area Sq. Ft. (x1,000)		26	28	28	27	28	30	28	28		

[1] Base year estimate as of 31Dec14: City of Evans.

Annual projections based on recent building trends

[2] 2012 American Community Survey 5-Year Estimates

[3] U.S. Census, 2011 OnTheMap 6.1.1 Application and LEHD Origin-Destination Employment Statistics

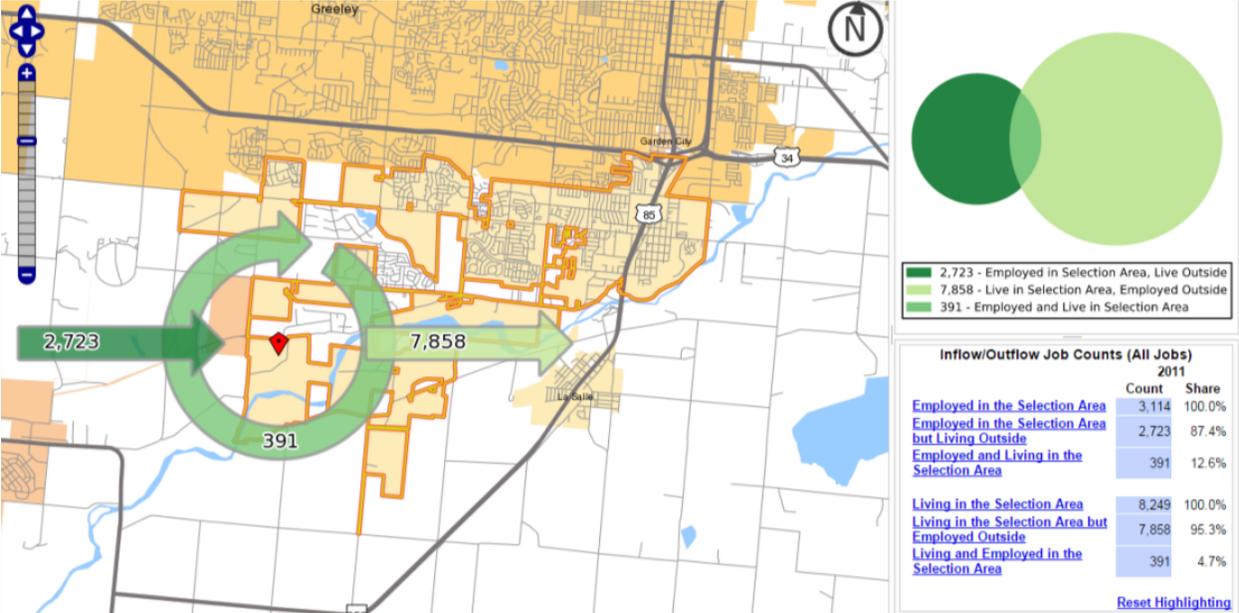
[4] TischlerBise; State of Colorado, North Front Range Metropolitan Planning Organization

[5] Trip Generation Manual, Institute of Transportation Engineers, 9th Edition (2012)

**COMMUTING PATTERNS AND FUNCTIONAL POPULATION**

As shown in Figure A7, the U.S. Census Bureau’s Longitudinal Employer-Household Dynamics (LEHD) web application OnTheMap indicates that Evans received a significant inflow of 2,723 workers on an average weekday in 2011 (the most recent data year available). In addition to these non-resident workers, another 391 persons lived and worked in Evans in 2011. TischlerBise will account for commuting patterns in the allocation of transportation infrastructure costs to residential and nonresidential development, and to derive functional population, as described below.

**Figure A7: Inflow/Outflow Analysis, City of Evans**



Source: U.S. Census Bureau. (14Aug14). OnTheMap Version 6, Inflow/Outflow Jobs Counts All Jobs) City of Evans, CO.

**Functional Population**

If local public safety calls for service data are not available by land use, TischlerBise recommends functional population to allocate the cost of certain facilities to residential and nonresidential development. Functional population has a long history in the professional literature. Originally called activity analysis by Stuart Chapin in 1965, and incorporated into the impact fee methodology by James Nicholas in the mid-1980s, functional population can be used to equitably spread infrastructure costs between residential and nonresidential sectors. TischlerBise has refined the functional population concept by incorporating what the U.S. Census Bureau calls “daytime population.” Using jurisdiction-specific data on commuting patterns (discussed above), it is now possible to roughly estimate where people live and work (i.e., spend their daily hours).

As shown below, residents that do not work are assigned 20 hours per day to residential development and four hours per day to nonresidential development (annualized averages). Residents that work in the City are assigned 14 hours to residential development and 10 hours to nonresidential development. Residents that work outside the City are assigned 14 hours to residential development. Inflow commuters are assigned 10 hours to nonresidential development.

Based on 2011 population data from the City, and U.S. Census Bureau data from the LEHD program, the proportionate share for residential development is 82 percent (rounded), while nonresidential development accounts for 18 percent (rounded) of the functional population distribution.

**Figure A8: Functional Population**

	Demand Units in 2011	Demand Hours/Day	Person Hours	Proportionate Share
<b>Residential</b>				
Estimated Residents	18,943			
Residents Not Working	10,694	20	213,880	
Employed Residents	8,249			
Employed in Service Area	391	14	5,474	
Employed outside Service Area	7,858	14	110,012	
<b>Residential Subtotal</b>			<b>329,366</b>	<b>82%</b>
<b>Nonresidential</b>				
Non-working Residents	10,694	4	42,776	
Jobs in Service Area	3,114			
Residents Employed in Service Area	391	10	3,910	
Non-Resident Workers (inflow Commuters)	2,723	10	27,230	
<b>Nonresidential Subtotal</b>			<b>73,916</b>	<b>18%</b>
<b>TOTAL</b>			<b>403,282</b>	<b>100%</b>

Source: 2011 population estimate from Colorado State Demography Office; U.S. Census Bureau, OnTheMap 6.1.1 Application and LEHD Origin-Destination Employment Statistics

## AVERAGE DAILY VEHICLE TRIPS

Average Daily Vehicle Trips are used for the Streets impact fee category as a measure of demand by land use. Vehicle trips are estimated using average weekday trip ends from the reference book, Trip Generation, 9<sup>th</sup> Edition, published by the Institute of Transportation Engineers (ITE) in 2012. A vehicle trip end represents a vehicle either entering or exiting a development (as if a traffic counter were placed across a driveway).

### Trip Rate Adjustments

Trip generation rates are adjusted to avoid double counting each trip at both the origin and destination points. Therefore, the basic trip adjustment factor is 50 percent. As discussed below, additional adjustments are made to ensure the fees are proportionate to the infrastructure demand for particular types of development.

#### *Adjustment for Journey-To-Work Commuting*

Residential development in the City of Evans has a larger trip adjustment factor of 65 percent to account for commuters leaving Evans for work. According to the National Household Travel Survey (2009), home-based work trips are typically 31 percent of “production” trips, also known as out-bound trips (which are 50 percent of all trip ends). Data from the LEHD for 2011 indicate that 95 percent of Evan’s employed residents travel outside the City for work. In combination, these factors ( $0.31 \times 0.50 \times 0.95 = 0.15$ ) account for 15 percent (rounded) of additional production trips. The total adjustment factor for residential includes attraction trips (50% of trip ends) plus the journey-to-work commuting adjustment for a total of 65 percent.

**Figure A9: Adjustment for Journey-to-Work Commuting**

<i>Trip Adjustment Factor for Commuters [1]</i>	
Employed Residents	8,249
Residents Working in City	391
Residents Commuting Outside City for Work	7,858
<b>Percent Commuting out of the City</b>	<b>95%</b>
Additional Production Trips [2]	15%
<b>Residential Trip Adjustment Factor</b>	<b>65%</b>

[1] U.S. Census Bureau, 2011 OnTheMap Application (version 6) and LEHD Origin-Destination Employment Statistics

[2] Outbound trip statistics from National Household Travel Survey, 2009: Table 30

#### *Adjustment for Pass-By Trips*

The basic trip adjustment factor of 50 percent is applied to both the office and industrial categories. The commercial and institutional categories have a trip factor of less than 50 percent because these types of development attract vehicles as they pass-by on arterial and collector roads. For example, for an average size shopping center, the ITE (2012) indicates that on average 34 percent of the vehicles that enter are passing by on their way to some other primary destination. The remaining 66 percent of

attraction trips have the shopping center as their primary destination. Because attraction trips are half of all trips, the trip adjustment factor is 66 percent multiplied by 50 percent, or approximately 33 percent of the trip ends.

### Customized Trip Generate Rates per Housing Unit

As an alternative to simply using the national average trip generation rate for residential development, the ITE publishes regression curve formulas that may be used to derive custom trip generation rates using local demographic data. Key independent variables needed for the analysis (i.e., vehicles available, housing units, households, and persons) are only available collectively from the 2012 ACS 5-Year Estimates for Evans.

Customized average weekday trip generation rates by type of housing are shown in Figure A10. A vehicle trip end represents a vehicle either entering or exiting a development, as if a traffic counter were placed across a driveway. The custom trip generation rates for Evans vary slightly from the national averages. For example, single unit structures in the City of Evans have an average daily trip rate of 9.10 per unit (compared to the national average of 9.52), and units in multi-unit structures have an average daily trip rate of 7.40 trips per unit (compared to the national average of 6.65).

**Figure A10: Residential Trip Generation Rates by Type of Housing**

	Vehicles Available [1]	Households by Structure Type[2]			Vehicles per Household by Tenure
	A	Single Unit	2+ Units	Total	E = A/D
		B	C	D = B+C	
Owner-occupied	7,134	3,419	131	3,550	2.01
Renter-occupied	4,610	1,350	1,176	2,526	1.83
<b>TOTAL</b>	<b>11,744</b>	<b>4,769</b>	<b>1,307</b>	<b>6,076</b>	<b>1.93</b>

[1] Vehicles available by tenure from Table B25046, American Community Survey, 2012.

[2] Households by tenure and units in structure from Table B25032, American Community Survey, 2012.

	Persons in Households [3]	Trip Ends [4]	Vehicles by Type of Housing	Trip Ends [5]	Average Trip Ends	Housing Units [6]	Trip Ends per Unit	
	F	G	H=Owner(B*E)+ Renter (B*E)	I	J = Avg of G,I	K	L= J/K	M
Single Units	15,040	38,927	9,335	53,954	46,440	5,115	9.10	9.52
2+ Units	3,465	11,959	2,409	9,787	10,873	1,473	7.40	6.65
<b>TOTAL</b>	<b>18,505</b>	<b>50,886</b>	<b>11,744</b>	<b>63,741</b>	<b>57,313</b>	<b>6,588</b>	<b>8.70</b>	

[3] Total population in households from Table 25033, American Community Survey, 2012.

[4] Vehicle trips ends based on persons using formulas from Trip Generation (ITE 2012). For single units (ITE 210), the fitted curve equation is  $EXP(0.91*LN(persons)+1.52)$ . To approximate the average population of the ITE studies, persons were divided by 27 and the equation result multiplied by 27. For 2+ units (ITE 220), the fitted curve equation is  $(3.47*persons)-64.48$ .

[5] Vehicle trip ends based on vehicles available using formulas from Trip Generation (ITE 2012). For single units (ITE 210), the fitted curve equation is  $EXP(0.99*LN(vehicles)+1.81)$ . To approximate the average number of vehicles in the ITE studies, vehicles available were divided by 36 and the equation result multiplied by 36. For 2+ units (ITE 220), the fitted curve equation is  $(3.94*vehicles)+293.58$ .

[6] Housing units from Table B25024, American Community Survey, 2012.

[7] Trip Generation, Institute of Transportation Engineers, 9th Edition (2012).

Figure A11 below details the calculations to determine that existing development in Evans generates an average of 58,309 vehicle trips on an average weekday. Residential development is estimated to generate 40,180 vehicle trips, or 69 percent of all trips, compared to 18,129 vehicle trips (31 percent) generated by nonresidential development. An example of the calculation is as follows for single residential units: 5,504 units X 9.10 vehicle trips per day per unit X 65% adjustment factor = 32,556 total

vehicle trips per day from single residential units in the City. The same calculation is repeated for each land use type.

**Figure A11: Average Daily Trips from Existing Development in the City of Evans**

<b>Residential Vehicle Trips on an Average Weekday*</b>		<b>2014</b>	
<b>Residential Units</b>		<i>Assumptions</i>	
Single Unit		5,504	
2+ Unit		1,585	
<b>Average Weekday Vehicle Trip Ends per Unit*</b>		<i>Trip Rate</i>	<i>Trip Factor</i>
Single Unit		9.10	65%
2+ Unit		7.40	65%
<b>Residential Vehicle Trip Ends of an Average Weekday</b>			
Single Unit		32,556	
2+ Unit		7,624	<i>% of total</i>
<b>Total Residential Trips</b>		<b>40,180</b>	<b>69%</b>
<b>Nonresidential Vehicle Trips on an Average Weekday**</b>		<b>2014</b>	
<b>Nonresidential Gross Floor Area (1,000 sq. ft.)</b>		<i>Assumptions</i>	
Commercial		733	
Office/Other Services		719	
Industrial		628	
Institutional		324	
<b>Average Weekday Vehicle Trips Ends per 1,000 Sq. Ft.**</b>		<i>Trip Rate</i>	<i>Trip Factor</i>
Commercial		42.70	33%
Office/Other Services		11.03	50%
Industrial		6.97	50%
Institutional		15.43	33%
<b>Nonresidential Vehicle Trips on an Average Weekday</b>			
Commercial		10,329	
Office/Other Services		3,964	
Industrial		2,188	
Institutional		1,649	
<b>Total Nonresidential Trips</b>		<b>18,129</b>	<b>31%</b>
<b>TOTAL TRIPS</b>		<b>58,309</b>	<b>100%</b>

\*Trip rates are customized for City. See accompanying tables and discussion.

\*\*Trip rates are from the Institute of Transportation Engineers (ITE) Trip Generation Manual (2012)

**PERSONS PER HOUSING UNIT**

According to the U.S. Census Bureau, a household is a housing unit that is occupied by year-round residents. Impact fees often use per capita standards and persons per housing unit (PPHU) or persons per household (PPH) to derive proportionate share fee amounts. When PPHU is used in the fee calculations, infrastructure standards are derived using year-round population. When PPH is used in the fee calculations, the impact fee methodology must assume all housing units will be occupied, thus requiring seasonal or peak population to be used when deriving infrastructure standards. **TischlerBise recommends that impact fees for residential development in the City of Evans be imposed according to the number of year-round residents per housing unit. This methodology acknowledges that some portion of the housing stock will be vacant during the course of a year. According to the U.S. Census Bureau American Community Survey, the City of Evans had a 2012 vacancy rate of eight percent.**

The 2010 census did not obtain detailed information using a “long-form” questionnaire. Instead, the U.S. Census Bureau switched to a continuous monthly mailing of surveys, known as the American Community Survey (ACS), which has limitations due to sample-size constraints. For example, data on detached housing units are now combined with attached single units (commonly known as townhouses). For impact fees in Evans, units in single unit structures include detached stick-built units and attached units (commonly known as townhouses, which share a common sidewall, but are typically constructed on an individual parcel of land) and manufactured units (formerly known as mobile homes). The second residential category (2+ Units) includes structures with two or more units on an individual parcel of land, such as duplexes and apartments.

Figure A12 shows the ACS 2012 5-Year Estimates for the City of Evans. To calculate the citywide average PPHU, persons in units (18,505) is divided by housing units (6,588), resulting in a PPHU factor of 2.81. Dwellings with a single unit per structure averaged 3.01 PPHU. Dwellings in structures with multiple units averaged 2.35 PPHU. *(Note: ACS estimates will not equal base year estimates provided by the City. These data are used only to derive the custom PPHU factors for each type of residential unit).*

**Figure A12: Year-Round Persons per Housing Unit by Type of Structure**

<b>2012 Summary by Type of Housing</b>	<i>Persons</i>	<i>House-holds</i>	<i>Housing Units</i>	<b>PPHU</b>	<i>Housing Mix</i>
Single Units [1]	13,748	4,249	4,563	<b>3.01</b>	69%
2+ Units [2]	3,465	1,307	1,473	<b>2.35</b>	22%
Mobile Homes	1,292	520	552	<b>2.34</b>	8%
Subtotal	18,505	6,076	6,588	<b>2.81</b>	<i>Vacancy Rate</i>
Group Quarters Population	8				
<b>TOTAL</b>	18,513	6,076	6,588		8%

2012 American Community Survey 5-Year Estimates

[1] "Single Unit" includes detached, attached, and manufactured homes

[2] "2+ Unit" includes duplex and all other units with 2 or more units per structure

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## CITY COUNCIL COMMUNICATION

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**DATE:** September 15, 2015

**AGENDA ITEM:** 9.A

**SUBJECT:** Approval of Ordinance No. 630-15 – Amending Title 2 and Title 15 of the Evans Municipal Code Regarding Emergency Response and Fire Protection

**PRESENTED BY:** Ron Pristera, Fire Chief, Evans Fire Protection District

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### **PROJECT DESCRIPTION:**

Ordinance No. 630-15 amends Titles 2 and Title 15 that involve fire protection, or the Evans Fire Protection District as described below:

#### **Chapter 2.18**

All of the modifications suggested in Chapter 2.18 are intended to bring the City Code into alignment with the 2011 transition from a municipal fire department to a fire district, and are reflective of the language and terms established in the service plan and transition IGA approved by the voters of the District.

#### **Chapter 15.48**

Chapter 15 is the formal adoption of the City’s fire code, with local modifications, and empowers the Fire District to enforce the fire code to protect the people and property of the City. The changes proposed in this chapter are intended to either simplify, or clarify that process.

15.48.010 was amended to allow the public to access a copy of the fire code, and eliminate the need for the City Clerk to retain a copy of the code solely for the public’s access.

15.48.070 was amended to clarify the term “fire code official” since it appears regularly throughout the International Fire Code.

15.48.080 is the section of the code containing local amendments to the published code.

Section 101.1 of the code was modified to clarify the status of the IFC as the fire code of Evans.

Section 101.2.1 was modified to clearly adopt the Appendices of the code that must be separately adopted to enforce. This is just a language clarification of the existing code- the same appendices of the IFC are already in effect, but the current language that adopts them is not as clear.

Section 103.2 was modified to clarify how the fire code official is appointed- again a

clarification of current practice.

Section 104.11.4 is NEW and was proposed to clearly establish the authority to order evacuations when needed to protect the public from peril.

Section 307.4.1 was a local amendment to the IFC deleting the section on bonfires- thereby prohibiting them. We were unable to determine the reason bonfires were specifically prohibited, especially since every other type of burning is allowed. Accordingly, we've suggested deleting the elimination, thereby restoring the section of the IFC that governs bonfires.

The only other change was renumbering the Code as required based on the changes.

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**FINANCIAL SUMMARY:**

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**STAFF RECOMMENDATION:**

To approve Ordinance No. 630-15

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**SUGGESTED MOTIONS:**

“I move to approve Ordinance No. 630-15 on first reading.”

“I move to deny the adoption of Ordinance No. 630-15”

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## CHAPTER 2.18 - Emergency Services

### Fire Department

#### 2.18.010 Fire department established.

There is hereby established the Fire Department, the director of which shall be the Fire Chief. (Ord. 972-95, 1995)

#### 2.18.010 – Provision of Emergency Services through Evans Fire Protection District

In November 2011, the City organized the Evans Fire Protection District ("Fire District") to provide fire suppression, fire prevention and public education, extrication and rescue, hazardous materials, ambulance (directly or through a third party) and emergency medical services (collectively, "Emergency Services") to the citizens and property within the City. The Fire District is governed by a five member elected Board of Directors. The Fire District's Fire Chief is responsible for the administration and operation of the Fire District, including fire code enforcement, directly or through a designee. (Ord. 972-95, 1995)

#### 2.18.020 City may – City's Contract with the Fire District for Emergency Services

At the time it organized the Fire District, the City entered into an exclusive provider contract for fire protection services with the Fire District to provide Emergency Services to the City, its citizens and their property. The contract was approved by an overwhelming vote of the City's citizens. The contract sets forth the terms and conditions upon which the Fire District will provide Emergency Services to the City, its citizens and their property.

The City Council, may contract with another municipality, fire protection district, nonprofit corporation, or other entity to provide for fire protection services. (Ord. 972-95, 1995) (Ord. 972-95, 1995)

#### 2.18.030 - Duties and functions.

The duties and functions of the Fire Chief and the Fire Department District shall be the preservation and protection of life and property from and during fires or other emergencies as may occur in the City or the immediate vicinity of the City (mutual aid). (Ord. 972-95, 1995)

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**CHAPTER 15.48 -**

International Fire Code (IFC)

15.48.010 - Document adopted by reference.

Pursuant to Section 31-16-201 et seq., C.R.S., there is hereby adopted as the fire code of the City, by reference thereto, the International Fire Code, 2012 edition, together with Appendices B through J included therein, of the International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795. ~~(Ord. 552-13 §2)~~ Copies of the IFC are on file in the Fire District's Office and may be inspected during regular business hours.

~~(Ord. 552-13 §2)~~

15.48.020 - Title for citation.

The ordinance codified in this chapter may be known and cited as "The Fire Code of the City of Evans, Colorado." ~~(Ord. 552-13 §3)~~

~~(Ord. 552-13 §3)~~

15.48.030 - Purpose.

The fire code is adopted in order to preserve and protect the public health, safety and general welfare, and for the purposes of prescribing regulations governing conditions hazardous to life and property from fire explosion. ~~(Ord. 552-13 §4)~~

~~(Ord. 552-13 §4)~~

15.48.040 - Scope of regulations.

The subject matter of the adopted code includes comprehensive provisions, standards and regulations concerning conditions hazardous to life and property from fire and explosions; establishes a department of fire prevention and defines its duties; and provides for officers and defines their duties. ~~(Ord. 552-13 §5)~~

~~(Ord. 552-13 §5)~~

15.48.050 - Interpretation of provisions.

This Chapter shall be so interpreted and construed as to effectuate its general purpose to make uniform administration and enforcement of the City's technical codes. ~~(Ord. 552-13 §6)~~

~~(Ord. 552-13 §6)~~

15.48.060 - Applicability of Chapter.

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This Chapter shall apply to every building, structure, hazardous substance, material or device, as defined in the ordinance codified herein, which is now in existence or which may hereafter be erected, constructed, altered, moved, demolished or repaired. ~~(Ord. 552-13 §7)~~

(Ord. 552-13 §7)

15.48.070 — Definitions.

As used in the International Fire Code:

City means the City of Evans, Colorado.

City Council means the City Council of the City of Evans.

Corporation Counsel means the City Attorney.

IFC means the 2012 Edition of the International Fire Code.

International Fire Code means the 2012 Edition of the International Fire Code.

Jurisdiction means the City of Evans.

Fire Code Official means the Chief of the Evans Fire Protection District, or his/her designee.

~~(Ord. 552-13 §8)~~

15.48.080 — IFC local amendments.

The following IFC sections are amended as follows:

1. Section 101.1 of the International Fire Code is amended to read as follows:

101.1 Title. These regulations shall be known as the Fire Code of the City of Evans, hereinafter referred to as "this code".

2. Section 101.2.1 of the International Fire Code is amended to read as follows:

101.2.1 Appendices. Provisions in the appendices shall not apply unless specifically adopted.

The following appendices published by the International Code Council and NFPA standards are specifically adopted and made part of the Fire Code of the City of Evans:

1. Appendix B, Fire Flow Requirements for Buildings

2. Appendix C, Fire Hydrant Locations and Distribution

3. Appendix D, Fire Apparatus Access Roads

4. Appendix E, Hazard Categories

5. Appendix F, Hazard Ranking

6. Appendix G, Cryogenic Fluids- Weight and Volume Equivalents

7. Appendix H, Hazardous Materials Management Plan (HMMP) and Hazardous Materials Inventory

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Statements (HMIS) Instructions

8. Appendix I, Fire Protection Systems - Noncompliant Conditions

9. Appendix J, Building Information Sign.

(3) Section 103.2 of the International Fire Code is amended to read as follows:

103.2 Appointment. The fire code official shall be appointed by the Fire Chief of the Evans Fire Protection District.

4. IFC Sec. 104 is amended to read:

104.11.4 Evacuation. The fire department official in charge of an incident shall be authorized to order the immediate evacuation of any occupied building deemed unsafe when such building has hazardous conditions that present imminent danger to building occupants. Persons so notified shall immediately leave the structure or premises and shall not enter or re-enter until authorized to do so by the fire department official in charge of the incident.

5.1. IFC Sec. 105 is amended to read:

"105.6 Required operational permits. The fire code official is authorized to issue permits for the operations set forth in Sections 105.6.4, 105.6.14, 105.6.30 and 105.6.43.

"105.6.4 Carnivals and fairs. An operational permit is required to conduct a carnival or fair.

"105.6.14 Explosives. An operational permit is required for the manufacture, storage, handling, sale or use of any quantity of explosives, explosive materials, fireworks or pyrotechnic special effects within the scope of Chapter 56.

"Exception. Storage in Group R-3 occupancies of smokeless propellant, black powder and small arms primer for personal use, not for resale and in accordance with Section 5606.

"105.6.30 Open burning. An operational permit is required for the kindling or maintaining of an open fire or a fire on any public street, alley, road or other public or private ground in accordance with Section 307. Instructions and requirements of the permit shall be adhered to.

"105.6.43 Temporary membrane structures, tents, and canopies. An operational permit is required to operate an air-supported temporary structure or tent having an area in excess of 400 square feet, or a canopy of over 400 square feet.

"Exceptions:

"1. Tents used exclusively for recreational camping purposes;

"2. Tents open on all sides, which comply with all the following: (2.1) Individual tents having a maximum of 700 square feet; (2.2) The aggregate area of multiple tents placed side by side without a fire break clearance of not less than 12 feet shall not exceed 700 square feet; and (2.3) A minimum clearance of 12 feet to structures and other tents shall be provided."

262. IFC Sec. 108 is amended to read:

"108 Board of Appeals.

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"108.1 Board of Appeals established.- In order to hear and decide appeals of orders, decisions or determinations made by the fire code official relative to the application and interpretations of this code, there shall be and is hereby created a Fire Board of Appeals. -The City of Evans Zoning Board of Appeals as established in Chapter 19.58 of the Evans Municipal Code shall serve as the Fire Board of Appeals."

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37. IFC Sec. 307 is amended to read:

"307 Open burning, recreational fires and portable outdoor fireplaces

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"307.1.1 Prohibited open burning.- Open burning that is offensive or objectionable because of smoke emissions, or when atmospheric conditions or local circumstances make such fires hazardous, shall be prohibited. -The burning of trash, debris and refuse shall be prohibited.

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"Exception.- Prescribed burning for the purpose of reducing the impact of wildland fire when authorized by the fire code official.

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"307.2 Permit required.- A permit shall be obtained from the fire code official in accordance with Section 105.6 prior to kindling a fire for recognized silvicultural or range or wildfire management practices, prevention or control of disease or pests, or a recreational fire. -Application for such approval shall only be presented by and permits issued to the owner of the land upon which the fire is to be kindled.

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"307.2.1 Authorization.- The permit is for compliance with fire safety and control alone, and is not a permit to violate any existing state or local laws, rules, regulations, or ordinances regarding fire, zoning, building, or air quality and pollution standards. -The owner is responsible for obtaining any additional permits and/or clearances from any appropriate local or state agency or other official prior to beginning the burn, including but not limited to any prior approval from the state or local air and water quality management authority.

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~~"307.4.1 Bonfires. Bonfires are prohibited."~~

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"307.5 Attendance.- Open burning, recreational fires and use of portable outdoor fireplaces shall be constantly attended until the fire is extinguished. -A minimum of one portable fire extinguisher complying with Section 906 with a minimum 4-A rating or other approved on-site fire-extinguishing equipment, such as dirt, sand, water barrel, garden hose or water truck, shall be available for immediate utilization.

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84. IFC Sec. 501.4 is amended to read:

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"501.4 Timing of installation.- When fire protection, including fire apparatus access roads and water supplies for fire protection, are required to be installed for any new building construction or remodel above the footing and foundation, such access and egress roads, streets, or driveways shall have been constructed and maintained with an all-weather surface capable of supporting the weight of a fully equipped fire apparatus, street signs shall be in place and any required water supply shall be fully functional, before any building permit will be issued. -The fire code official may require the installation of fire protection features described above where unusual hazards exist due to the location and type of construction or hazard to adjacent properties and buildings.

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"Exception.- When alternate methods of protection, as approved, are provided, the requirements of Section 501.4 may be modified or waived by the Fire Chief."

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59. IFC Sec. 902 is amended to read:

"902 Nuisance alarms.- An alarm caused by mechanical failure, malfunction, improper installation, or lack of proper maintenance, or an alarm activated by a cause that cannot be determined. -No person shall allow any home, school, business, or any building that has a fire alarm system to have more than 3 nuisance alarms in one year."

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610. IFC Section 5301.3 is added to read:

"5301.3 Maximum capacity of CNG.- The storage of compressed natural gas (CNG) shall be prohibited in areas zoned R as defined by the City of Evans. -Within the limits established by law restricting

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the storage of CNG for the protection of heavily populated or congested commercial area, the aggregate capacity of any one installation shall not exceed 500 gallons water capacity (70,000 cubic feet). -The aggregate capacity for any one installation for the use as a wholesale or retail bulk storage plant shall not exceed 500 gallons water capacity."

711. IFC Sec. 560.1.1.a is added to read:

**5601.1.a Prohibited and limited acts.**

"a. \_\_Prohibited explosives:- The storage of explosives and blasting agents is prohibited, except for temporary storage for use in connection with approved blasting operations; provided, however, this prohibition shall not apply to wholesale, retail stocks and small arms ammunition, explosive bolts, explosive rivets or cartridges for explosive-actuated power tools in quantities involving less than 20 pounds of explosive material. -A valid permit in accordance with Section 105.6.14 is required."

812. IFC Sec. 5704.2 is added to read:

**5704.2.a Storage.**

"a. \_\_Prohibited locations:- Any new bulk plants for the storage or manufacture of flammable or combustible liquids are prohibited within any areas within the City of Evans zoned solely or primarily for residential occupancies or for mercantile establishments primarily retail in character. -The zoning designation of the City of Evans zoning ordinance shall govern as to the zoning characteristics of such area.

**Exceptions:**

"1. \_\_Legal nonconforming.- Bulk storage tanks legally installed and in use as of April 19, 1983, may be continued in use, provided that such tanks are located and installed in accordance with the latest adopted edition of the International Fire Code and provided further, that other applicable provisions of this code and the City of Evans Code of Ordinances are complied with.

"2. \_\_Variance.- Upon payment of a variance fee, review and recommendation of the Board of Appeals, the Evans City Council may grant a variance to the prohibitions in Section 3406 of the International Fire Code above for permits granted under Chapter 16.28, Oil and Gas Exploration and Development, if the Evans City Council finds that (a) such variance will not create an undue safety hazard and will not adversely affect surrounding property; and (b) good cause exists. -All bulk storage authorized by the Evans City Council variance is subject to the construction, location and other applicable standards set forth in the latest adopted edition of the International Fire Code."

913. IFC Sec. 5404.2.9.2.1 is amended to read:

**5404.2.9.2.1 Additional fire protection.-** When required by the Fire Chief and in accordance with Section 5404.2.9.2.1 of the International Fire Code, additional foam fire protection and/or deluge water systems shall be provided at the well head and/or tank battery locations."

1014. IFC Sec. 5704.2.9.5.a is amended to read:

**5704.2.9.5.a Location of aboveground tanks.**

"1. \_\_General.- Storage of Class I and Class II liquids in aboveground tanks outside of buildings is prohibited.

**Exceptions:**

"1. \_\_Prohibited and legal nonconforming.- Any such aboveground tanks legally installed and in use as of April 19, 1983, may be continued in use, provided that such tanks are located and installed in accordance with the latest edition of the National Fire Protection Association Pamphlet Nos. 30 & 58 and provided further, that other applicable provisions of latest adopted edition of the International Fire Code and the City of Evans Code of Ordinances are complied with.

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"2. \_\_\_Variance for storage of flammable or combustible liquids in C, I, and P.U.D. zones.- Upon payment of variance fee, review and recommendation of the Board of Appeals, the Evans City Council may grant a variance to the prohibitions in Section 5704 of the International Fire Code above for permits granted under Chapter 16.28, Oil and Gas Exploration and Development, and/or for aboveground storage in C, I, and P.U.D. zoning districts as defined by the City of Evans, if the Evans City Council finds that: -(a) such variance will not create an undue safety hazard and will not adversely affect surrounding property; and (b) good cause exists. -All aboveground storage authorized by Evans City Council variance is subject to the construction, location and other applicable standards set forth in the latest adopted edition of the International Fire Code."

4415. IFC Sec. 5706.1.a is added to read:

"5706.1.a Construction sites.- The aboveground storage of Class I and II liquids shall be allowed on a temporary basis at construction sites for the purpose of refueling of construction equipment. -A maximum of 1,100 gallons will be allowed at the site and shall have secondary containment. -Gravity feed tanks will not be allowed for refueling equipment."

4216. IFC Sec. 5706.3 is amended to read:

"5706.3 Well drilling and operating.- Wells for oil and natural gas shall be drilled and operated in accordance with City of Evans Municipal Code Chapter 16.28; OIL AND GAS EXPLORATION AND DEVELOPMENT."

4317. IFC Sec. 5706.6.5 is added to read:

"5706.6.5 Tank vehicle routes.

"1. \_\_\_General.- No person shall operate, or cause to be operated, a tank vehicle on any street, highway, alley, avenue, boulevard or other public way or place within the City of Evans, Colorado, other than upon the streets and avenues shown on the tank vehicle route map adopted at subsection B of this section, or other than upon streets and avenues leading as directly as possible between a bulk plant and a point on a street or avenue shown on such map or between a retail service station and a point on a street or avenue shown on such map.

"2. \_\_\_Routes defined.- The tank vehicle route map is adopted by resolution by the Evans City Council and is under separate cover on file in the City Clerk's office, City of Evans, Colorado 80620."

4418. IFC Sec. 5804.3 is added to read:

"5804.3 Maximum capacity (LPG) within established limits.- The storage of liquefied petroleum gas shall be prohibited in areas zoned R as defined by the City of Evans. -The Evans City Council, upon review and recommendation of the Board of Appeals, may grant the storage of aboveground liquefied petroleum gases with C, I, and PUD Zones upon finding that: -(a) such variance will not create an undue safety hazard and will not adversely affect surrounding property; and (b) good cause exists.- All aboveground storage authorized by Evans City Council variance shall be in accordance with the latest edition of the adopted International Fire Code. -Within the limits established by law restricting the storage of liquefied petroleum gas for the protection of heavily populated or congested commercial area, the aggregate capacity of any one installation shall not exceed 2,000 gallons water capacity. -The aggregate capacity for any one installation for the use as a wholesale or retail bulk storage plant shall not exceed 2,000 gallons water capacity. -The foregoing prohibitions shall not apply to existing storage installations in existence on August 1, 1972, the effective date of the first adoption of the Uniform Fire Code.

"Exceptions:

"1. \_\_\_The storage and use of liquefied petroleum gas in residential areas for barbeques, RV's or other recreational uses shall be limited to portable containers of 10 gallon water capacity or less. -The total amount to be allowed in storage or use shall be limited to 20 gallons water capacity.

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"2. —The storage and use of liquefied petroleum gas in areas zoned residential or commercial as defined by the City of Evans that do not have natural gas supplied to the area shall meet the requirements of Section 5803."

(Ord. 552-13 §10)

15.48.090 — Violation - ~~Administrative citation, enforcement and abatement. — penalty.~~

A. Any person, firm or corporation violating any of the provisions of Chapter 15.48 of the Evans Municipal International Fire Code, as amended from time to time, shall be subject to the following administrative citation, enforcement, deemed guilty of a misdemeanor, and each such person shall be guilty of a separate offense for each and abatement procedures:

1. The term "Fire Chief" as used in this Section refers to the Fire Chief of the Evans Fire Protection District and his every day or her designee(s). Upon a determination by the Fire Chief of a portion thereof during which any violation of the provisions of the International Fire Code as amended are committed, continued or permitted, and upon the conviction of the City of Evans, Colorado, the Fire Chief may serve, or cause to be served, a notice of any such violation(s) and an order to correct upon the responsible party. The notice of violation(s) shall be in writing and shall describe with reasonable detail the violation so that the responsible party may properly correct it. The notice of violation shall provide a reasonable time (typically seven (7) days) for correction given the circumstances of the violation, unless a longer period of time is specified in the notice based on the Fire Chief's determination of the amount of time reasonably needed to correct the violations. In circumstances involving the public health, safety such person shall be punished by a fine not exceeding one thousand dollars (\$1,000) or welfare, the Fire Chief may designate a period of less than seven (7) days to correct the violation.
2. If the violations causing the issuance of the notice of violation(s) are not corrected within the specified time period, the Fire Chief may issue a final notice to correct. The final notice to correct shall be in writing and shall describe the violation(s) with sufficient detail to enable the responsible party to correct the violations. A copy of the preceding notice of violation(s) and order to correct may be attached to the final notice to correct. The final notice to correct shall advise the responsible party that if the violations are by imprisonment not remedied by the proscribed date, a citation into municipal court will be issued.
3. Citations into Municipal Court may be issued by the Fire Chief or a police officer at any point, regardless of whether a notice of violation(s) or a final notice to correct has previously issued.
4. All citations into Municipal Court shall be processed according to the procedures set forth in Chapter 1.16 of the Evans Municipal Code and shall be subject to the penalties set forth therein.

B. Each day a violation exists or continues shall constitute a separate and distinct violation of the Fire Code of the City of Evans.

C. The City may abate any violation not corrected within the time specified in a final notice to correct or a citation into Evans Municipal Court pursuant to the authority and procedures set forth in Section 1.16.050 of the Evans Municipal Code. The need to exercise the City's ability to abate shall constitute good cause for the court to award attorney's fees and costs in addition to the costs associated with the abatement of the violation(s).

D. Administrative citation, enforcement, and abatement actions are intended to be cumulative in nature. The City may pursue one or more civil, criminal, and administrative actions, fees, fines, sentences, penalties, judgments and remedies and may do so simultaneously or in succession. The enactment of these remedies shall in no way interfere with the City's right or ability to prosecute violations, seek temporary restraining orders, or preliminary injunctions from a court of competent jurisdiction or to exercise other available remedies.

~~exceeding one (1) year, or by both such fine and imprisonment. (Ord. 614-14, 2014; Ord. 552-13 §11)~~

15.48.100—15.48.260 — Repealed by Ord. 552-13 §9

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**CITY OF EVANS, COLORADO**

**ORDINANCE NO. 630-15**

**AN ORDINANCE AMENDING CHAPTERS 2.18 AND 15.48 OF THE EVANS CITY CODE TO ALIGN THE CITY CODE WITH THE 2011 TRANSITION FROM A MUNICIPAL FIRE DEPARTMENT TO A FIRE DISTRICT AND TO FORMALLY ADOPT THE CITY'S FIRE CODE**

**WHEREAS**, the City Council of the City of Evans, Colorado, pursuant to Colorado statute and the Evans City Charter, is vested with the authority of administering the affairs of the City of Evans, Colorado; and

**WHEREAS**, in 2011 the Evans City Fire Department transitioned from a municipal fire department to a fire district; and

**WHEREAS**, Chapter 2.18, and the IGA approved by the voters of the Fire District, establish the relationship between the Fire District and the City; and

**WHEREAS**, the City Council wishes to align the City's Code with the transition from a municipal fire department to a fire district; and

**WHEREAS**, Chapter 15.48 contains the City's Fire Code, with local modifications, and empowers the Fire District to enforce the City's Fire Code to protect the citizens and the property of the City.

**NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF EVANS, COLORADO AS FOLLOWS:**

1. Chapter 2.18, establishing the relationship between the Fire District and the City, is hereby amended as depicted on Exhibit 1 to this Ordinance.
2. Chapter 15.48, the City's Fire Code, is hereby amended as depicted on Exhibit 2 to this Ordinance.
3. Severability. 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 thereof irrespective of the fact that any one part or parts be declared unconstitutional or invalid.
4. Repeal. Existing ordinances or parts of ordinances covering the same matters embraced in this ordinance are hereby repealed and all ordinances or parts of ordinances inconsistent with the provisions of this ordinance are hereby repealed except that this repeal shall not affect or

prevent the prosecution or punishment of any person for any act done or committed in violation of any ordinance hereby repealed prior to the effective date of this ordinance.

**INTRODUCED AND PASSED AT A REGULAR MEETING OF THE CITY COUNCIL OF THE CITY OF EVANS ON THIS 15<sup>TH</sup> DAY OF SEPTEMBER, 2015.**

**ATTEST:**

**CITY OF EVANS, COLORADO**

\_\_\_\_\_  
Raegan Robb, City Clerk

BY: \_\_\_\_\_  
John L. Morris, Mayor

**PASSED AND ADOPTED ON A SECOND READING THIS 6<sup>TH</sup> DAY OF OCTOBER, 2015.**

**ATTEST:**

**CITY OF EVANS, COLORADO**

\_\_\_\_\_  
Raegan Robb, City Clerk

BY: \_\_\_\_\_  
John L. Morris, Mayor

## **CHAPTER 2.18 - Emergency Services**

### **2.18.010 – Provision of Emergency Services through Evans Fire Protection District**

In November 2011, the City organized the Evans Fire Protection District (“Fire District”) to provide fire suppression, fire prevention and public education, extrication and rescue, hazardous materials, ambulance (directly or through a third party) and emergency medical services (collectively, “Emergency Services”) to the citizens and property within the City. The Fire District is governed by a five member elected Board of Directors. The Fire District’s Fire Chief is responsible for the administration and operation of the Fire District, including fire code enforcement, directly or through a designee. (Ord. 972-95, 1995)

### **2.18.020 – City’s Contract with the Fire District for Emergency Services**

At the time it organized the Fire District, the City entered into an exclusive provider contract with the Fire District to provide Emergency Services to the City, its citizens and their property. The contract was approved by an overwhelming vote of the City’s citizens. The contract sets forth the terms and conditions upon which the Fire District will provide Emergency Services to the City, its citizens and their property. (Ord. 972-95, 1995)

### **2.18.030 - Duties and functions**

The duties and functions of the Fire Chief and the Fire District shall be the preservation and protection of life and property from and during fires or other emergencies as may occur in the City or the immediate vicinity of the City (mutual aid). (Ord. 972-95, 1995)

## CHAPTER 15.48 - International Fire Code (IFC)

### 15.48.010 - Document adopted by reference.

Pursuant to Section 31-16-201 et seq., C.R.S., there is hereby adopted as the fire code of the City, by reference thereto, the International Fire Code, 2012 edition, together with Appendices B through J included therein, of the International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795. Copies of the IFC are on file in the Fire District's Office and may be inspected during regular business hours.

### 15.48.020 - Title for citation.

The ordinance codified in this chapter may be known and cited as "The Fire Code of the City of Evans, Colorado."

### 15.48.030 - Purpose.

The fire code is adopted in order to preserve and protect the public health, safety and general welfare, and for the purposes of prescribing regulations governing conditions hazardous to life and property from fire explosion.

### 15.48.040 - Scope of regulations.

The subject matter of the adopted code includes comprehensive provisions, standards and regulations concerning conditions hazardous to life and property from fire and explosions; establishes a department of fire prevention and defines its duties; and provides for officers and defines their duties.

### 15.48.050 - Interpretation of provisions.

This Chapter shall be so interpreted and construed as to effectuate its general purpose to make uniform administration and enforcement of the City's technical codes.

### 15.48.060 - Applicability of Chapter.

This Chapter shall apply to every building, structure, hazardous substance, material or device, as defined in the ordinance codified herein, which is now in existence or which may hereafter be erected, constructed, altered, moved, demolished or repaired.

15.48.070 - Definitions.

As used in the International Fire Code:

City means the City of Evans, Colorado.

City Council means the City Council of the City of Evans.

Corporation Counsel means the City Attorney.

IFC means the 2012 Edition of the International Fire Code.

International Fire Code means the 2012 Edition of the International Fire Code.

Jurisdiction means the City of Evans.

Fire Code Official means the Chief of the Evans Fire Protection District, or his/her designee.

15.48.080 - IFC local amendments.

The following IFC sections are amended as follows:

1. Section 101.1 of the International Fire Code is amended to read as follows:

101.1 Title. These regulations shall be known as the Fire Code of the City of Evans, hereinafter referred to as "this code".

2. Section 101.2.1 of the International Fire Code is amended to read as follows:

101.2.1 Appendices. Provisions in the appendices shall not apply unless specifically adopted.

The following appendices published by the International Code Council and NFPA standards are specifically adopted and made part of the Fire Code of the City of Evans:

1. Appendix B, Fire Flow Requirements for Buildings
  2. Appendix C, Fire Hydrant Locations and Distribution
  3. Appendix D, Fire Apparatus Access Roads
  4. Appendix E, Hazard Categories
  5. Appendix F, Hazard Ranking
  6. Appendix G, Cryogenic Fluids- Weight and Volume Equivalents
  7. Appendix H, Hazardous Materials Management Plan (HMMP) and Hazardous Materials Inventory
- Statements (HMIS) Instructions

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8. Appendix I, Fire Protection Systems - Noncompliant Conditions

9. Appendix J, Building Information Sign.

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3. Section 103.2 of the International Fire Code is amended to read as follows:

103.2 Appointment. The fire code official shall be appointed by the Fire Chief of the Evans Fire Protection District.

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4. IFC Sec. 104 is amended to read:

104.11.4 Evacuation. The fire department official in charge of an incident shall be authorized to order the immediate evacuation of any occupied building deemed unsafe when such building has hazardous conditions that present imminent danger to building occupants. Persons so notified shall immediately leave the structure or premises and shall not enter or re-enter until authorized to do so by the fire department official in charge of the incident.

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5. IFC Sec. 105 is amended to read:

"105.6 Required operational permits. The fire code official is authorized to issue permits for the operations set forth in Sections 105.6.4, 105.6.14, 105.6.30 and 105.6.43.

"105.6.4 Carnivals and fairs. An operational permit is required to conduct a carnival or fair.

"105.6.14 Explosives. An operational permit is required for the manufacture, storage, handling, sale or use of any quantity of explosives, explosive materials, fireworks or pyrotechnic special effects within the scope of Chapter 56.

"Exception: Storage in Group R-3 occupancies of smokeless propellant, black powder and small arms primer for personal use, not for resale and in accordance with Section 5606.

"105.6.30 Open burning. An operational permit is required for the kindling or maintaining of an open fire or a fire on any public street, alley, road or other public or private ground in accordance with Section 307. Instructions and requirements of the permit shall be adhered to.

"105.6.43 Temporary membrane structures, tents, and canopies. An operational permit is required to operate an air-supported temporary structure or tent having an area in excess of 400 square feet, or a canopy of over 400 square feet.

"Exceptions:

"1. Tents used exclusively for recreational camping purposes;

"2. Tents open on all sides, which comply with all the following: (2.1) Individual tents having a maximum of 700 square feet; (2.2) The aggregate area of multiple tents placed side by side without a fire break clearance of not less than 12 feet shall not exceed 700 square feet; and (2.3) A minimum clearance of 12 feet to structures and other tents shall be provided."

6. IFC Sec. 108 is amended to read:

"108 Board of Appeals.

"108.1 Board of Appeals established. In order to hear and decide appeals of orders, decisions or determinations made by the fire code official relative to the application and interpretations of this code, there shall be and is hereby created a Fire Board of Appeals. The City of Evans Zoning Board of Appeals as established in Chapter 19.58 of the Evans Municipal Code shall serve as the Fire Board of Appeals."

7. IFC Sec. 307 is amended to read:

"307 Open burning, recreational fires and portable outdoor fireplaces.

"307.1.1 Prohibited open burning. Open burning that is offensive or objectionable because of smoke emissions, or when atmospheric conditions or local circumstances make such fires hazardous, shall be prohibited. The burning of trash, debris and refuse shall be prohibited.

"Exception: Prescribed burning for the purpose of reducing the impact of wildland fire when authorized by the fire code official.

"307.2 Permit required. A permit shall be obtained from the fire code official in accordance with Section 105.6 prior to kindling a fire for recognized silvicultural or range or wildfire management practices, prevention or control of disease or pests, or a recreational fire. Application for such approval shall only be presented by and permits issued to the owner of the land upon which the fire is to be kindled.

"307.2.1 Authorization. The permit is for compliance with fire safety and control alone, and is not a permit to violate any existing state or local laws, rules, regulations, or ordinances regarding fire, zoning, building, or air quality and pollution standards. The owner is responsible for obtaining any additional permits and/or clearances from any appropriate local or state agency or other official prior to beginning the burn, including but not limited to any prior approval from the state or local air and water quality management authority.

"307.5 Attendance. Open burning, recreational fires and use of portable outdoor fireplaces shall be constantly attended until the fire is extinguished. A minimum of one portable fire extinguisher complying with Section 906 with a minimum 4-A rating or other approved on-site fire-extinguishing equipment, such as dirt, sand, water barrel, garden hose or water truck, shall be available for immediate utilization.

8. IFC Sec. 501.4 is amended to read:

"501.4 Timing of installation. When fire protection, including fire apparatus access roads and water supplies for fire protection, are required to be installed for any new building construction or remodel above the footing and foundation, such access and egress roads, streets, or driveways shall have been constructed and maintained with an all-weather surface capable of supporting the weight of a fully equipped fire apparatus, street signs shall be in place and any required water supply shall be fully functional, before any building permit will be issued. The fire code official may require the installation of fire protection features described above where unusual hazards exist due to the location and type of construction or hazard to adjacent properties and buildings.

"Exception: When alternate methods of protection, as approved, are provided, the requirements of Section 501.4 may be modified or waived by the Fire Chief."

9. IFC Sec. 902 is amended to read:

"902 Nuisance alarms. An alarm caused by mechanical failure, malfunction, improper installation, or lack of proper maintenance, or an alarm activated by a cause that cannot be determined. No person shall allow any home, school, business, or any building that has a fire alarm system to have more than 3 nuisance alarms in one year."

10. IFC Section 5301.3 is added to read:

"5301.3 Maximum capacity of CNG. The storage of compressed natural gas (CNG) shall be prohibited in areas zoned R as defined by the City of Evans. Within the limits established by law restricting the storage of CNG for the protection of heavily populated or congested commercial area, the aggregate capacity of any one installation shall not exceed 500 gallons water capacity (70,000 cubic feet). The aggregate capacity for any one installation for the use as a wholesale or retail bulk storage plant shall not exceed 500 gallons water capacity."

11. IFC Sec. 560.1.1.a is added to read:

"560.1.1.a Prohibited and limited acts.

"a. Prohibited explosives: The storage of explosives and blasting agents is prohibited, except for temporary storage for use in connection with approved blasting operations; provided, however, this prohibition shall not apply to wholesale, retail stocks and small arms ammunition, explosive bolts, explosive rivets or cartridges for explosive-actuated power tools in quantities involving less than 20 pounds of explosive material. A valid permit in accordance with Section 105.6.14 is required."

12. IFC Sec. 5704.2 is added to read:

"5704.2.a Storage.

"a. Prohibited locations: Any new bulk plants for the storage or manufacture of flammable or combustible liquids are prohibited within any areas within the City of Evans zoned solely or primarily for residential occupancies or for mercantile establishments primarily retail in character. The zoning designation of the City of Evans zoning ordinance shall govern as to the zoning characteristics of such area.

"Exceptions:

- "1. Legal nonconforming. Bulk storage tanks legally installed and in use as of April 19, 1983, may be continued in use, provided that such tanks are located and installed in accordance with the latest adopted edition of the International Fire Code and provided further, that other applicable provisions of this code and the City of Evans Code of Ordinances are complied with.
- "2. Variance. Upon payment of a variance fee, review and recommendation of the Board of Appeals, the Evans City Council may grant a variance to the prohibitions in Section 3406 of the International Fire Code above for permits granted under Chapter 16.28, Oil and Gas Exploration and Development, if the Evans City Council finds that (a) such variance will not create an undue safety hazard and will not adversely affect surrounding property; and (b) good cause exists. All bulk storage authorized by the Evans City Council variance is subject to the construction, location and other applicable standards set forth in the latest adopted edition of the International Fire Code."

13. IFC Sec. 5404.2.9.2.1 is amended to read:

"5404.2.9.2.1 Additional fire protection. When required by the Fire Chief and in accordance with Section 5404.2.9.2.1 of the International Fire Code, additional foam fire protection and/or deluge water systems shall be provided at the well head and/or tank battery locations."

14. IFC Sec. 5704.2.9.5.a is amended to read:

"5704.2.9.5.a Location of aboveground tanks.

"1. General. Storage of Class I and Class II liquids in aboveground tanks outside of buildings is prohibited.

"Exceptions:

- "1. Prohibited and legal nonconforming. Any such aboveground tanks legally installed and in use as of April 19, 1983, may be continued in use, provided that such tanks are located and installed in accordance with the latest edition of the National Fire Protection Association Pamphlet Nos. 30 & 58 and provided further, that other applicable provisions of latest adopted edition of the International Fire Code and the City of Evans Code of Ordinances are complied with.
- "2. Variance for storage of flammable or combustible liquids in C, I, and P.U.D. zones. Upon payment of variance fee, review and recommendation of the Board of Appeals,

the Evans City Council may grant a variance to the prohibitions in Section 5704 of the International Fire Code above for permits granted under Chapter 16.28, Oil and Gas Exploration and Development, and/or for aboveground storage in C, I, and P.U.D. zoning districts as defined by the City of Evans, if the Evans City Council finds that: (a) such variance will not create an undue safety hazard and will not adversely affect surrounding property; and (b) good cause exists. All aboveground storage authorized by Evans City Council variance is subject to the construction, location and other applicable standards set forth in the latest adopted edition of the International Fire Code."

15. IFC Sec. 5706.1.a is added to read:

"5706.1.a Construction sites. The aboveground storage of Class I and II liquids shall be allowed on a temporary basis at construction sites for the purpose of refueling of construction equipment. A maximum of 1,100 gallons will be allowed at the site and shall have secondary containment. Gravity feed tanks will not be allowed for refueling equipment."

16. IFC Sec. 5706.3 is amended to read:

"5706.3 Well drilling and operating. Wells for oil and natural gas shall be drilled and operated in accordance with City of Evans Municipal Code Chapter 16.28; OIL AND GAS EXPLORATION AND DEVELOPMENT."

17. IFC Sec. 5706.6.5 is added to read:

"5706.6.5 Tank vehicle routes.

"1. General. No person shall operate, or cause to be operated, a tank vehicle on any street, highway, alley, avenue, boulevard or other public way or place within the City of Evans, Colorado, other than upon the streets and avenues shown on the tank vehicle route map adopted at subsection B of this section, or other than upon streets and avenues leading as directly as possible between a bulk plant and a point on a street or avenue shown on such map or between a retail service station and a point on a street or avenue shown on such map.

"2. Routes defined. The tank vehicle route map is adopted by resolution by the Evans City Council and is under separate cover on file in the City Clerk's office, City of Evans, Colorado 80620."

18. IFC Sec. 5804.3 is added to read:

"5804.3 Maximum capacity (LPG) within established limits. The storage of liquefied petroleum gas shall be prohibited in areas zoned R as defined by the City of Evans. The Evans City Council, upon review and recommendation of the Board of Appeals, may grant the storage of aboveground liquefied petroleum gases with C, I, and PUD Zones upon finding that: (a) such variance will not create an undue safety hazard and will not adversely affect surrounding

property; and (b) good cause exists. All aboveground storage authorized by Evans City Council variance shall be in accordance with the latest edition of the adopted International Fire Code. Within the limits established by law restricting the storage of liquefied petroleum gas for the protection of heavily populated or congested commercial area, the aggregate capacity of any one installation shall not exceed 2,000 gallons water capacity. The aggregate capacity for any one installation for the use as a wholesale or retail bulk storage plant shall not exceed 2,000 gallons water capacity. The foregoing prohibitions shall not apply to existing storage installations in existence on August 1, 1972, the effective date of the first adoption of the Uniform Fire Code.

"Exceptions:

- "1. The storage and use of liquefied petroleum gas in residential areas for barbeques, RV's or other recreational uses shall be limited to portable containers of 10 gallon water capacity or less. The total amount to be allowed in storage or use shall be limited to 20 gallons water capacity.
- "2. The storage and use of liquefied petroleum gas in areas zoned residential or commercial as defined by the City of Evans that do not have natural gas supplied to the area shall meet the requirements of Section 5803."

15.48.090 - Violation - Administrative citation, enforcement and abatement.

- A. Any person, firm or corporation violating any of the provisions of Chapter 15.48 of the Evans Municipal Code, as amended from time to time, shall be subject to the following administrative citation, enforcement, and abatement procedures:
1. The term "Fire Chief" as used in this Section refers to the Fire Chief of the Evans Fire Protection District and his or her designee(s). Upon a determination by the Fire Chief of a violation of the Fire Code of the City of Evans, Colorado, the Fire Chief may serve, or cause to be served, a notice of violation(s) and an order to correct upon the responsible party. The notice of violation(s) shall be in writing and shall describe with reasonable detail the violation so that the responsible party may properly correct it. The notice of violation shall provide a reasonable time (typically seven (7) days) for correction given the circumstances of the violation, unless a longer period of time is specified in the notice based on the Fire Chief's determination of the amount of time reasonably needed to correct the violations. In circumstances involving the public health, safety or welfare, the Fire Chief may designate a period of less than seven (7) days to correct the violation.
  2. If the violations causing the issuance of the notice of violation(s) are not corrected within the specified time period, the Fire Chief may issue a final notice to correct. The final notice to correct shall be in writing and shall describe the violation(s) with sufficient detail to enable the responsible party to correct the violations. A copy of the preceding notice of violation(s) and order to correct may be attached to the final notice to correct. The final notice to correct shall advise the responsible party that if the violations are not remedied by the proscribed date, a citation into municipal court will be issued.

3. Citations into Municipal Court may be issued by the Fire Chief or a police officer at any point, regardless of whether a notice of violation(s) or a final notice to correct has previously issued.
  4. All citations into Municipal Court shall be processed according to the procedures set forth in Chapter 1.16 of the Evans Municipal Code and shall be subject to the penalties set forth therein.
- B. Each day a violation exists or continues shall constitute a separate and distinct violation of the Fire Code of the City of Evans.
- C. The City may abate any violation not corrected within the time specified in a final notice to correct or a citation into Evans Municipal Court pursuant to the authority and procedures set forth in Section 1.16.050 of the Evans Municipal Code. The need to exercise the City's ability to abate shall constitute good cause for the court to award attorney's fees and costs in addition to the costs associated with the abatement of the violation(s).
- D. Administrative citation, enforcement, and abatement actions are intended to be cumulative in nature. The City may pursue one or more civil, criminal, and administrative actions, fees, fines, sentences, penalties, judgments and remedies and may do so simultaneously or in succession. The enactment of these remedies shall in no way interfere with the City's right or ability to prosecute violations, seek temporary restraining orders, or preliminary injunctions from a court of competent jurisdiction or to exercise other available remedies.

(Ord. 614-14, 2014; Ord. 552-13 §11)

15.48.100—15.48.260 - Repealed by Ord. 552-13 §9

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## CITY COUNCIL COMMUNICATION

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**DATE:** September 15, 2015

**AGENDA ITEM:** 9.B

**SUBJECT:** Ordinance No. 631-15 – Amending Title 16 of the Evans Municipal Code Concerning Flood Damage Prevention

**PRESENTED BY:** Dave Burns, Emergency Management Coordinator

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### **PROJECT DESCRIPTION:**

Ordinance No. 631-15 amends Titles 160.4 that involve Flood Damage Prevention.

As part of a citywide effort to review current ordinance, the only changes that were needed to be made to 160.4, was in the definition section. OSHA has replaced Material Safety Data Sheets (MSDS) forms with Safety Data Sheets (SDS) in 2012. All MSDS forms and terminology has to be changed by 2016 nationwide. To meet current standers, Titles 160.4 was updated to the new standard and definition below:

#### **16.04.050 - Definitions.**

“Safety Data Sheets (SDS) includes information such as the properties of each chemical; the physical, health, and environmental health hazards; protective measures; and safety precautions for handling, storing, and transporting the chemical. The information contained in the SDS must be in English (although it may be in other languages as well). In addition, OSHA requires that SDS preparers provide specific minimum information as detailed in Appendix D of 29 CFR 1910.1200. The SDS preparers may also include additional information in various section(s).”

The only other change changing MSDS abbreviations to SDS through the ordinance.

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### **FINANCIAL SUMMARY:**

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### **STAFF RECOMMENDATION:**

To approve Ordinance No. 631-15

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### **SUGGESTED MOTIONS:**

“I move to approve Ordinance No. 631-15 on first reading.”

“I move to deny the adoption of Ordinance No. 631-15”

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### **ATTACHMENTS:**

The amended sections of 16.04 that involve Flood Damage Prevention

## **Chapter 16.04      Flood Damage Prevention**

- 16.04.010 Statutory authorization
- 16.04.020 Findings of fact
- 16.04.030 Statement of purpose
- 16.04.040 Methods of reducing flood losses
- 16.04.050 Definitions
- 16.04.060 Lands to which this Chapter applies
- 16.04.070 Basis for establishing the special flood hazard area
- 16.04.080 Establishment of floodplain development permit
- 16.04.090 Compliance
- 16.04.100 Abrogation and greater restrictions
- 16.04.110 Interpretation
- 16.04.120 Warning and disclaimer of liability
- 16.04.130 Severability
- 16.04.140 Designation of Floodplain Administrator
- 16.04.150 Duties and responsibilities of Floodplain Administrator
- 16.04.160 Permit procedures
- 16.04.170 Variance procedures
- 16.04.180 Penalties for noncompliance
- 16.04.190 General standards for construction in special flood hazard areas
- 16.04.200 Specific standards for construction in special flood hazard areas
- 16.04.210 Standards for areas of shallow flooding (AO/AH zones)
- 16.04.220 Floodways
- 16.04.230 Alteration of watercourse
- 16.04.240 Properties removed from floodplain by fill
- 16.04.250 Standards for subdivision proposals
- 16.04.260 Standards for critical facilities

### **TITLE 16 - Environment**

#### **CHAPTER 16.04 - Flood Damage Prevention**

16.04.010 - Statutory authorization.

The Legislature of the State has, in Title 29, Article 20, C.R.S., delegated the responsibility of local governmental units to adopt regulations designed to minimize flood losses. Therefore, City Council hereby adopts the following floodplain management regulations.

(Ord. 579-13 §1)

16.04.020 - Findings of fact.

A.

The flood hazard areas of the City are subject to periodic inundation, which can result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, and extraordinary public expenditures for flood protection and relief, all of which adversely affect the health, safety and general welfare of the public.

B.

These flood losses are created by the cumulative effect of obstructions in floodplains, which cause an increase in flood heights and velocities, and by the occupancy of flood hazard areas by uses vulnerable to floods and hazardous to other lands because they are inadequately elevated, flood proofed or otherwise protected from flood damage.

(Ord. 579-13 §1)

16.04.030 - Statement of purpose.

It is the purpose of this Chapter to promote public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

A.

Protect human life and health;

B.

Minimize expenditure of public money for costly flood control projects;

C.

Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

D.

Minimize prolonged business interruptions;

E.

Minimize damage to critical facilities, infrastructure and other public facilities, such as water sewer and gas mains; electric and communications stations; and streets and bridges located in floodplains;

F.

Help maintain a stable tax base by providing for the sound use and development of flood prone areas in such a manner as to minimize future flood blight areas; and

G.

Ensure that potential buyers are notified that property is located in a flood hazard area.

(Ord. 579-13 §1)

16.04.040 - Methods of reducing flood losses.

In order to accomplish its purposes, this Chapter uses the following methods:

A.

Restrict or prohibit uses that are dangerous to health, safety or property in times of flood, or cause excessive increases in flood heights or velocities;

B.

Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

C.

Control the alteration of natural floodplains, stream channels and natural protective barriers, which are involved in the accommodation of flood waters;

D.

Control filling, grading, dredging and other development which may increase flood damage;

E.

Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands.

(Ord. 579-13 §1)

16.04.050 - Definitions.

Unless specifically defined below, words or phrases used in this Chapter shall be interpreted to give them the meaning they have in common usage and to give this Chapter its most reasonable application.

100-year flood means a flood having a recurrence interval that has a one-percent chance of being equaled or exceeded during any given year (1-percent-annual-chance flood). The terms one-hundred-year flood and one percent chance flood are synonymous with the term 100-year flood. The term does not imply that the flood will necessarily happen once every one hundred (100) years.

100-year floodplain means the area of land susceptible to being inundated as a result of the occurrence of a one-hundred-year flood.

500-year flood means a flood having a recurrence interval that has a 0.2-percent chance of being equaled or exceeded during any given year (0.2-percent-chance-annual-flood). The term does not imply that the flood will necessarily happen once every five hundred (500) years.

500-year floodplain means the area of land susceptible to being inundated as a result of the occurrence of a five-hundred-year flood.

Addition means any activity that expands the enclosed footprint or increases the square footage of an existing structure.

Area of shallow flooding means a designated Zone AO or AH on a community's Flood Insurance Rate Map (FIRM) with a one-percent chance or greater annual chance of flooding to an average depth of one (1) to three (3) feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

Base flood elevation (BFE) means the elevation shown on a FEMA Flood Insurance Rate Map for Zones AE, AH, A1-A30, AR, AR/A, AR/AE, AR/A1- A30, AR/AH, AR/AO, V1-V30 and VE that indicates the water surface elevation resulting from a flood that has a one-percent chance of equaling or exceeding that level in any given year.

Basement means any area of a building having its floor sub-grade (below ground level) on all sides.

Channel means the physical confine of stream or waterway consisting of a bed and stream banks, existing in a variety of geometries.

Channelization means the artificial creation, enlargement or realignment of a stream channel.

Conditional letter of map revision (CLOMR) means FEMA's comment on a proposed project which does not revise an effective floodplain map that would, upon construction, affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodplain.

Critical facility means a structure or related infrastructure, but not the land on which it is situated, as specified in Section 16.04.620 of this Chapter that, if flooded, may result in significant hazards to public health and safety or interrupt essential services and operations for the community at any time before, during and after a flood. See Section 16.04.620 of this Chapter.

Development means any man-made change in improved and unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

DFIRM database means the database, usually spreadsheets containing data and ~~analyses,~~ [analyses that](#) accompany DFIRMs. The FEMA Mapping Specifications and Guidelines outline requirements for the development and maintenance of DFIRM databases.

Digital flood insurance rate map (DFIRM) means the FEMA digital floodplain map. These digital maps serve as "regulatory floodplain maps" for insurance and floodplain management purposes.

Elevated building means a non-basement building (i) built, in the case of a building in Zones AI-30, AE, A, A99, AO, AH, B, C, X and D, to have the top of the elevated floor above the ground level by means of pilings, columns (posts and piers), or shear walls parallel to the flow of the water and (ii) adequately anchored so as not to impair the structural integrity of the building during a flood of up to the magnitude of the base flood. In the case of Zones AI-30, AE, A, A99, AO, AH, B, C, X and D, elevated building also includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of flood waters.

Existing manufactured home park or subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed, including, at a minimum, the installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads, is completed before the effective date of the floodplain management regulations adopted by a community.

Expansion to an existing manufactured home park or subdivision means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed, including the installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads.

FEMA means the Federal Emergency Management Agency, the agency responsible for administering the National Flood Insurance Program.

Flood or flooding means a general and temporary condition of partial or complete inundation of normally dry land areas from:

a.

The overflow of water from channels and reservoir spillways;

b.

The unusual and rapid accumulation or runoff of surface waters from any source; or

c.

Mudslides or mudflows that occur from excess surface water that is combined with mud or other debris that is sufficiently fluid so as to flow over the surface of normally dry land areas, such as earth carried by a current of water and deposited along the path of the current.

Flood control structure means a physical structure designed and built expressly or partially for the purpose of reducing, redirecting or guiding flood flows along a particular waterway. These specialized flood modifying works are those constructed in conformance with sound engineering standards.

Flood insurance rate map (FIRM) means an official map of a community on which FEMA has delineated both the special flood hazard areas and the risk premium zones applicable to the community.

Flood insurance study (FIS) means the official report provided by FEMA. The report contains the flood insurance rate map as well as flood profiles for studied flooding sources that can be used to determine base flood elevations for some areas.

Floodplain or flood-prone area means any land area susceptible to being inundated as the result of a flood, including the area of land over which floodwater would flow from the spillway of a reservoir.

Floodplain Administrator means the City official designated by City Council to administer and enforce the floodplain management regulations.

Floodplain development permit means a permit required before construction or development begins within any special flood hazard area (SFHA). If FEMA has not defined the SFHA within a community, the community shall require permits for all proposed construction or other development in the community including the placement of manufactured homes, so that it may determine whether such construction or other development is proposed within flood-prone areas. Permits are required to ensure that proposed development projects meet the requirements of the NFIP and this Chapter.

Floodplain management means the operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works and floodplain management regulations.

Floodplain management regulations means zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as a floodplain ordinance, grading ordinance and erosion control ordinance) and other applications of police power. The term describes such state or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.

Floodproofing means any combination of structural and/or nonstructural additions, changes or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

Floodway (regulatory floodway) means the channel of a river or other watercourse and adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. The statewide standard for the designated height to be used for all newly studied reaches shall be one-half foot (six [6] inches). Letters of map revision to existing floodway delineations may continue to use the floodway criteria in place at the time of the existing floodway delineation.

Freeboard means the vertical distance in feet above a predicted water surface elevation intended to provide a margin of safety to compensate for unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood such as debris blockage of bridge openings and the increased runoff due to urbanization of the watershed.

Functionally dependent use means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port

facilities that are necessary for the loading and unloading of cargo or passengers and boat building and boat repair facilities, but does not include long-term storage or related manufacturing facilities.

Highest adjacent grade means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

Historic structure means any structure that is:

a.

Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;

b.

Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary of the Interior to qualify as a registered historic district;

c.

Individually listed on the State's inventory of historic places as part of an historic preservation program which has been approved by the Secretary of Interior; or

d.

Individually listed on a local inventory of historic places as part of an historic preservation program that has been certified either:

(1)

By an approved Colorado state program as determined by the Secretary of the Interior; or

(2)

Directly by the Secretary of the Interior.

Letter of map revision (LOMR) means FEMA's official revision of an effective flood insurance rate map (FIRM) or flood boundary and floodway map (FBFM), or both. LOMRs are generally based on the implementation of physical measures that affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective base flood elevations (BFEs) or the special flood hazard area (SFHA).

Letter of map revision based on fill (LOMR-F) means FEMA's modification of the special flood hazard area (SFHA) shown on the flood insurance rate map (FIRM) based on the placement of fill outside the existing regulatory floodway.

Levee means a man-made embankment, usually earthen, designed and constructed in accordance with sound engineering practices to contain, control or divert the flow of water so as to provide

protection from temporary flooding. For a levee structure to be reflected on the FEMA FIRMs as providing flood protection, the levee structure must meet the requirements set forth in 44 C.F.R. § 65.10.

Levee system means a flood protection system which consists of a levee or levees and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

Lowest floor means the lowest floor of the lowest enclosed area, including basement. Any floor used for living purposes which includes working, storage, sleeping, cooking and eating or recreation, or any combination thereof. This includes any floor that could be converted to such a use such as a basement or crawl space. The lowest floor is a determinate for the flood insurance premium for a building, home or business. An unfinished or flood resistant enclosure, usable solely for parking or vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor; provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirement of Section 60.3 of the National Flood Insurance Program regulations.

Manufactured home means a structure transportable in one (1) or more sections which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. The term manufactured home does not include a recreational vehicle.

Manufactured home park or subdivision means a parcel (or contiguous parcels) of land divided into two (2) or more manufactured home lots for rent or sale.

~~Material safety data sheet (MSDS) means a form with data regarding the properties of a particular substance. An important component of product stewardship and workplace safety, it is intended to provide workers and emergency personnel with procedures for handling or working with that substance in a safe manner and includes information such as physical data (melting point, boiling point, flash point, etc.), toxicity, health effects, first aid, reactivity, storage, disposal, protective equipment and spill handling procedures.~~

Safety Data Sheets (SDS) includes information such as the properties of each chemical; the physical, health, and environmental health hazards; protective measures; and safety precautions for handling, storing, and transporting the chemical. The information contained in the SDS must be in English (although it may be in other languages as well). In addition, OSHA requires that SDS preparers provide specific minimum information as detailed in Appendix D of 29 CFR 1910.1200. The SDS preparers may also include additional information in various section(s).

Mean sea level means, for purposes of the National Flood Insurance Program, the North American Vertical Datum (NAVD) of 1988, or other datum to which base flood elevations shown on a community's flood insurance rate map are referenced.

National flood insurance program (NFIP) means FEMA's program of flood insurance coverage and floodplain management administered in conjunction with the Robert T. Stafford Relief and

**Commented [DB1]:** OSHA has replaced MSDS forms with SDS in 2012. All MSDS forms and terminology has to be changed by 2016 nationwide.

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Emergency Assistance Act. The NFIP has applicable federal regulations promulgated in Title 44, C.F.R.

New manufactured home park or subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed, including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads, is completed on or after the effective date of floodplain management regulations adopted by a community.

No-rise certification means a record of the results of an engineering analysis conducted to determine whether a project will increase flood heights in a floodway. A no-rise certification must be supported by technical data and signed by a registered Colorado professional engineer. The supporting technical data should be based on the standard step-backwater computer model used to develop the 100-year floodway shown on the flood insurance rate map (FIRM) or flood boundary and floodway map (FBFM).

Physical map revision (PMR) means FEMA's action whereby one (1) or more map panels are physically revised and republished. A PMR is used to change flood risk zones, floodplain and/or floodway delineations, flood elevations and/or planimetric features.

Recreational vehicle means a vehicle which is:

a.

Built on a single chassis;

b.

Four hundred (400) square feet or less when measured at the largest horizontal projections;

c.

Designed to be self-propelled or permanently towable by a light duty truck; and

d.

Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel or seasonal use.

Special flood hazard area means the land in the floodplain within a community subject to a one percent (1%) or greater chance of flooding in any given year, i.e., the 100-year floodplain.

Start of construction means the date the building permit was issued, including substantial improvements, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement or other improvement was within one hundred eighty (180) days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or

walkways; nor does it include excavation for basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Structure means a walled and roofed building, including a gas or liquid storage tank, which is principally above ground, as well as a manufactured home.

Substantial damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed fifty percent (50%) of the market value of the structure just prior to when the damage occurred.

Substantial improvement means any reconstruction, rehabilitation, addition or other improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure before start of construction of the improvement. The value of the structure shall be determined by the City's designee. This includes structures which have incurred substantial damage, regardless of the actual repair work performed. The term does not, however, include either:

a.

Any project for improvement of a structure to correct existing violations of state or local health, sanitary or safety code specifications which have been identified by the City's code enforcement official and which are the minimum necessary conditions; or

b.

Any alteration of a historic structure provided that the alteration will not preclude the structure's continued designation as a historic structure.

Threshold planning quantity (TPQ) means a quantity designated for each chemical on the list of extremely hazardous substances that triggers notification by facilities to the State that such facilities are subject to emergency planning requirements.

Variance means a grant of relief to a person from the requirement of this Chapter when specific enforcement would result in unnecessary hardship. A variance, therefore, permits construction or development in a manner otherwise prohibited by this Chapter. For full requirements see Section 60.6 of the National Flood Insurance Program regulations.

Violation means the failure of a structure or other development to be fully compliant with the City's floodplain management regulations. A structure or other development without the elevation certificate, other certifications or other evidence of compliance required in Section 60.3(b)(5), (c)(4), (c)(10), (d)(3), (e)(2), (e)(4) or (e)(5) is presumed to be in violation until such time as that documentation is provided.

Water surface elevation means the height, in relation to the North American Vertical Datum (NAVD) of 1988 (or other datum, where specified), of floods of various magnitudes and frequencies in the floodplains of riverine areas.

(Ord. 579-13 §1)

16.04.060 - Lands to which this Chapter applies.

This Chapter shall apply to all special flood hazard areas and areas removed from the floodplain by the issuance of a FEMA letter of map revision based on fill (LOMR-F) within the jurisdiction of the City.

(Ord. 579-13 §1)

16.04.070 - Basis for establishing the special flood hazard area.

A.

The special flood hazard areas identified by the Federal Emergency Management Agency in a scientific and engineering report entitled, "The Flood Insurance Study for the City of Evans, Colorado," dated May 31, 2013, with accompanying flood insurance rate maps and/or flood boundary as adopted by ordinance.

B.

Floodway maps (FIRM and/or FBFM) and any revisions thereto are hereby adopted by reference and declared to be a part of this Chapter. These special flood hazard areas identified by the FIS and attendant mapping are the minimum area of applicability of this Chapter and may be supplemented by studies designated and approved by resolution of the City Council. The Floodplain Administrator shall keep a copy of the Flood Insurance Study (FIS), DFIRMs, FIRMs and/or FBFMs on file and available for public inspection.

(Ord. 579-13 §1)

16.04.080 - Establishment of floodplain development permit.

A floodplain development permit shall be required to ensure conformance with the provisions of this Chapter.

(Ord. 579-13 §1)

16.04.090 - Compliance.

No structure or land shall hereafter be located, altered, or have its use changed within the special flood hazard area without full compliance with the terms of this Chapter and other applicable regulations. Nothing herein shall prevent the City Council from taking such lawful action as is necessary to prevent or remedy any violation. These regulations meet the minimum requirements as set forth by the Colorado Water Conservation Board and the National Flood Insurance Program.

(Ord. 579-13 §1)

16.04.100 - Abrogation and greater restrictions.

This Chapter is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. However, where this Chapter and another ordinance, easement, covenant or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

(Ord. 579-13 §1)

16.04.110 - Interpretation.

In the interpretation and application of this Chapter, all provisions shall be:

A.

Considered as minimum requirements;

B.

Liberal construed in favor of the City; and

C.

Deemed neither to limit nor repeal any other powers granted under state statutes.

(Ord. 579-13 §1)

16.04.120 - Warning and disclaimer of liability.

A.

The degree of flood protection required by this Chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. On rare occasions greater floods can and will occur and flood heights may be increased by man-made or natural causes.

B.

This Chapter does not imply that land outside the special flood hazard area or uses permitted within such areas will be free from flooding or flood damages. This Chapter shall not create liability on the part of the City or any official or employee thereof for any flood damages that result from reliance on this Chapter or any administrative decision lawfully made thereunder.

(Ord. 579-13 §1)

16.04.130 - Severability.

This Chapter and the various parts thereof are hereby declared to be severable. Should any section of this Chapter be declared by the courts to be unconstitutional or invalid, such decision

shall not affect the validity of the Chapter as a whole, or any portion thereof other than the section so declared to be unconstitutional or invalid.

(Ord. 579-13 §1)

16.04.140 - Designation of Floodplain Administrator.

The City Manager is hereby appointed as Floodplain Administrator to administer, implement and enforce the provisions of this Chapter and other appropriate sections of 44 C.F.R. (National Flood Insurance Program Regulations) pertaining to floodplain management.

(Ord. 579-13 §1)

16.04.150 - Duties and responsibilities of Floodplain Administrator.

Duties and responsibilities of the Floodplain Administrator shall include, but not be limited to, the following:

A.

Maintain and hold open for public inspection all records pertaining to the provisions of this Chapter, including the actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures and any floodproofing certificate required by Section 16.04.160 below.

B.

Review, approve or deny all applications for floodplain development permits required by adoption of this Chapter.

C.

Review floodplain development permit applications to determine whether a proposed building site, including the placement of manufactured homes, will be reasonably safe from flooding.

D.

Review permits for proposed development to assure that all necessary permits have been obtained from those federal, state or local governmental agencies, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. § 1334, from which prior approval is required.

E.

Inspect all development at appropriate times during the period of construction to ensure compliance with all provisions of this Chapter, including proper elevation of the structure.

F.

Where interpretation is needed as to the exact location of the boundaries of the special flood hazard area (for example, where there appears to be a conflict between a mapped boundary and actual field conditions) the Floodplain Administrator shall make the necessary interpretation.

G.

When base flood elevation data has not been provided in accordance with Section 16.04.070 of this Chapter, the Floodplain Administrator shall obtain, review and reasonably utilize any base flood elevation data and floodway data available from a federal, state or other source in order to administer the provisions of Sections 16.04.190 through 16.04.210 of this Chapter.

H.

For waterways with base flood elevations for which a regulatory floodway has not been designated, no new construction, substantial improvements or other development (including fill) shall be permitted within Zones A1-30 and AE on the City's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one-half (½) foot at any point within the community.

I.

Under the provisions of 44 C.F.R. Chapter 1, Section 65.12, of the National Flood Insurance Program regulations, a community may approve certain development in Zones A1-30, AE or AH on the community's FIRM which increases the water surface elevation of the base flood by more than one-half (½) foot, provided that the community first applies for a conditional FIRM revision through FEMA (conditional letter of map revision), fulfills the requirements for such revisions as established under the provisions of Section 65.12 and receives FEMA approval.

J.

Notify, in riverine situations, adjacent communities and the State Coordinating Agency, which is the Colorado Water Conservation Board, prior to any alteration or relocation of a watercourse, and submit evidence of such notification to FEMA.

K.

Ensure that the flood carrying capacity within the altered or relocated portion of any watercourse is maintained.

(Ord. 579-13 §1)

16.04.160 - Permit procedures.

A.

Application for a floodplain development permit shall be presented to the Floodplain Administrator on forms furnished by him or her and shall include, but not be limited to, plans in duplicate drawn to scale showing the location, dimensions and elevation of proposed landscape alterations, existing and proposed structures, including the placement of manufactured homes,

and the location of the foregoing in relation to special flood hazard area. Additionally, the following information is required:

1.

Elevation (in relation to mean sea level), of the lowest floor (including basement) of all new and substantially improved structures;

2.

Elevation in relation to mean sea level to which any nonresidential structure shall be flood proofed;

3.

A certificate from a registered Colorado professional engineer or architect that the nonresidential flood proofed structure shall meet the floodproofing criteria of Paragraph 16.04.200.B.2 of this Chapter;

4.

Description of the extent to which any watercourse or natural drainage will be altered or relocated as a result of proposed development.

5.

Maintain a record of all such information in accordance with Section 16.04.150 above.

B.

Approval or denial of a floodplain development permit by the Floodplain Administrator shall be based on all of the provisions of this Chapter and the following non-exclusive list of relevant factors:

1.

The danger to life and property due to flooding or erosion damage;

2.

The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;

3.

The danger that materials may be swept onto other lands to the injury of others;

4.

The compatibility of the proposed use with existing and anticipated development;

5.

The safety of access to the property in times of flood for ordinary and emergency vehicles;

6.

The costs of providing governmental services during and after flood conditions, including maintenance and repair of streets and bridges, and public utilities and facilities such as sewer, gas, electrical and water systems;

7.

The expected heights, velocity, duration, rate of rise and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site;

8.

The necessity to the facility of a waterfront location, where applicable;

9.

The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;

10.

The relationship of the proposed use to the comprehensive plan for that area.

(Ord. 579-13 §1)

16.04.170 - Variance procedures.

A.

Requests for variances from the requirements of this ordinance shall be heard and determined using the process set forth in Chapter 19.58 of the Evans Municipal Code, except as modified in this Section.

B.

The Floodplain Administrator shall maintain a record of all actions involving an appeal and shall report variances to FEMA upon request.

C.

Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in Chapter 19.58 or the procedures set forth in the remainder of this ordinance.

D.

Variances may be issued for new construction and substantial improvements to be erected on a lot of one-half (1/2) acre or less in size contiguous to and surrounded by lots with existing

structures constructed below the base flood level, providing the relevant factors in this ordinance have been fully considered.

E.

Upon consideration of the factors noted in this Section and the intent of this ordinance, the City Council may attach such conditions to the granting of variances as it deems necessary to further the purpose and objectives of this ordinance as stated in Section 16.04.030.

F.

Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

G.

Variances may be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.

H.

Prerequisites for granting variances:

i.

Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

ii.

Variances shall only be issued upon:

a.

Showing a good and sufficient cause, and

b.

A determination that failure to grant the variance would result in exceptional hardship to the applicant, and

c.

A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.

iii.

Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with the lowest floor elevation below the base flood elevation, and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

I.

Variations may be issued for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that:

i.

The criteria outlined herein are met, and

ii.

The structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

(Ord. 596-14, 2014; Ord. 579-13 §1)

16.04.180 - Penalties for noncompliance.

No structure or land shall hereafter be constructed, located, extended, converted or altered without full compliance with the terms of this Chapter and other applicable regulations. Violation of the provisions of this Chapter by failure to comply with any of its requirements, including violations of conditions and safeguards established in connection with conditions, shall be cited, prosecuted and punished pursuant to the provisions of Chapter 1.16 of this Code. Nothing contained in this Chapter or in Chapter 1.16 shall prevent the City from taking such other lawful action as is necessary to prevent or remedy any violation of this Chapter.

(Ord. 579-13 §1)

16.04.190 - General standards for construction in special flood hazard areas.

In all special flood hazard areas the following provisions are required for all new construction and substantial improvements:

A.

All new construction or substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.

B.

All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage.

C.

All new construction or substantial improvements shall be constructed with materials resistant to flood damage.

D.

All new construction or substantial improvements shall be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

E.

All manufactured homes shall be installed using methods and practices which minimize flood damage. For the purposes of this requirement, manufactured homes must be elevated and anchored to resist flotation, collapse or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces.

F.

All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.

G.

New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharge from the systems into flood waters.

H.

On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

(Ord. 579-13 §1)

16.04.200 - Specific standards for construction in special flood hazard areas.

In all special flood hazard areas where base flood elevation data has been provided as set forth in Sections 16.04.070, 16.04.150 or 16.04.260 of this Chapter, the following provisions are required:

A.

Residential construction. New construction and substantial improvement of any residential structure shall have the lowest floor (including basement), electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities (including ductwork), elevated to thirty-six (36) inches above the base flood elevation. Upon completion of the structure, the elevation of the lowest floor, including basement, shall be certified by a registered Colorado professional engineer, architect or land surveyor. Such certification shall be submitted to the Floodplain Administrator.

B.

Nonresidential construction.

1.

With the exception of critical facilities, as defined herein, new construction and substantial improvements of any commercial, industrial or other nonresidential structure shall either have the lowest floor (including basement), electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities (including ductwork), elevated to eighteen (18) inches above the base flood elevation or, together with attendant utility and sanitary facilities, be designed so that at eighteen (18) inches above the base flood elevation the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

2.

A registered Colorado professional engineer or architect shall develop and/or review structural design, specifications and plans for the construction, and shall certify that the design and methods of construction are in accordance with accepted standards of practice as outlined in this Subsection. Such certification shall be maintained by the Floodplain Administrator.

C.

Enclosures.

1.

New construction and substantial improvements, with fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding, shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters.

2.

Designs for meeting this requirement must either be certified by a registered Colorado professional engineer or architect or meet or exceed the following minimum criteria:

a.

A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided.

b.

The bottom of all openings shall be no higher than one (1) foot above grade.

c.

Openings may be equipped with screens, louvers, valves or other coverings or devices, provided that they permit the automatic entry and exit of floodwaters.

D.

Manufactured homes.

1.

All manufactured homes that are placed or substantially improved within Zones A1-30, AH and AE on the City's FIRM on sites (i) outside of a manufactured home park or subdivision, (ii) in a new manufactured home park or subdivision, (iii) in an expansion to an existing manufactured home park or subdivision, or (iv) in an existing manufactured home park or subdivision on which manufactured home has incurred "substantial damage" as a result of a flood, be elevated on a permanent foundation such that the lowest floor of the manufactured home, electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities, including ductwork, are elevated to thirty-six (36) inches above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement.

2.

All manufactured homes placed or substantially improved on sites in an existing manufactured home park or subdivision within Zones A1-30, AH and AE on the community's FIRM that are not subject to the provisions of Paragraph 1. above shall be elevated so that either:

a.

The lowest floor of the manufactured home, electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities, including ductwork, are thirty-six (36) inches above the base flood elevation, or

b.

The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than thirty-six (36) inches in height above grade and be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement.

E.

Recreational vehicles.

1.

All recreational vehicles placed on sites within Zones A1-30, AH and AE on the City's FIRM must either:

a.

Be on the site for fewer than one hundred eighty (180) consecutive days,

b.

Be fully licensed and ready for highway use, or

c.

Meet the permit requirements of Section 16.04.160 of this Chapter, and the elevation and anchoring requirements for "manufactured homes" in Subsection D above.

2.

A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices and has no permanently attached additions.

F.

Prior approved activities. Any activity for which a floodplain development permit was issued by the City or a CLOMR was issued by FEMA prior to the effective date of this Chapter may be completed according to the standards in place at the time of the permit or CLOMR issuance and will not be considered in violation of this Chapter if it meets such standards.

(Ord. 579-13 §1)

16.04.210 - Standards for areas of shallow flooding (AO/AH zones).

Located within the special flood hazard area established in Section 16.04.070 of this Chapter are areas designated as shallow flooding. These areas have special flood hazards associated with base flood depths of one (1) to three (3) feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow; therefore, the following provisions apply:

A.

Residential construction. All new construction and substantial improvements of residential structures must have the lowest floor, including basement, electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities, including ductwork, elevated above the highest adjacent grade at least one (1) foot above the depth number specified in feet on the City's FIRM (at least three [3] feet if no depth number is specified). Upon completion of the structure, the elevation of the lowest floor, including basement, shall be certified by a registered Colorado professional engineer, architect or land surveyor. Such certification shall be submitted to the Floodplain Administrator.

B.

Nonresidential construction. With the exception of critical facilities, outlined in Section 16.04.260 of this Chapter, all new construction and substantial improvements of nonresidential structures must have the lowest floor (including basement), electrical, heating, ventilation,

plumbing and air conditioning equipment and other service facilities, including ductwork, elevated above the highest adjacent grade at least one (1) foot above the depth number specified in feet on the City's FIRM (at least three [3] feet if no depth number is specified) or, together with attendant utility and sanitary facilities, be designed so that the structure is watertight to at least one (1) foot above the base flood level with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads of effects of buoyancy. A registered Colorado professional engineer or architect shall submit a certification to the Floodplain Administrator that the standards of this Section, as proposed in Section 16.04.160 of this Chapter are satisfied. Within Zones AH or AO, adequate drainage paths around structures on slopes are required to guide flood waters around and away from proposed structures.

#### 16.04.220 - Floodways.

Floodways are administrative limits and tools used to regulate existing and future floodplain development. The State has adopted floodway standards that are more stringent than the FEMA minimum standard (see definition of floodway in Article 2). Located within special flood hazard area established in Section 16.04.070 of this Chapter are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles and erosion potential, the following provisions shall apply:

A.

Encroachments are prohibited, including fill, new construction, substantial improvements and other development within the adopted regulatory floodway, unless it has been demonstrated through hydrologic and hydraulic analyses performed by a licensed Colorado professional engineer and in accordance with standard engineering practice that the proposed encroachment would not result in any increase (requires a no-rise certification) in flood levels within the community during the occurrence of the base flood discharge.

B.

If the above is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this Article.

C.

Under the provisions of 44 C.F.R. Chapter 1, Section 65.12, of the National Flood Insurance Regulations, a community may permit encroachments within the adopted regulatory floodway that would result in an increase in base flood elevations, provided that the community first applies for a CLOMR and floodway revision through FEMA.

(Ord. 579-13 §1)

#### 16.04.230 - Alteration of watercourse.

For all proposed developments that alter a watercourse within a special flood hazard area, the following standards apply:

A.

Channelization and flow diversion projects shall appropriately consider issues of sediment transport, erosion, deposition and channel migration and properly mitigate potential problems through the project as well as upstream and downstream of any improvement activity. A detailed analysis of sediment transport and overall channel stability should be considered, when appropriate, to assist in determining the most appropriate design.

B.

Channelization and flow diversion projects shall evaluate the residual 100-year floodplain.

C.

Any channelization or other stream alteration activity proposed by a project proponent must be evaluated for its impact on the regulatory floodplain and be in compliance with all applicable federal, state and local floodplain rules, regulations and ordinances.

D.

Any stream alteration activity shall be designed and sealed by a registered Colorado professional engineer or certified professional hydrologist.

E.

All activities within the regulatory floodplain shall meet all applicable federal, state and City floodplain requirements and regulations.

F.

Within the regulatory floodway, stream alteration activities shall not be constructed unless the project proponent demonstrates through a floodway analysis and report, sealed by a registered Colorado professional engineer, that there is not more than a 0.00-foot rise in the proposed conditions compared to existing conditions floodway resulting from the project, otherwise known as a no-rise certification, unless the City first applies for a CLOMR and floodway revision in accordance with Section 16.04.220 above.

G.

Maintenance shall be required for any altered or relocated portions of watercourses so that the flood-carrying capacity is not diminished.

(Ord. 579-13 §1)

16.04.240 - Properties removed from floodplain by fill.

A floodplain development permit shall not be issued for the construction of a new structure or addition to an existing structure on a property removed from the floodplain by the issuance of a FEMA letter of map revision based on fill (LOMR-F), unless such new structure or addition complies with the following:

A.

Residential construction. The lowest floor (including basement), electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities, including ductwork, must be elevated to eighteen inches above the base flood elevation that existed prior to the placement of fill.

B.

Nonresidential construction. The lowest floor (including basement), electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities (including ductwork), must be elevated to eighteen [18] inches above the base flood elevation that existed prior to the placement of fill, or, together with attendant utility and sanitary facilities, be designed so that the structure or addition is watertight to at least one (1) foot above the base flood level that existed prior to the placement of fill with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads of effects of buoyancy.

(Ord. 579-13 §1)

16.04.250 - Standards for subdivision proposals.

A.

All subdivision proposals including the placement of manufactured home parks and subdivisions shall be reasonably safe from flooding. If a subdivision or other development proposal is in a flood-prone area, the proposal shall minimize flood damage.

B.

All proposals for the development of subdivisions, including the placement of manufactured home parks and subdivisions, shall meet floodplain development permit requirements of Sections 16.04.080 and 16.04.160 of this Chapter and the provisions of flood hazard reduction of this Chapter.

C.

Base flood elevation data shall be generated for subdivision proposals and other proposed development, including the placement of manufactured home parks and subdivisions which is greater than fifty (50) lots or five (5) acres, whichever is lesser, if not otherwise provided pursuant to Sections 16.04.070 or 16.04.150 of this Chapter.

D.

All subdivision proposals including the placement of manufactured home parks and subdivisions shall have adequate drainage provided to reduce exposure to flood hazards.

E.

All subdivision proposals including the placement of manufactured home parks and subdivisions shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize or eliminate flood damage.

(Ord. 579-13 §1)

16.04.260 - Standards for critical facilities.

A critical facility is a structure or related infrastructure, but not the land on which it is situated, as specified in Rule 6 of the Rules and Regulations for Regulatory Floodplains in Colorado, that, if flooded, may result in significant hazards to public health and safety or interrupt essential services and operations for the community at any time before, during and after a flood.

A.

Classification of critical facilities. Critical facilities are classified under the following categories: (a) essential services; (b) hazardous materials; (c) at-risk populations; and (d) vital to restoring normal services. Specific structures in the City shall meet the following criteria:

1.

Essential services facilities include public safety, emergency response, emergency medical, designated emergency shelters, communications, public utility plant facilities and transportation lifelines.

a.

These facilities consist of:

(1)

Public safety (police stations, fire and rescue stations, emergency vehicle and equipment storage and emergency operation centers);

(2)

Emergency medical (hospitals, ambulance service centers, urgent care centers having emergency treatment functions, and non-ambulatory surgical structures, but excluding clinics, doctor offices and non-urgent care medical structures that do not provide these functions);

(3)

Designated emergency shelters;

(4)

Communications (main hubs for telephone, broadcasting equipment for cable systems, satellite dish systems, cellular systems, television, radio and other emergency warning systems, but excluding towers, poles, lines, cables and conduits);

(5)

Public utility plant facilities for generation and distribution (hubs, treatment plants, substations and pumping stations for water, power and gas, but not including towers, poles, power lines, buried pipelines, transmission lines, distribution lines and service lines); and

(6)

Air transportation lifelines (airports [municipal and larger], helicopter pads and structures serving emergency functions, and associated infrastructure [aviation control towers, air traffic control centers and emergency equipment aircraft hangars]).

b.

Specific exemptions to this category include wastewater treatment plants (WWTP), non-potable water treatment and distribution systems, and hydroelectric power generating plants and related appurtenances.

c.

Public utility plant facilities may be exempted if it can be demonstrated to the satisfaction of the City Council that the facility is an element of a redundant system for which service will not be interrupted during a flood. At a minimum, it shall be demonstrated that redundant facilities are available (either owned by the same utility or available through an intergovernmental agreement or other contract) and connected, the alternative facilities are either located outside of the 100-year floodplain or are compliant with the provisions of this Article and an operations plan is in effect that states how redundant systems will provide service to the affected area in the event of a flood. Evidence of ongoing redundancy shall be provided to the City Council on an as-needed basis upon request.

2.

Hazardous materials facilities include facilities that produce or store highly volatile, flammable, explosive, toxic and/or water-reactive materials.

a.

These facilities may include:

(1)

Chemical and pharmaceutical plants (chemical plant, pharmaceutical manufacturing);

(2)

Laboratories containing highly volatile, flammable, explosive, toxic and/or water-reactive materials;

(3)

Refineries;

(4)

Hazardous waste storage and disposal sites; and

(5)

Above ground gasoline or propane storage or sales centers.

b.

Facilities shall be determined to be critical facilities if they produce or store materials in excess of threshold limits. If the owner of a facility is required by the Occupational Safety and Health Administration (OSHA) to keep a material safety data sheet (~~MSDS~~SDS) on file for any chemicals stored or used in the work place, and the chemical is stored in quantities equal to or greater than the threshold planning quantity (TPQ) for that chemical, then that facility shall be considered to be a critical facility. The TPQ for these chemicals is: either five hundred (500) pounds or the TPQ listed (whichever is lower) for the chemicals listed under 40 C.F.R. § 302 (2010), as amended from time to time, also known as extremely hazardous substances (EHS); or ten thousand (10,000) pounds for any other chemical. This threshold is consistent with the requirements for reportable chemicals established by the Department of Public Health and Environment. OSHA requirements for ~~MSDS~~SDS can be found in 29 C.F.R. § 1910 (2010). The Environmental Protection Agency (EPA) regulation "Designation, Reportable Quantities, and Notification," 40 C.F.R. § 302 (2010) and OSHA regulation "Occupational Safety and Health Standards," 29 C.F.R. § 1910 (2010) are incorporated herein by reference and include the regulations in existence at the time of the promulgation of this Chapter, as well as amendments to or editions of the regulations.

c.

Specific exemptions to this category include:

(1)

Finished consumer products within retail centers and households containing hazardous materials intended for household use, and agricultural products intended for agricultural use.

(2)

Buildings and other structures containing hazardous materials for which it can be demonstrated to the satisfaction of the City Council by hazard assessment and certification by a qualified professional (as determined by the City Council) that a release of the subject hazardous material does not pose a major threat to the public.

(3)

Pharmaceutical sales, use, storage and distribution centers that do not manufacture pharmaceutical products.

These exemptions shall not apply to buildings or other structures that also function as critical facilities under another category outlined in this Article.

3.

At-risk population facilities include medical care, congregate care, and schools. These facilities consist of:

a.

Elder care ( nursing homes);

b.

Congregate care serving twelve (12) or more individuals (day care and assisted living);

c.

Public and private schools (pre-schools, K-12 schools), before-school and after-school care serving twelve (12) or more children.

4.

Facilities vital to restoring normal services including government operations.

a.

These facilities consist of:

(1)

Essential government operations (public records, courts, jails, building permitting and inspection services, community administration and management, maintenance and equipment centers);

(2)

Essential structures for public colleges and universities (dormitories, offices and classrooms only).

b.

These facilities may be exempted if it is demonstrated to the City Council that the facility is an element of a redundant system for which service will not be interrupted during a flood. At a minimum, it shall be demonstrated that redundant facilities are available (either owned by the same entity or available through an intergovernmental agreement or other contract), the alternative facilities are either located outside of the 100-year floodplain or are compliant with this Chapter, and an operations plan is in effect that states how redundant facilities will provide service to the affected area in the event of a flood. Evidence of ongoing redundancy shall be provided to the City Council on an as-needed basis upon request.

B.

Protection for critical facilities. All new and substantially improved critical facilities and new additions to critical facilities located within the special flood hazard area shall be regulated to a higher standard than structures not determined to be critical facilities. For the purposes of this Chapter, protection shall include at least one (1) of the following:

1.

Location outside the special flood hazard area; or

2.

Elevation of the lowest floor or floodproofing of the structure, together with attendant utility and sanitary facilities, to at least two (2) feet above the base flood elevation.

C.

Ingress and egress for new critical facilities. New critical facilities shall, when practicable as determined by the City Council, have continuous non-inundated access (ingress and egress for evacuation and emergency services) during a 100-year flood event.

(Ord. 579-13 §1)

**CITY OF EVANS, COLORADO**

**ORDINANCE NO. 631-15**

**AN ORDINANCE AMENDING CHAPTER 16.04 OF THE EVANS CITY CODE TO  
UPDATE THE REFERENCES TO SAFETY DATA SHEETS AS  
REQUIRED BY OSHA**

**WHEREAS**, the City Council of the City of Evans, Colorado, pursuant to Colorado statute and the Evans City Charter, is vested with the authority of administering the affairs of the City of Evans, Colorado; and

**WHEREAS**, the Title 29, Article 20 of the Colorado Revised Statutes delegated the responsibility of local governmental units to adopt regulations designed to minimize flood losses; and

**WHEREAS**, the City Council previously adopted regulations designed to minimize flood losses; and

**WHEREAS**, the City Council wishes to update the references to Safety Data Sheets, hereinafter, "SDS" as required by OSHA.

**NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE  
CITY OF EVANS, COLORADO AS FOLLOWS:**

1. Chapter 16.04 is amended by striking the reference to Material Safety Data Sheets (MSDS) and replacing it with language referencing Safety Data Sheets (SDS), as well as replacing references to MSDS with SDS throughout the Chapter, such changes being depicted on Exhibit 1 to this Ordinance.
2. Severability. 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 thereof irrespective of the fact that any one part or parts be declared unconstitutional or invalid.
3. Repeal. Existing ordinances or parts of ordinances covering the same matters embraced in this ordinance are hereby repealed and all ordinances or parts of ordinances inconsistent with the provisions of this ordinance are hereby repealed except that this repeal shall not affect or prevent the prosecution or punishment of any person for any act done or committed in violation of any ordinance hereby repealed prior to the effective date of this ordinance.

**INTRODUCED AND PASSED AT A REGULAR MEETING OF THE CITY COUNCIL  
OF THE CITY OF EVANS ON THIS 15<sup>TH</sup> DAY OF SEPTEMBER, 2015.**

**ATTEST:**

**CITY OF EVANS, COLORADO**

\_\_\_\_\_  
Raegan Robb, City Clerk

BY: \_\_\_\_\_  
John L. Morris, Mayor

**PASSED AND ADOPTED ON A SECOND READING THIS 6<sup>TH</sup> DAY OF OCTOBER,  
2015.**

**ATTEST:**

**CITY OF EVANS, COLORADO**

\_\_\_\_\_  
Raegan Robb, City Clerk

BY: \_\_\_\_\_  
John L. Morris, Mayor

## **TITLE 16**

### **Environment**

#### **Chapter 16.04 Flood Damage Prevention**

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- 16.04.020 Findings of fact
- 16.04.030 Statement of purpose
- 16.04.040 Methods of reducing flood losses
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- 16.04.060 Lands to which this Chapter applies
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- 16.04.210 Standards for areas of shallow flooding (AO/AH zones)
- 16.04.220 Floodways
- 16.04.230 Alteration of watercourse
- 16.04.240 Properties removed from floodplain by fill
- 16.04.250 Standards for subdivision proposals
- 16.04.260 Standards for critical facilities

#### **CHAPTER 16.04 - Flood Damage Prevention**

16.04.010 - Statutory authorization.

The Legislature of the State has, in Title 29, Article 20, C.R.S., delegated the responsibility of local governmental units to adopt regulations designed to minimize flood losses. Therefore, City Council hereby adopts the following floodplain management regulations.

(Ord. 579-13 §1)

16.04.020 - Findings of fact.

A. The flood hazard areas of the City are subject to periodic inundation, which can result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, and extraordinary public expenditures for flood protection and relief, all of which adversely affect the health, safety and general welfare of the public.

B. These flood losses are created by the cumulative effect of obstructions in floodplains, which cause an increase in flood heights and velocities, and by the occupancy of flood hazard areas by uses vulnerable to floods and hazardous to other lands because they are inadequately elevated, flood proofed or otherwise protected from flood damage.

(Ord. 579-13 §1)

16.04.030 - Statement of purpose.

It is the purpose of this Chapter to promote public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

A. Protect human life and health;

B. Minimize expenditure of public money for costly flood control projects;

C. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

D. Minimize prolonged business interruptions;

E. Minimize damage to critical facilities, infrastructure and other public facilities, such as water sewer and gas mains; electric and communications stations; and streets and bridges located in floodplains;

F. Help maintain a stable tax base by providing for the sound use and development of flood prone areas in such a manner as to minimize future flood blight areas; and

G. Ensure that potential buyers are notified that property is located in a flood hazard area.

(Ord. 579-13 §1)

16.04.040 - Methods of reducing flood losses.

In order to accomplish its purposes, this Chapter uses the following methods:

A. Restrict or prohibit uses that are dangerous to health, safety or property in times of flood, or cause excessive increases in flood heights or velocities;

B. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

C. Control the alteration of natural floodplains, stream channels and natural protective barriers, which are involved in the accommodation of flood waters;

D. Control filling, grading, dredging and other development which may increase flood damage;

E. Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands.

(Ord. 579-13 §1)

16.04.050 - Definitions.

Unless specifically defined below, words or phrases used in this Chapter shall be interpreted to give them the meaning they have in common usage and to give this Chapter its most reasonable application.

100-year flood means a flood having a recurrence interval that has a one-percent chance of being equaled or exceeded during any given year (1-percent-annual-chance flood). The terms one-hundred-year flood and one percent chance flood are synonymous with the term 100-year flood. The term does not imply that the flood will necessarily happen once every one hundred (100) years.

100-year floodplain means the area of land susceptible to being inundated as a result of the occurrence of a one-hundred-year flood.

500-year flood means a flood having a recurrence interval that has a 0.2-percent chance of being equaled or exceeded during any given year (0.2-percent-chance-annual-flood). The term does not imply that the flood will necessarily happen once every five hundred (500) years.

500-year floodplain means the area of land susceptible to being inundated as a result of the occurrence of a five-hundred-year flood.

Addition means any activity that expands the enclosed footprint or increases the square footage of an existing structure.

Area of shallow flooding means a designated Zone AO or AH on a community's Flood Insurance Rate Map (FIRM) with a one-percent chance or greater annual chance of flooding to an average depth of one (1) to three (3) feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

Base flood elevation (BFE) means the elevation shown on a FEMA Flood Insurance Rate Map for Zones AE, AH, A1-A30, AR, AR/A, AR/AE, AR/A1- A30, AR/AH, AR/AO, V1-V30 and VE that indicates the water surface elevation resulting from a flood that has a one-percent chance of equaling or exceeding that level in any given year.

Basement means any area of a building having its floor sub-grade (below ground level) on all sides.

Channel means the physical confine of stream or waterway consisting of a bed and stream banks, existing in a variety of geometries.

Channelization means the artificial creation, enlargement or realignment of a stream channel.

Conditional letter of map revision (CLOMR) means FEMA's comment on a proposed project which does not revise an effective floodplain map that would, upon construction, affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodplain.

Critical facility means a structure or related infrastructure, but not the land on which it is situated, as specified in Section 16.04.620 of this Chapter that, if flooded, may result in significant hazards to public health and safety or interrupt essential services and operations for the community at any time before, during and after a flood. See Section 16.04.620 of this Chapter.

Development means any man-made change in improved and unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

DFIRM database means the database, usually spreadsheets containing data and analyses that accompany DFIRMs. The FEMA Mapping Specifications and Guidelines outline requirements for the development and maintenance of DFIRM databases.

Digital flood insurance rate map (DFIRM) means the FEMA digital floodplain map. These digital maps serve as "regulatory floodplain maps" for insurance and floodplain management purposes.

Elevated building means a non-basement building (i) built, in the case of a building in Zones AI-30, AE, A, A99, AO, AH, B, C, X and D, to have the top of the elevated floor above the ground level by means of pilings, columns (posts and piers), or shear walls parallel to the flow of the water and (ii) adequately anchored so as not to impair the structural integrity of the building during a flood of up to the magnitude of the base flood. In the case of Zones AI-30, AE, A, A99, AO, AH, B, C, X and D, elevated building also includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of flood waters.

Existing manufactured home park or subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed, including, at a minimum, the installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads, is completed before the effective date of the floodplain management regulations adopted by a community.

Expansion to an existing manufactured home park or subdivision means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed, including the installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads.

FEMA means the Federal Emergency Management Agency, the agency responsible for administering the National Flood Insurance Program.

Flood or flooding means a general and temporary condition of partial or complete inundation of normally dry land areas from:

- a. The overflow of water from channels and reservoir spillways;
- b. The unusual and rapid accumulation or runoff of surface waters from any source; or
- c. Mudslides or mudflows that occur from excess surface water that is combined with mud or other debris that is sufficiently fluid so as to flow over the surface of normally dry land areas, such as earth carried by a current of water and deposited along the path of the current.

Flood control structure means a physical structure designed and built expressly or partially for the purpose of reducing, redirecting or guiding flood flows along a particular waterway. These specialized flood modifying works are those constructed in conformance with sound engineering standards.

Flood insurance rate map (FIRM) means an official map of a community on which FEMA has delineated both the special flood hazard areas and the risk premium zones applicable to the community.

Flood insurance study (FIS) means the official report provided by FEMA. The report contains the flood insurance rate map as well as flood profiles for studied flooding sources that can be used to determine base flood elevations for some areas.

Floodplain or flood-prone area means any land area susceptible to being inundated as the result of a flood, including the area of land over which floodwater would flow from the spillway of a reservoir.

Floodplain Administrator means the City official designated by City Council to administer and enforce the floodplain management regulations.

Floodplain development permit means a permit required before construction or development begins within any special flood hazard area (SFHA). If FEMA has not defined the SFHA within a community, the community shall require permits for all proposed construction or other development in the community including the placement of manufactured homes, so that it may determine whether such construction or other development is proposed within flood-prone areas. Permits are required to ensure that proposed development projects meet the requirements of the NFIP and this Chapter.

Floodplain management means the operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works and floodplain management regulations.

Floodplain management regulations means zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as a floodplain ordinance, grading ordinance and erosion control ordinance) and other applications of police power. The term describes such state or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.

Floodproofing means any combination of structural and/or nonstructural additions, changes or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

Floodway (regulatory floodway) means the channel of a river or other watercourse and adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. The statewide standard for the designated height to be used for all newly studied reaches shall be one-half foot (six [6] inches). Letters of map revision to existing floodway delineations may continue to use the floodway criteria in place at the time of the existing floodway delineation.

Freeboard means the vertical distance in feet above a predicted water surface elevation intended to provide a margin of safety to compensate for unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood such as debris blockage of bridge openings and the increased runoff due to urbanization of the watershed.

Functionally dependent use means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers and boat building and boat repair facilities, but does not include long-term storage or related manufacturing facilities.

Highest adjacent grade means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

Historic structure means any structure that is:

- a. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- b. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary of the Interior to qualify as a registered historic district;
- c. Individually listed on the State's inventory of historic places as part of an historic preservation program which has been approved by the Secretary of Interior; or
- d. Individually listed on a local inventory of historic places as part of an historic preservation program that has been certified either:
  - (1) By an approved Colorado state program as determined by the Secretary of the Interior; or
  - (2) Directly by the Secretary of the Interior.

Letter of map revision (LOMR) means FEMA's official revision of an effective flood insurance rate map (FIRM) or flood boundary and floodway map (FBFM), or both. LOMRs are generally based on the implementation of physical measures that affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective base flood elevations (BFEs) or the special flood hazard area (SFHA).

Letter of map revision based on fill (LOMR-F) means FEMA's modification of the special flood hazard area (SFHA) shown on the flood insurance rate map (FIRM) based on the placement of fill outside the existing regulatory floodway.

Levee means a man-made embankment, usually earthen, designed and constructed in accordance with sound engineering practices to contain, control or divert the flow of water so as to provide protection from temporary flooding. For a levee structure to be reflected on the FEMA FIRMs as providing flood protection, the levee structure must meet the requirements set forth in 44 C.F.R. § 65.10.

Levee system means a flood protection system which consists of a levee or levees and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

Lowest floor means the lowest floor of the lowest enclosed area, including basement. Any floor used for living purposes which includes working, storage, sleeping, cooking and eating or recreation, or any combination thereof. This includes any floor that could be converted to such a use such as a basement or crawl space. The lowest floor is a determinate for the flood insurance premium for a building, home or business. An unfinished or flood resistant enclosure, usable solely for parking or vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor; provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirement of Section 60.3 of the National Flood Insurance Program regulations.

Manufactured home means a structure transportable in one (1) or more sections which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. The term manufactured home does not include a recreational vehicle.

Manufactured home park or subdivision means a parcel (or contiguous parcels) of land divided into two (2) or more manufactured home lots for rent or sale.

Safety Data Sheets (SDS) includes information such as the properties of each chemical; the physical, health, and environmental health hazards; protective measures; and safety precautions for handling, storing, and transporting the chemical. The information contained in the SDS must be in English (although it may be in other languages as well). In addition, OSHA requires that SDS preparers provide specific minimum information as detailed in Appendix D of 29 CFR 1910.1200. The SDS preparers may also include additional information in various section(s).

Mean sea level means, for purposes of the National Flood Insurance Program, the North American Vertical Datum (NAVD) of 1988, or other datum to which base flood elevations shown on a community's flood insurance rate map are referenced.

National flood insurance program (NFIP) means FEMA's program of flood insurance coverage and floodplain management administered in conjunction with the Robert T. Stafford Relief and Emergency Assistance Act. The NFIP has applicable federal regulations promulgated in Title 44, C.F.R.

New manufactured home park or subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed, including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads, is completed on or after the effective date of floodplain management regulations adopted by a community.

No-rise certification means a record of the results of an engineering analysis conducted to determine whether a project will increase flood heights in a floodway. A no-rise certification must be supported by technical data and signed by a registered Colorado professional engineer. The supporting technical data should be based on the standard step-backwater computer model used to develop the 100-year floodway shown on the flood insurance rate map (FIRM) or flood boundary and floodway map (FBFM).

Physical map revision (PMR) means FEMA's action whereby one (1) or more map panels are physically revised and republished. A PMR is used to change flood risk zones, floodplain and/or floodway delineations, flood elevations and/or planimetric features.

Recreational vehicle means a vehicle which is:

- a. Built on a single chassis;
- b. Four hundred (400) square feet or less when measured at the largest horizontal projections;
- c. Designed to be self-propelled or permanently towable by a light duty truck; and
- d. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel or seasonal use.

Special flood hazard area means the land in the floodplain within a community subject to a one percent (1%) or greater chance of flooding in any given year, i.e., the 100-year floodplain.

Start of construction means the date the building permit was issued, including substantial improvements, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement or other improvement was within one hundred eighty (180) days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Structure means a walled and roofed building, including a gas or liquid storage tank, which is principally above ground, as well as a manufactured home.

Substantial damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed fifty percent (50%) of the market value of the structure just prior to when the damage occurred.

Substantial improvement means any reconstruction, rehabilitation, addition or other improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure before start of construction of the improvement. The value of the structure shall be determined by the City's designee. This includes structures which have incurred substantial damage, regardless of the actual repair work performed. The term does not, however, include either:

- a. Any project for improvement of a structure to correct existing violations of state or local health, sanitary or safety code specifications which have been identified by the City's code enforcement official and which are the minimum necessary conditions; or
- b. Any alteration of a historic structure provided that the alteration will not preclude the structure's continued designation as a historic structure.

Threshold planning quantity (TPQ) means a quantity designated for each chemical on the list of extremely hazardous substances that triggers notification by facilities to the State that such facilities are subject to emergency planning requirements.

Variance means a grant of relief to a person from the requirement of this Chapter when specific enforcement would result in unnecessary hardship. A variance, therefore, permits construction or development in a manner otherwise prohibited by this Chapter. For full requirements see Section 60.6 of the National Flood Insurance Program regulations.

Violation means the failure of a structure or other development to be fully compliant with the City's floodplain management regulations. A structure or other development without the elevation certificate, other certifications or other evidence of compliance required in Section 60.3(b)(5), (c)(4), (c)(10), (d)(3), (e)(2), (e)(4) or (e)(5) is presumed to be in violation until such time as that documentation is provided.

Water surface elevation means the height, in relation to the North American Vertical Datum (NAVD) of 1988 (or other datum, where specified), of floods of various magnitudes and frequencies in the floodplains of riverine areas.

(Ord. 579-13 §1)

16.04.060 - Lands to which this Chapter applies.

This Chapter shall apply to all special flood hazard areas and areas removed from the floodplain by the issuance of a FEMA letter of map revision based on fill (LOMR-F) within the jurisdiction of the City.

(Ord. 579-13 §1)

16.04.070 - Basis for establishing the special flood hazard area.

A. The special flood hazard areas identified by the Federal Emergency Management Agency in a scientific and engineering report entitled, "The Flood Insurance Study for the City of Evans, Colorado," dated May 31, 2013, with accompanying flood insurance rate maps and/or flood boundary as adopted by ordinance.

B. Floodway maps (FIRM and/or FBFM) and any revisions thereto are hereby adopted by reference and declared to be a part of this Chapter. These special flood hazard areas identified by the FIS and attendant mapping are the minimum area of applicability of this Chapter and may be supplemented by studies designated and approved by resolution of the City Council. The Floodplain Administrator shall keep a copy of the Flood Insurance Study (FIS), DFIRMs, FIRMs and/or FBFMs on file and available for public inspection.

(Ord. 579-13 §1)

16.04.080 - Establishment of floodplain development permit.

A floodplain development permit shall be required to ensure conformance with the provisions of this Chapter.

(Ord. 579-13 §1)

16.04.090 - Compliance.

No structure or land shall hereafter be located, altered, or have its use changed within the special flood hazard area without full compliance with the terms of this Chapter and other applicable regulations. Nothing herein shall prevent the City Council from taking such lawful action as is necessary to prevent or remedy any violation. These regulations meet the minimum requirements as set forth by the Colorado Water Conservation Board and the National Flood Insurance Program.

(Ord. 579-13 §1)

16.04.100 - Abrogation and greater restrictions.

This Chapter is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. However, where this Chapter and another ordinance, easement, covenant or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

(Ord. 579-13 §1)

16.04.110 - Interpretation.

In the interpretation and application of this Chapter, all provisions shall be:

A. Considered as minimum requirements;

B. Liberally construed in favor of the City; and

C. Deemed neither to limit nor repeal any other powers granted under state statutes.

(Ord. 579-13 §1)

16.04.120 - Warning and disclaimer of liability.

A. The degree of flood protection required by this Chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. On rare occasions greater floods can and will occur and flood heights may be increased by man-made or natural causes.

B. This Chapter does not imply that land outside the special flood hazard area or uses permitted within such areas will be free from flooding or flood damages. This Chapter shall not create liability on the part of the City or any official or employee thereof for any flood damages that result from reliance on this Chapter or any administrative decision lawfully made thereunder.

(Ord. 579-13 §1)

16.04.130 - Severability.

This Chapter and the various parts thereof are hereby declared to be severable. Should any section of this Chapter be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the Chapter as a whole, or any portion thereof other than the section so declared to be unconstitutional or invalid.

(Ord. 579-13 §1)

16.04.140 - Designation of Floodplain Administrator.

The City Manager is hereby appointed as Floodplain Administrator to administer, implement and enforce the provisions of this Chapter and other appropriate sections of 44 C.F.R. (National Flood Insurance Program Regulations) pertaining to floodplain management.

(Ord. 579-13 §1)

16.04.150 - Duties and responsibilities of Floodplain Administrator.

Duties and responsibilities of the Floodplain Administrator shall include, but not be limited to, the following:

A. Maintain and hold open for public inspection all records pertaining to the provisions of this Chapter, including the actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures and any floodproofing certificate required by Section 16.04.160 below.

B. Review, approve or deny all applications for floodplain development permits required by adoption of this Chapter.

C. Review floodplain development permit applications to determine whether a proposed building site, including the placement of manufactured homes, will be reasonably safe from flooding.

D. Review permits for proposed development to assure that all necessary permits have been obtained from those federal, state or local governmental agencies, including Section 404 of the

Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. § 1334, from which prior approval is required.

E. Inspect all development at appropriate times during the period of construction to ensure compliance with all provisions of this Chapter, including proper elevation of the structure.

F. Where interpretation is needed as to the exact location of the boundaries of the special flood hazard area (for example, where there appears to be a conflict between a mapped boundary and actual field conditions) the Floodplain Administrator shall make the necessary interpretation.

G. When base flood elevation data has not been provided in accordance with Section 16.04.070 of this Chapter, the Floodplain Administrator shall obtain, review and reasonably utilize any base flood elevation data and floodway data available from a federal, state or other source in order to administer the provisions of Sections 16.04.190 through 16.04.210 of this Chapter.

H. For waterways with base flood elevations for which a regulatory floodway has not been designated, no new construction, substantial improvements or other development (including fill) shall be permitted within Zones A1-30 and AE on the City's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one-half (½) foot at any point within the community.

I. Under the provisions of 44 C.F.R. Chapter 1, Section 65.12, of the National Flood Insurance Program regulations, a community may approve certain development in Zones A1-30, AE or AH on the community's FIRM which increases the water surface elevation of the base flood by more than one-half (½) foot, provided that the community first applies for a conditional FIRM revision through FEMA (conditional letter of map revision), fulfills the requirements for such revisions as established under the provisions of Section 65.12 and receives FEMA approval.

J. Notify, in riverine situations, adjacent communities and the State Coordinating Agency, which is the Colorado Water Conservation Board, prior to any alteration or relocation of a watercourse, and submit evidence of such notification to FEMA.

K. Ensure that the flood carrying capacity within the altered or relocated portion of any watercourse is maintained.

(Ord. 579-13 §1)

16.04.160 - Permit procedures.

A. Application for a floodplain development permit shall be presented to the Floodplain Administrator on forms furnished by him or her and shall include, but not be limited to, plans in duplicate drawn to scale showing the location, dimensions and elevation of proposed landscape alterations, existing and proposed structures, including the placement of manufactured homes, and the location of the foregoing in relation to special flood hazard area. Additionally, the following information is required:

1. Elevation (in relation to mean sea level), of the lowest floor (including basement) of all new and substantially improved structures;
2. Elevation in relation to mean sea level to which any nonresidential structure shall be flood proofed;
3. A certificate from a registered Colorado professional engineer or architect that the nonresidential flood proofed structure shall meet the floodproofing criteria of Paragraph 16.04.200.B.2 of this Chapter;
4. Description of the extent to which any watercourse or natural drainage will be altered or relocated as a result of proposed development.
5. Maintain a record of all such information in accordance with Section 16.04.150 above.

B. Approval or denial of a floodplain development permit by the Floodplain Administrator shall be based on all of the provisions of this Chapter and the following non-exclusive list of relevant factors:

1. The danger to life and property due to flooding or erosion damage;
2. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
3. The danger that materials may be swept onto other lands to the injury of others;
4. The compatibility of the proposed use with existing and anticipated development;
5. The safety of access to the property in times of flood for ordinary and emergency vehicles;
6. The costs of providing governmental services during and after flood conditions, including maintenance and repair of streets and bridges, and public utilities and facilities such as sewer, gas, electrical and water systems;
7. The expected heights, velocity, duration, rate of rise and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site;
8. The necessity to the facility of a waterfront location, where applicable;
9. The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
10. The relationship of the proposed use to the comprehensive plan for that area.

(Ord. 579-13 §1)

16.04.170 - Variance procedures.

A. Requests for variances from the requirements of this ordinance shall be heard and determined using the process set forth in Chapter 19.58 of the Evans Municipal Code, except as modified in this Section.

B. The Floodplain Administrator shall maintain a record of all actions involving an appeal and shall report variances to FEMA upon request.

C. Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in Chapter 19.58 or the procedures set forth in the remainder of this ordinance.

D. Variances may be issued for new construction and substantial improvements to be erected on a lot of one-half (½) acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing the relevant factors in this ordinance have been fully considered.

E. Upon consideration of the factors noted in this Section and the intent of this ordinance, the City Council may attach such conditions to the granting of variances as it deems necessary to further the purpose and objectives of this ordinance as stated in Section 16.04.030.

F. Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

G. Variances may be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.

H. Prerequisites for granting variances:

i. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

ii. Variances shall only be issued upon:

a. Showing a good and sufficient cause, and

b. A determination that failure to grant the variance would result in exceptional hardship to the applicant, and

c. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.

iii. Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with the lowest floor elevation below the base flood elevation, and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

I. Variances may be issued for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that:

i. The criteria outlined herein are met, and

ii. The structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

(Ord. 596-14, 2014; Ord. 579-13 §1)

#### 16.04.180 - Penalties for noncompliance.

No structure or land shall hereafter be constructed, located, extended, converted or altered without full compliance with the terms of this Chapter and other applicable regulations. Violation of the provisions of this Chapter by failure to comply with any of its requirements, including violations of conditions and safeguards established in connection with conditions, shall be cited, prosecuted and punished pursuant to the provisions of Chapter 1.16 of this Code. Nothing contained in this Chapter or in Chapter 1.16 shall prevent the City from taking such other lawful action as is necessary to prevent or remedy any violation of this Chapter.

(Ord. 579-13 §1)

#### 16.04.190 - General standards for construction in special flood hazard areas.

In all special flood hazard areas the following provisions are required for all new construction and substantial improvements:

A. All new construction or substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.

B. All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage.

C. All new construction or substantial improvements shall be constructed with materials resistant to flood damage.

D. All new construction or substantial improvements shall be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

E. All manufactured homes shall be installed using methods and practices which minimize flood damage. For the purposes of this requirement, manufactured homes must be elevated and anchored to resist flotation, collapse or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces.

F. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.

G. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharge from the systems into flood waters.

H. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

(Ord. 579-13 §1)

16.04.200 - Specific standards for construction in special flood hazard areas.

In all special flood hazard areas where base flood elevation data has been provided as set forth in Sections 16.04.070, 16.04.150 or 16.04.260 of this Chapter, the following provisions are required:

A. Residential construction. New construction and substantial improvement of any residential structure shall have the lowest floor (including basement), electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities (including ductwork), elevated to thirty-six (36) inches above the base flood elevation. Upon completion of the structure, the elevation of the lowest floor, including basement, shall be certified by a registered Colorado professional engineer, architect or land surveyor. Such certification shall be submitted to the Floodplain Administrator.

B. Nonresidential construction.

1. With the exception of critical facilities, as defined herein, new construction and substantial improvements of any commercial, industrial or other nonresidential structure shall either have the lowest floor (including basement), electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities (including ductwork), elevated to eighteen (18) inches above the base flood elevation or, together with attendant utility and sanitary facilities, be designed so that at eighteen (18) inches above the base flood elevation the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

2. A registered Colorado professional engineer or architect shall develop and/or review structural design, specifications and plans for the construction, and shall certify that the design and methods of construction are in accordance with accepted standards of practice as outlined in this Subsection. Such certification shall be maintained by the Floodplain Administrator.

C. Enclosures.

1. New construction and substantial improvements, with fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding, shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters.

2. Designs for meeting this requirement must either be certified by a registered Colorado professional engineer or architect or meet or exceed the following minimum criteria:

a. A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided.

b. The bottom of all openings shall be no higher than one (1) foot above grade.

c. Openings may be equipped with screens, louvers, valves or other coverings or devices, provided that they permit the automatic entry and exit of floodwaters.

#### D. Manufactured homes.

1. All manufactured homes that are placed or substantially improved within Zones A1-30, AH and AE on the City's FIRM on sites (i) outside of a manufactured home park or subdivision, (ii) in a new manufactured home park or subdivision, (iii) in an expansion to an existing manufactured home park or subdivision, or (iv) in an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as a result of a flood, be elevated on a permanent foundation such that the lowest floor of the manufactured home, electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities, including ductwork, are elevated to thirty-six (36) inches above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement.

2. All manufactured homes placed or substantially improved on sites in an existing manufactured home park or subdivision within Zones A1-30, AH and AE on the community's FIRM that are not subject to the provisions of Paragraph 1. above shall be elevated so that either:

a. The lowest floor of the manufactured home, electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities, including ductwork, are thirty-six (36) inches above the base flood elevation, or

b. The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than thirty-six (36) inches in height above grade and be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement.

#### E. Recreational vehicles.

1. All recreational vehicles placed on sites within Zones A1-30, AH and AE on the City's FIRM must either:

a. Be on the site for fewer than one hundred eighty (180) consecutive days,

b. Be fully licensed and ready for highway use, or

c. Meet the permit requirements of Section 16.04.160 of this Chapter, and the elevation and anchoring requirements for "manufactured homes" in Subsection D above.

2. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices and has no permanently attached additions.

F. Prior approved activities. Any activity for which a floodplain development permit was issued by the City or a CLOMR was issued by FEMA prior to the effective date of this Chapter may be completed according to the standards in place at the time of the permit or CLOMR issuance and will not be considered in violation of this Chapter if it meets such standards.

(Ord. 579-13 §1)

16.04.210 - Standards for areas of shallow flooding (AO/AH zones).

Located within the special flood hazard area established in Section 16.04.070 of this Chapter are areas designated as shallow flooding. These areas have special flood hazards associated with base flood depths of one (1) to three (3) feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow; therefore, the following provisions apply:

A. Residential construction. All new construction and substantial improvements of residential structures must have the lowest floor, including basement, electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities, including ductwork, elevated above the highest adjacent grade at least one (1) foot above the depth number specified in feet on the City's FIRM (at least three [3] feet if no depth number is specified). Upon completion of the structure, the elevation of the lowest floor, including basement, shall be certified by a registered Colorado professional engineer, architect or land surveyor. Such certification shall be submitted to the Floodplain Administrator.

B. Nonresidential construction. With the exception of critical facilities, outlined in Section 16.04.260 of this Chapter, all new construction and substantial improvements of nonresidential structures must have the lowest floor (including basement), electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities, including ductwork, elevated above the highest adjacent grade at least one (1) foot above the depth number specified in feet on the City's FIRM (at least three [3] feet if no depth number is specified) or, together with attendant utility and sanitary facilities, be designed so that the structure is watertight to at least one (1) foot above the base flood level with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads of effects of buoyancy. A registered Colorado professional engineer or architect shall submit a certification to the Floodplain Administrator that the standards of this Section, as proposed in Section 16.04.160 of this Chapter are satisfied. Within Zones AH or AO, adequate drainage paths around structures on slopes are required to guide flood waters around and away from proposed structures.

16.04.220 - Floodways.

Floodways are administrative limits and tools used to regulate existing and future floodplain development. The State has adopted floodway standards that are more stringent than the FEMA minimum standard (see definition of floodway in Article 2). Located within special flood hazard area established in Section 16.04.070 of this Chapter are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles and erosion potential, the following provisions shall apply:

A. Encroachments are prohibited, including fill, new construction, substantial improvements and other development within the adopted regulatory floodway, unless it has been demonstrated through hydrologic and hydraulic analyses performed by a licensed Colorado professional

engineer and in accordance with standard engineering practice that the proposed encroachment would not result in any increase (requires a no-rise certification) in flood levels within the community during the occurrence of the base flood discharge.

B. If the above is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this Article.

C. Under the provisions of 44 C.F.R. Chapter 1, Section 65.12, of the National Flood Insurance Regulations, a community may permit encroachments within the adopted regulatory floodway that would result in an increase in base flood elevations, provided that the community first applies for a CLOMR and floodway revision through FEMA.

(Ord. 579-13 §1)

16.04.230 - Alteration of watercourse.

For all proposed developments that alter a watercourse within a special flood hazard area, the following standards apply:

A. Channelization and flow diversion projects shall appropriately consider issues of sediment transport, erosion, deposition and channel migration and properly mitigate potential problems through the project as well as upstream and downstream of any improvement activity. A detailed analysis of sediment transport and overall channel stability should be considered, when appropriate, to assist in determining the most appropriate design.

B. Channelization and flow diversion projects shall evaluate the residual 100-year floodplain.

C. Any channelization or other stream alteration activity proposed by a project proponent must be evaluated for its impact on the regulatory floodplain and be in compliance with all applicable federal, state and local floodplain rules, regulations and ordinances.

D. Any stream alteration activity shall be designed and sealed by a registered Colorado professional engineer or certified professional hydrologist.

E. All activities within the regulatory floodplain shall meet all applicable federal, state and City floodplain requirements and regulations.

F. Within the regulatory floodway, stream alteration activities shall not be constructed unless the project proponent demonstrates through a floodway analysis and report, sealed by a registered Colorado professional engineer, that there is not more than a 0.00-foot rise in the proposed conditions compared to existing conditions floodway resulting from the project, otherwise known as a no-rise certification, unless the City first applies for a CLOMR and floodway revision in accordance with Section 16.04.220 above.

G. Maintenance shall be required for any altered or relocated portions of watercourses so that the flood-carrying capacity is not diminished.

(Ord. 579-13 §1)

16.04.240 - Properties removed from floodplain by fill.

A floodplain development permit shall not be issued for the construction of a new structure or addition to an existing structure on a property removed from the floodplain by the issuance of a FEMA letter of map revision based on fill (LOMR-F), unless such new structure or addition complies with the following:

A. Residential construction. The lowest floor (including basement), electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities, including ductwork, must be elevated to eighteen inches above the base flood elevation that existed prior to the placement of fill.

B. Nonresidential construction. The lowest floor (including basement), electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities (including ductwork), must be elevated to eighteen [18] inches above the base flood elevation that existed prior to the placement of fill, or, together with attendant utility and sanitary facilities, be designed so that the structure or addition is watertight to at least one (1) foot above the base flood level that existed prior to the placement of fill with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads of effects of buoyancy.

(Ord. 579-13 §1)

16.04.250 - Standards for subdivision proposals.

A. All subdivision proposals including the placement of manufactured home parks and subdivisions shall be reasonably safe from flooding. If a subdivision or other development proposal is in a flood-prone area, the proposal shall minimize flood damage.

B. All proposals for the development of subdivisions, including the placement of manufactured home parks and subdivisions, shall meet floodplain development permit requirements of Sections 16.04.080 and 16.04.160 of this Chapter and the provisions of flood hazard reduction of this Chapter.

C. Base flood elevation data shall be generated for subdivision proposals and other proposed development, including the placement of manufactured home parks and subdivisions which is greater than fifty (50) lots or five (5) acres, whichever is lesser, if not otherwise provided pursuant to Sections 16.04.070 or 16.04.150 of this Chapter.

D. All subdivision proposals including the placement of manufactured home parks and subdivisions shall have adequate drainage provided to reduce exposure to flood hazards.

E. All subdivision proposals including the placement of manufactured home parks and subdivisions shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize or eliminate flood damage.

(Ord. 579-13 §1)

16.04.260 - Standards for critical facilities.

A critical facility is a structure or related infrastructure, but not the land on which it is situated, as specified in Rule 6 of the Rules and Regulations for Regulatory Floodplains in Colorado, that, if flooded, may result in significant hazards to public health and safety or interrupt essential services and operations for the community at any time before, during and after a flood.

A. Classification of critical facilities. Critical facilities are classified under the following categories: (a) essential services; (b) hazardous materials; (c) at-risk populations; and (d) vital to restoring normal services. Specific structures in the City shall meet the following criteria:

1. Essential services facilities include public safety, emergency response, emergency medical, designated emergency shelters, communications, public utility plant facilities and transportation lifelines.

a. These facilities consist of:

(1)Public safety (police stations, fire and rescue stations, emergency vehicle and equipment storage and emergency operation centers);

(2)Emergency medical (hospitals, ambulance service centers, urgent care centers having emergency treatment functions, and non-ambulatory surgical structures, but excluding clinics, doctor offices and non-urgent care medical structures that do not provide these functions);

(3)Designated emergency shelters;

(4)Communications (main hubs for telephone, broadcasting equipment for cable systems, satellite dish systems, cellular systems, television, radio and other emergency warning systems, but excluding towers, poles, lines, cables and conduits);

(5)Public utility plant facilities for generation and distribution (hubs, treatment plants, substations and pumping stations for water, power and gas, but not including towers, poles, power lines, buried pipelines, transmission lines, distribution lines and service lines); and

(6)Air transportation lifelines (airports [municipal and larger], helicopter pads and structures serving emergency functions, and associated infrastructure [aviation control towers, air traffic control centers and emergency equipment aircraft hangars]).

b. Specific exemptions to this category include wastewater treatment plants (WWTP), non-potable water treatment and distribution systems, and hydroelectric power generating plants and related appurtenances.

c. Public utility plant facilities may be exempted if it can be demonstrated to the satisfaction of the City Council that the facility is an element of a redundant system for which service will not be interrupted during a flood. At a minimum, it shall be demonstrated that redundant facilities are available (either owned by the same utility or available through an intergovernmental agreement or other contract) and connected, the alternative facilities are either located outside of the 100-year floodplain or are compliant with the provisions of this Article and an operations plan is in effect that states how redundant systems will provide service to the affected area in the event of a flood.

Evidence of ongoing redundancy shall be provided to the City Council on an as-needed basis upon request.

2. Hazardous materials facilities include facilities that produce or store highly volatile, flammable, explosive, toxic and/or water-reactive materials.

a. These facilities may include:

- (1) Chemical and pharmaceutical plants (chemical plant, pharmaceutical manufacturing);
- (2) Laboratories containing highly volatile, flammable, explosive, toxic and/or water-reactive materials;
- (3) Refineries;
- (4) Hazardous waste storage and disposal sites; and
- (5) Above ground gasoline or propane storage or sales centers.

b. Facilities shall be determined to be critical facilities if they produce or store materials in excess of threshold limits. If the owner of a facility is required by the Occupational Safety and Health Administration (OSHA) to keep a material safety data sheet (SDS) on file for any chemicals stored or used in the work place, and the chemical is stored in quantities equal to or greater than the threshold planning quantity (TPQ) for that chemical, then that facility shall be considered to be a critical facility. The TPQ for these chemicals is: either five hundred (500) pounds or the TPQ listed (whichever is lower) for the chemicals listed under 40 C.F.R. § 302 (2010), as amended from time to time, also known as extremely hazardous substances (EHS); or ten thousand (10,000) pounds for any other chemical. This threshold is consistent with the requirements for reportable chemicals established by the Department of Public Health and Environment. OSHA requirements for SDS can be found in 29 C.F.R. § 1910 (2010). The Environmental Protection Agency (EPA) regulation "Designation, Reportable Quantities, and Notification," 40 C.F.R. § 302 (2010) and OSHA regulation "Occupational Safety and Health Standards," 29 C.F.R. § 1910 (2010) are incorporated herein by reference and include the regulations in existence at the time of the promulgation of this Chapter, as well as amendments to or editions of the regulations.

c. Specific exemptions to this category include:

- (1) Finished consumer products within retail centers and households containing hazardous materials intended for household use, and agricultural products intended for agricultural use.
- (2) Buildings and other structures containing hazardous materials for which it can be demonstrated to the satisfaction of the City Council by hazard assessment and certification by a qualified professional (as determined by the City Council) that a release of the subject hazardous material does not pose a major threat to the public.
- (3) Pharmaceutical sales, use, storage and distribution centers that do not manufacture pharmaceutical products.

These exemptions shall not apply to buildings or other structures that also function as critical facilities under another category outlined in this Article.

3. At-risk population facilities include medical care, congregate care, and schools. These facilities consist of:

a. Elder care ( nursing homes);

b. Congregate care serving twelve (12) or more individuals (day care and assisted living);

c. Public and private schools (pre-schools, K-12 schools), before-school and after-school care serving twelve (12) or more children.

4. Facilities vital to restoring normal services including government operations.

a. These facilities consist of:

(1)Essential government operations (public records, courts, jails, building permitting and inspection services, community administration and management, maintenance and equipment centers);

(2)Essential structures for public colleges and universities (dormitories, offices and classrooms only).

b. These facilities may be exempted if it is demonstrated to the City Council that the facility is an element of a redundant system for which service will not be interrupted during a flood. At a minimum, it shall be demonstrated that redundant facilities are available (either owned by the same entity or available through an intergovernmental agreement or other contract), the alternative facilities are either located outside of the 100-year floodplain or are compliant with this Chapter, and an operations plan is in effect that states how redundant facilities will provide service to the affected area in the event of a flood. Evidence of ongoing redundancy shall be provided to the City Council on an as-needed basis upon request.

B. Protection for critical facilities. All new and substantially improved critical facilities and new additions to critical facilities located within the special flood hazard area shall be regulated to a higher standard than structures not determined to be critical facilities. For the purposes of this Chapter, protection shall include at least one (1) of the following:

1. Location outside the special flood hazard area; or

2.Elevation of the lowest floor or floodproofing of the structure, together with attendant utility and sanitary facilities, to at least two (2) feet above the base flood elevation.

C. Ingress and egress for new critical facilities. New critical facilities shall, when practicable as determined by the City Council, have continuous non-inundated access (ingress and egress for evacuation and emergency services) during a 100-year flood event.

(Ord. 579-13 §1)

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## CITY COUNCIL COMMUNICATION

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**DATE:** September 15, 2015

**AGENDA ITEM:** 9.C

**SUBJECT:** Contract for Engineering Services with RockSol Consulting Group, Inc. for Permanent Repairs to Brantner Road, Industrial Parkway and 49<sup>th</sup> Street

**PRESENTED BY:** Gary Wilson, Project Manager

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### **PROJECT DESCRIPTION:**

The purpose of this item is to request City Council's authorization of a professional services agreement with RockSol Consulting Group, Inc. to perform engineering services for permanent repairs to Brantner Road, Industrial Parkway, and 49<sup>th</sup> Street. This item was discussed at the September 1, 2015 Council study session.

As discussed during the September 1<sup>st</sup> study session, due to flood damages in the spring of 2015, a new direction is needed to accomplish permanent repairs to these roads. Flood hazard mitigation is needed to improve drainage and prevent ongoing damage to these roads. This new approach will require construction documents, specifications and computer modeling of flood conditions to ensure there is no impact to the floodplain.

In response to an open and competitive RFP, a proposal was received from RockSol, Inc. to develop a design for flood mitigation and perform the full scope of engineering needed for permanent repairs. This consultant has had extensive experience with flood projects, including work on the Highway 34 reconstruction in the Big Thompson Canyon and Railroad Avenue in Loveland. The RockSol proposal includes:

- Preliminary plans and cost estimates to revise the FEMA PW and support estimates in the Energy Impact grant application;
- Land surveys;
- Analysis of alternative mitigation improvements;
- River hydrology modeling and "no rise" certification;
- Geotechnical analysis;
- Roadway Design;
- Environmental surveys and clearances required for FEMA funding;
- Utility coordination; and
- Final plans, specifications and cost estimates to obtain construction bids.

FEMA PW 302 was set up to fund repairs to flood damaged roads. As mentioned during the study session, it is uncertain whether the fees for this engineering work will be fully reimbursed by FEMA. The current scope of PW 302 does not reflect the extent of repairs needed in this case or the full cost of engineering for a more complicated road design as in this case.

The preliminary plans and cost estimates to be prepared by RockSol in the first phase of their work are needed to revise the scope of PW 302. With the revised scope, staff will make every effort possible to seek as much reimbursement as possible for the cost of engineering and road repair that is needed. Additionally, the City has applied for Energy Impact grant funds to help recover any costs not reimbursed by FEMA. The RockSol cost estimates will also support the proposed budget in this application.

**FINANCIAL SUMMARY:**

Consultant fees are set not-to-exceed \$167,965. This work will be funded by an existing 2015 budget appropriation for capital street projects. The current scope of PW 302 includes a small allocation for engineering costs that is not sufficient to fund the entire cost of these services. As mentioned, staff will seek a scope revision to PW 302 to recoup as much of this engineering fee as possible and has applied for Energy Impact grant funds to recover costs not reimbursed by FEMA.

**STAFF RECOMMENDATION:**

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Staff recommends City Council approve the agreement for engineering services with RockSol Consulting Group, Inc.

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**SUGGESTED MOTIONS:**

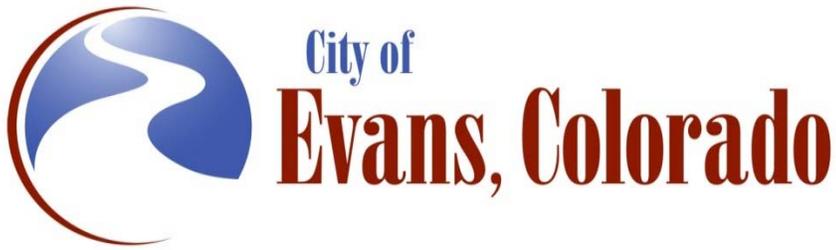
“I move to approve the agreement with RockSol Consulting Group, Inc.”

“I move to deny the approval of the agreement with RockSol Consulting Group, Inc.”

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**ATTACHMENTS:**

City Standard Contract Agreement and Scope of Services for RockSol Consulting Group, Inc.



## City Manager - Monitoring Report

September 15, 2015

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*Below is a compellation of updates and projects that are either new or have changed since the last City Council meeting.*

### ➤ **Communications**

In an effort to make water issues top of mind again, we have resumed including the H2Oh! mini-newsletter with the utility bill. General information on Windy Gap and NISP was included in the September bill. October's bill will include information about the relative cost of water.

Cities and Towns Week efforts will kick off at Evansfest, September 12 and education boards will on display at the Community Complex throughout the week of September 14-18 with fun and impressive facts about what this local government does for its residents. Links to the PSA's provided by CML will be on the website and Facebook posts will include factoids about what the City does "by the numbers".

### ➤ **Economic Development**

#### Riverside Neighborhood Tree Inventory

One of the unique aspects of the Riverside Neighborhood east of Highway 85 is the presence of many large and mature trees. In fact, nearly 100 of the Siberian Elms and Cottonwoods in the neighborhood have trunks that are over 3 feet in diameter. These trees have been shading homes, yards and streets for many decades and add a great deal to the character of the neighborhood. The recently completed Riverside Neighborhood Master Plan recommended that the City conduct an inventory of the existing trees in the neighborhood to determine the health and diversity of the trees in the area so that we have a better understanding of this existing resource as we begin making some investments into the neighborhood. Through a fortunate partnership with the Colorado Department of Local Affairs, the University of Colorado and the Colorado State University Horticulture program, the City was able to conduct a full inventory of trees along the streets and sidewalks of the Riverside Neighborhood as well as trees in City Park and at the Riverside Library. Shana Brown, a horticulture student at CSU, inventoried over 1500 trees in the neighborhood over 5 weeks this summer. Shana used a wi-fi enabled tablet and an easy to use application created by CSU to record the tree on a map and note each tree's species, size, and general health.

Thanks to this work we have a better picture of the composition of trees in the neighborhood. Some stats:

- 80% of the trees are in generally good condition
- Siberian Elms are by far the most common trees in the neighborhood; about 20% of all the trees counted were Siberian Elms. Unfortunately these trees tend to be invasive, expensive to maintain and are prone to breakage making them less than desirable.
- Aside from the Siberian Elms, the neighborhood has a relatively healthy mix of other tree species.
- There is room for more trees. The study noted appropriate planting spaces for nearly 300 more trees along the streets of the neighborhood. In order to insure that the next generations of residents continue to benefit from

the tree canopy, the City should encourage the planting of additional trees, especially as the older ones approach the end of their life cycle.

You can see the full report here:

[http://www.evanscolorado.gov/sites/default/files/fileattachments/evans\\_tree\\_inventory.pdf](http://www.evanscolorado.gov/sites/default/files/fileattachments/evans_tree_inventory.pdf)

**South Platte River Update**

During the months of July and August, The City of Evans, the Middle South Platte River Alliance, and a consultant of the Colorado Water Conservation Board worked together to set up three meetings for land-owners in the high-risk regions of the river. These meetings were intended to determine more specific projects along the river. Following these meetings CDM-Smith, our project consultant, will work on wrapping up the master planning document. We plan on bringing the plan back to City Council for adoption before the end of the year.

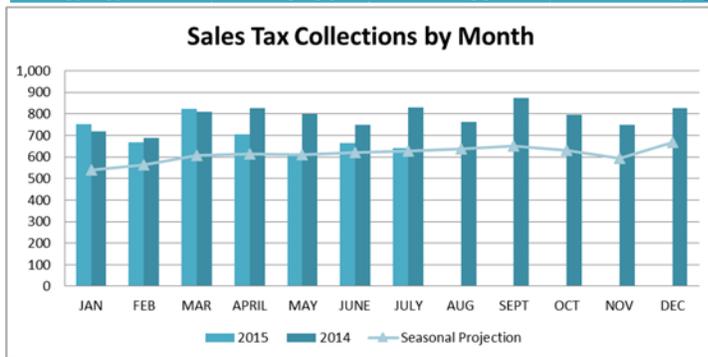
Meanwhile, we recently held a kick-off meeting for the next phase of this project: the Sediment Transport Modeling and Project Feasibility Study that we are undertaking with funding from the CDBG-DR program. This project will determine the nature of sediment in the river and propose some possible solutions to sticky spots around the Highway 85 Bridge and at the confluence of the Big Thompson River.

➤ **Finance**

Please find the July sales tax update below:

July 2015			
Category	2014 YTD	2015 YTD	% Change
Base	1,324,683	1,477,267	12%
Commercial	1,134,888	1,117,179	-2%
Industrial	1,668,112	1,039,236	-38%
Utilities	434,282	455,064	5%
Motor Vehicle	857,303	783,773	-9%
<b>Total</b>	<b>5,419,269</b>	<b>4,872,518</b>	<b>-10%</b>
July 2015			
Lodging	51,976	59,221	14%

As far as the monthly projection goes, we are \$15,382 ahead of what we needed to collect this month to meet our annual budget.



➤ **Public Works**

**Engineering**

City staff is working on narrowing the scope of the 2015 Asphalt Patch contract; the bid was awarded to Martin Marietta. A pre-construction meeting with Kolbe Striping will take place within the next week. Engineering bid the Hwy 85 Entryway Landscaping & Signage; the award of the bid will take place on Sept. 15<sup>th</sup>. We are working with CDOT to get approval to bid the Hwy 85 Access Control Project at 37<sup>th</sup> Street.

## **Operations**

Major unexpected projects included the replacement of a disintegrated road crossing culvert. Major road maintenance projects included placing road base and regrading the majority of our “in town” aggregate roadways and alleys. Finally, fleet is working on getting our street sweepers back on line and street sweeping will commence shortly.

## **Parks**

All operations are on schedule. The young man completing his Eagle Scout project is moving along. We have had several Elm tree issues at the Cemetery and City Park; we are working with a tree removal company on prices. Staff is working with Recreation to lay out the soccer fields. Staff is also working with Michele from the Evans Chamber regarding Evans Fest.

## **Waste Water**

The City has responded to all the EPA and CDPHE violations regarding recent inspections. Staff is working to provide information to the Flood Recovery Team for the auditors. Annual preventive maintenance cleaning of collection system is currently underway. Staff helped with Utility locates while Leon in Engineering was on a short vacation.

## **Stormwater Management Plan**

On September 3<sup>rd</sup> City staff met with Muller Engineering to kick off the City’s Stormwater Management Plan. The first steps of this approximately year-long process will be to collect and analyze data from the City and other sources to determine the gaps that might exist in that Data. The engineers will then likely spend a few days in town doing some field work (with City Staff as necessary). This collection and analysis phase will likely continue through the remainder of the year. Once complete, the Engineers will start compiling this information together and present their findings and first conceptual plans to the community in February or March of 2016.

# City Council Calendar

## September 2015

### SEPTEMBER 2015

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	1	2	3

September	Event	Location	Time
1	City Council Work Session & Regular City Council Meeting	Evans City Complex	6:00 PM - 8:00 PM
7	Labor Day	City Offices Closed	All Day
10	85 Coalition	La Salle Town Hall	Begins at 6:30 PM
12	<a href="#">EvansFest</a>	Evans City Park 3929 Golden Street	10:00 AM - 3:00 PM
15	City Council Work Session & Regular City Council Meeting	Evans City Complex	Begins at 6:00 PM
17	Evans Chamber-Business After Hours	ENVIROTECH SERVICES 850 47th Avenue, Evans	5:00 PM - 6:30 PM
1	Neighborhood Business Showcase	Riverside Library and Cultural Center	TBD