



**CITY COMMISSION
WEDNESDAY, MARCH 4, 2026 AT 11:00 AM
CITY COMMISSION CHAMBER**

ORDER OF BUSINESS

CALL MEETING TO ORDER Mayor Becky Smith

MEMBERS PRESENT

Vice-Mayor Tammi Ogle
Commissioner Monica Duncan
Commissioner Erren Harter
Commissioner Kurt Steinkuhler

PROCLAMATIONS

Proclamation Recognizing April 18th as Spring Into Pickleball Day in Emporia
Accepted by: Ashley Mitchell, President of the Emporia Pickleball Club

PUBLIC FORUM

The public is invited to make comments at this time. Please limit comments to two (2) minutes each. Please state your name and address prior to making comments.

NEW BUSINESS

1) **Resolution No. 3789 Authorizing the Offering for Sale of General Obligation Bonds Series 2026, of the City of Emporia, Kansas**

Presented by: Mark Detter, Deputy City Manager

Recommended Action: Approve Resolution No. 3789 authorizing the offering for sale of General Obligation Bonds Series 2026, of the City of Emporia, Kansas

2) **KWPCRF Project No. C20 002 01 Amendment No. 4 (Final) to the Loan Agreement with KDHE**

Presented by: Jim Ubert, City Engineer

Recommended Action: City staff recommends approval of the KDHE KWPCRF Project No. C20 2002 01 Amendment No. 4 (Final) as a deduct in the amount of (\$118,081.43) to lower the Loan to \$32,166,918.57 and authorize the mayor to sign the agreement

3) **Award 2026 Hazardous Sidewalk Program, Project No. HZ2601**

Presented by: Jim Ubert, City Engineer

Recommended Action: Staff recommends awarding the contract to S.R. Coffman Construction.

COMMUNICATIONS

Presented by Trey Cocking, City Manager.

1) Sparklight Letter February 18, 2026

CONSENT AGENDA

Presented by Trey Cocking, City Manager.

- 1) Commission Meeting Minutes for February 18, 2026

INFORMATIONAL ITEMS

Presented by Trey Cocking, City Manager.

- 1) informational Items

GOVERNING BODY COMMENTS

Mayor Becky Smith

Vice-Mayor Tammi Ogle

Commissioner Monica Duncan

Commissioner Erren Harter

Commissioner Kurt Steinkuhler

EXECUTIVE SESSION

RECESS

Recess to Evora Wheeler Conference Room for Study Session

STUDY SESSION AGENDA ITEMS

- 1) End the Year Financials
- 2) Discuss Downtown Emporia Signal TEAP Study (2025-26)
- 3) Strategic Direction Session One

ADJOURNMENT



PROCLAMATION

WHEREAS, sports and recreation activities of Emporia promote the health and well-being of our Citizens; and

WHEREAS, sports and recreation activities help build a sense of vitality in our community; and

WHEREAS, sports and recreation activities contribute to a sense of camaraderie and belonging in our community; and

WHEREAS, the sport of Pickleball is the fastest growing sport in the United States; and

WHEREAS, the not-for-profit Emporia Pickleball Club is living out its mission to *grow the game of Pickleball* to host a clinic to introduction the game of pickleball to new players at no cost.

NOW, THEREFORE, I, Becky Smith, Mayor of the City of Emporia, Kansas, do hereby proclaim Saturday, April 18, 2026, as

Spring Into Pickleball Day

in the city of Emporia, Kansas, and urge all residents of Emporia to join the rest of America in shopping at small locally owned businesses.

On this 4th Day of March 2026

ATTEST:

Becky Smith, Mayor

Kerry Sull, City Clerk



Commission Action Report

Resolution No.3789 Authorizing the Offering or Sale of GO Bonds,
Series 2026, of the City of Emporia, Kansas

Title: Resolution No. 3789 Authorizing the Offering for Sale
of General Obligation Bonds Series 2026, of the City of Emporia, Kansas

Agenda Date: March 4, 2026

Presented By: Mark Detter, Deputy City Manager

Background:

The Series 2026 General Obligation Bonds are being issued for the purpose of the rehabilitation of Fire Station #2 which is 50 years old and fully depreciated, the aerial engine (Ladder Truck) which is 25 years old and fully depreciated, Flint Hills Crossing subdivision, which will be paid for in part by sales tax proceeds generated in the area (by QuikTrip) through the previous establishment of a Community Improvement District, and to for pay for water, sewer, and storm sewer on the Overlander Road project. The road portion of the project is being paid entirely by a Kansas Department of Economic Development Grant and from Federal Highway Funds.

Discussion:

The Resolution Authorizes the sale of General Obligation Bonds and the approval of the Preliminary Official Statement outlining the financial and economic capacity of the City of Emporia. Greg Vahrenberg of Raymond James is acting as the Municipal Financial Advisor on the Bond issuance. Raymond James is currently forecasting a 3.9% true interest rate on the 20-year Bond issue.

Financial considerations:

The Fire Station #1 PBC Bonds issued in 2025, the Emporia Fire Station #2 and aerial truck portion of the Series 2026 Bonds debt service will be approximately \$1.6 million per year until 2035, when the aerial truck will be paid off. The payment will drop to \$1.4 million per year until 2045, when Emporia Fire Station # 1 payments have been completed and will be \$770,000 in 2046 when the Series 2026 Bonds are fully mature. The payments on fire stations and fire apparatus are maintenance by the maturing of previous bond issues that primarily financed bridge improvements.

The Flint Hills Crossing improvements are scheduled to be paid off in 2046, however, if sales tax receipts exceed projections, the improvements can be paid off prior to the 2046 final payment date. Flint Hills crossing yearly payments are approximately \$210,000 per year and 50% of the payments are projected from sales tax receipts in the Community Improvement District. The remaining principal and interest payments for Flint Hills Crossing and Overlander Road will be paid for from bond & interest fund that held a \$5.5 million balance at the end of 2025.

Recommended action:

Approve Resolution No. 3789 authorizing the offering for sale of General Obligation Bonds Series 2026, of the City of Emporia, Kansas.

Attachments:

Resolution No. 3789
Preliminary Official Statement for Series 2026 General Obligation Bonds
GOB 2026 Appendix A

RESOLUTION NO. 3789

A RESOLUTION AUTHORIZING THE OFFERING FOR SALE OF GENERAL OBLIGATION BONDS, SERIES 2026, OF THE CITY OF EMPORIA, KANSAS.

WHEREAS, the City of Emporia, Kansas (the “Issuer”), has previously authorized certain improvements described as follows (collectively the “Improvements”):

<u>Project Description</u>	<u>Ord/Res. No.</u>	<u>Authority (K.S.A.)</u>	<u>Amount</u>
Flint Hills Crossing Infrastructure Improvements – Streets, Sanitary Sewer, Water, and Storm Sewer Improvements	Res No. 3741	13-1024a/Charter Ord. 41 and K.S.A. 12-685 <i>et seq.</i>	\$ 3,218,275
Overlander Road-Main Trafficway	Res No. 3771	K.S.A. 12-687 and K.S.A. 12-685 <i>et seq.</i>	4,774,110
Aerial Fire Truck Acquisition	Res No. 3785	13-1024a/Charter Ord. 41	2,200,000
Fire Station #2	Res No. 3785	13-1024a/Charter Ord. 41	7,000,000
Street Sweeper	Res No. 3788	13-1024a/Charter Ord. 41	400,000
Total:			<u>\$17,592,385</u>

WHEREAS, the Issuer desires to issue its general obligation bonds in order to permanently finance the costs of such Improvements; and

WHEREAS, the Issuer proposes to issue its general obligation bonds to pay a portion of the costs of the Improvements; and

WHEREAS, the City Commission of the Issuer (the “Governing Body”) hereby selects the firm of Raymond James & Associates, Inc., Leawood, Kansas (the “Municipal Advisor”), as municipal advisor for one or more series of general obligation bonds of the Issuer to be issued in order to provide funds to permanently finance the Improvements; and

WHEREAS, the Issuer desires to authorize the Municipal Advisor to proceed with the offering for sale of said general obligation bonds and related activities; and

WHEREAS, one of the duties and responsibilities of the Issuer is to prepare and distribute a preliminary official statement relating to said general obligation bonds; and

WHEREAS, the Issuer desires to authorize the Municipal Advisor and Gilmore & Bell, P.C., Wichita, Kansas, the Issuer’s bond counsel (“Bond Counsel”), in conjunction with the Clerk to proceed with the preparation and distribution of a preliminary official statement and notice of bond sale and to authorize the distribution thereof and all other preliminary action necessary to sell said general obligation bonds; and

WHEREAS, due to the volatile nature of the municipal bond market and the desire of the Issuer to achieve maximum benefit of timing of the sale of said general obligation bonds, the Governing Body desires to authorize the Mayor to award the sale of such general obligation bonds, if necessary, prior to the next meeting of the Governing Body to adopt the necessary ordinance and resolution providing for the issuance thereof.

BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF EMPORIA, KANSAS, AS FOLLOWS:

Section 1. There is hereby authorized to be offered for sale the Issuer's General Obligation Bonds, Series 2026 (the "Bonds") described in the Notice of Bond Sale, which is hereby approved in substantially the form presented to the Governing Body this date (the "Notice of Bond Sale"). All proposals for the purchase of the Bonds shall be delivered to the Governing Body at its meeting to be held on the sale date referenced in the Notice of Bond Sale, at which meeting the Governing Body shall review such bids and award the sale of the Bonds or reject all proposals.

Section 2. The Mayor and Director of Finance in conjunction with the Municipal Advisor and Bond Counsel are hereby authorized to cause to be prepared a Preliminary Official Statement relating to the Bonds (the "Preliminary Official Statement"), and such officials and other representatives of the Issuer are hereby authorized to use such document in connection with the sale of the Bonds.

Section 3. The Director of Finance, in conjunction with the Municipal Advisor and Bond Counsel, is hereby authorized and directed to give notice of said bond sale by publishing a summary of the Notice of Bond Sale not less than 6 days before the date of the bond sale in a newspaper of general circulation in Lyon County, Kansas, and the *Kansas Register* and by distributing copies of the Notice of Bond Sale and Preliminary Official Statement to prospective purchasers of the Bonds. Proposals for the purchase of the Bonds shall be submitted upon the terms and conditions set forth in the Notice of Bond Sale, and awarded or rejected in the manner set forth in the Notice of Bond Sale.

Section 4. For the purpose of enabling the purchaser of the Bonds (the "Purchaser") to comply with the requirements of Rule 15c2-12 of the Securities and Exchange Commission (the "Rule"), the Mayor and Director of Finance are hereby authorized: (a) to approve the form of the Preliminary Official Statement and to execute the "Certificate Deeming Preliminary Official Statement Final" in substantially the form attached hereto as *Exhibit A* as approval of the Preliminary Official Statement, such official's signature thereon being conclusive evidence of such official's and the Issuer's approval thereof; (b) covenant to provide continuous secondary market disclosure by annually transmitting certain financial information and operating data and other information necessary to comply with the Rule to the Municipal Securities Rulemaking Board; and (c) take such other actions or execute such other documents as such officers in their reasonable judgment deem necessary to enable the Purchaser to comply with the requirement of the Rule.

Section 5. The Issuer agrees to provide to the Purchaser within seven business days of the date of the sale of Bonds or within sufficient time to accompany any confirmation that requests payment from any customer of the Purchaser, whichever is earlier, sufficient copies of the final Official Statement to enable the Purchaser to comply with the requirements of the Rule and with the requirements of Rule G-32 of the Municipal Securities Rulemaking Board.

Section 6. The Mayor, City Manager, Assistant City Manager, Director of Finance, Clerk and the other officers and representatives of the Issuer, the Municipal Advisor and Bond Counsel are hereby authorized and directed to take such other action as may be necessary to carry out the sale of the Bonds.

The transactions described in this Resolution may be conducted, and documents related to the Bonds may be sent, received, executed, and stored, by electronic means or transmissions. Copies, telecopies, electronic files and other reproductions of original executed documents (or documents executed by electronic means or transmissions) shall be deemed to be authentic and valid counterparts of such documents for all purposes, including the filing of any claim, action or suit in the appropriate court of law.

Section 7. This Resolution shall be in full force and effect from and after its adoption by the Governing Body.

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ADOPTED by the City Commission on March 4, 2026.

(SEAL)

Mayor

ATTEST:

Clerk

**EXCERPT OF MINUTES OF A MEETING
OF THE CITY COMMISSION OF
THE CITY OF EMPORIA, KANSAS
HELD ON MARCH 4, 2026**

The City Commission (the “Governing Body”) met in regular session at the usual meeting place in the City at 11:00 A.M., the following members being present and participating, to-wit:

Absent:

The Mayor declared that a quorum was present and called the meeting to order.

* * * * *

(Other Proceedings)

The matter of providing for the offering for sale of General Obligation Bonds, Series 2026, came on for consideration and was discussed.

Commissioner _____ presented and moved the adoption of a Resolution entitled:

**A RESOLUTION AUTHORIZING THE OFFERING FOR SALE OF GENERAL
OBLIGATION BONDS, SERIES 2026, OF THE CITY OF EMPORIA, KANSAS.**

Commissioner _____ seconded the motion to adopt the Resolution. The Resolution was duly read and considered, and upon being put, the motion for the adoption of the Resolution was carried by the following vote of the Governing Body:

Aye: _____.

Nay: _____.

The Mayor declared the Resolution duly adopted by the Governing Body and the Clerk designated the same Resolution No. 3789.

* * * * *

(Other Proceedings)

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CERTIFICATE

I hereby certify that the foregoing Excerpt of Minutes is a true and correct excerpt of the proceedings of the Governing Body of the City of Emporia, Kansas, held on the date stated therein, and that the official minutes of such proceedings are on file in my office.

(SEAL)

Clerk

EXHIBIT A

**CERTIFICATE DEEMING
PRELIMINARY OFFICIAL STATEMENT FINAL**

_____, 2026

Re: City of Emporia, Kansas, General Obligation Bonds, Series 2026

The undersigned are the duly acting Mayor and Director of Finance of the City of Emporia, Kansas (the "Issuer"), and are authorized to deliver this Certificate to the purchaser (the "Purchaser") of the above-referenced bonds (the "Bonds") on behalf of the Issuer. The Issuer has previously caused to be delivered to the Purchaser copies of the Preliminary Official Statement (the "Preliminary Official Statement") relating to the Bonds.

For the purpose of enabling the Purchaser to comply with the requirements of Rule 15c2-12(b)(1) of the Securities and Exchange Commission (the "Rule"), the Issuer hereby deems the information regarding the Issuer contained in the Preliminary Official Statement to be final as of its date, except for the omission of such information as is permitted by the Rule, such as offering prices, interest rates, selling compensation, aggregate principal amount, principal per maturity, delivery dates, ratings, identity of the underwriters and other terms of the Bonds depending on such matters.

CITY OF EMPORIA, KANSAS

By: _____
Title: Mayor

By: _____
Title: Director of Finance

NOTICE OF BOND SALE
\$13,415,000*
CITY OF EMPORIA, KANSAS
GENERAL OBLIGATION BONDS
SERIES 2026

(GENERAL OBLIGATION BONDS PAYABLE
FROM UNLIMITED AD VALOREM TAXES)

Bids. Email and electronic (as explained below) bids for the purchase of the above-referenced bonds (the “Bonds”) of the City of Emporia, Kansas (the “Issuer”) herein described will be received on behalf of the undersigned Director of Finance of the Issuer at the address hereinafter set forth in the case of email, and via PARITY® in the case of electronic bids, until 9:00 A.M. applicable Central Time (the “Submittal Hour”), on

APRIL 1, 2026

(the “Sale Date”). All bids will be publicly evaluated at said time and place and the award of the Bonds to the successful bidder (the “Successful Bidder”) will be acted upon immediately thereafter by the Issuer’s Mayor, and ratified by the City Commission of the Issuer (the “Governing Body”) at its meeting to be held at 11:00 A.M. the Sale Date. No oral or auction bids will be considered. Capitalized terms not otherwise defined herein shall have the meanings set forth in the hereinafter referenced Preliminary Official Statement relating to the Bonds.

Terms of the Bonds. The Bonds will consist of fully registered bonds in the denomination of \$5,000 or any integral multiple thereof (the “Authorized Denomination”). The Bonds will be dated April 23, 2026 (the “Dated Date”), and will become due in principal installments on September 1 in the years as follows:

<u>Year</u>	<u>Principal Amount*</u>	<u>Year</u>	<u>Principal Amount*</u>
2027	\$505,000	2037	\$535,000
2028	700,000	2038	550,000
2029	710,000	2039	575,000
2030	735,000	2040	595,000
2031	750,000	2041	615,000
2032	685,000	2042	640,000
2033	705,000	2043	670,000
2034	725,000	2044	700,000
2035	745,000	2045	735,000
2036	775,000	2046	765,000

The Bonds will bear interest from the Dated Date at rates to be determined when the Bonds are sold as hereinafter provided, which interest will be payable semiannually on March 1 and September 1 in each year, beginning on March 1, 2027 (the “Interest Payment Dates”).

***Adjustment of Issue Size.** The Issuer reserves the right to increase or decrease the total principal amount of the Bonds or the schedule of principal payments described above, depending on the purchase price and interest rates bid and the offering prices specified by the Successful Bidder, but in no event will the total principal amount of the Bonds exceed \$13,500,000. The Successful Bidder may not withdraw its bid or change the interest rates bid as a result of any changes made to the principal amount of the Bonds or the schedule of principal payments as described herein. If there is an increase or decrease in the final aggregate principal amount of the Bonds or the schedule of principal payments as described above, the Issuer will notify the Successful Bidder by means of telephone, electronic or facsimile transmission, subsequently confirmed in writing, no later than 2:00 p.m. applicable Central Time, on the Sale Date. The actual purchase price for the Bonds shall be calculated by applying the percentage of par value bid by the Successful Bidder against the final aggregate principal amount of the Bonds, as adjusted, plus accrued interest from the Dated Date to the Closing Date (as hereinafter defined).

Place of Payment. The principal of and interest on the Bonds will be payable in lawful money of the United States of America by check or draft of the Treasurer of the State of Kansas, Topeka, Kansas (the "Paying Agent" and "Bond Registrar"). The principal of each Bond will be payable at maturity or earlier redemption to the owner thereof whose name is on the registration books (the "Bond Register") of the Bond Registrar (the "Registered Owner") upon presentation and surrender at the principal office of the Paying Agent. Interest on each Bond will be payable to the Registered Owner of such Bond as of the fifteenth day (whether or not a business day) of the calendar month next preceding each Interest Payment Date (the "Record Date") (a) mailed by the Paying Agent to the address of such Registered Owner as shown on the Bond Register or at such other address as is furnished to the Paying Agent in writing by such Registered Owner; or (b) in the case of an interest payment to Cede & Co. or any Owner of \$500,000 or more in aggregate principal amount of Bonds, by wire transfer to such Registered Owner upon written notice given to the Paying Agent by such Registered Owner, not less than 15 days prior to the Record Date for such interest, containing the wire transfer address to which such Registered Owner wishes to have such wire directed.

Bond Registration. The Bonds will be registered pursuant to a plan of registration approved by the Issuer and the Attorney General of the State of Kansas (the "State"). The Issuer will pay for the fees of the Bond Registrar for registration and transfer of the Bonds and will also pay for printing a reasonable supply of registered bond blanks. Any additional costs or fees that might be incurred in the secondary market, other than fees of the Bond Registrar, will be the responsibility of the Owners.

Book-Entry-Only System. The Depository Trust Company, New York, New York ("DTC"), will act as securities depository for the Bonds. The Bonds will initially be issued exclusively in "book entry" form and shall be initially registered in the name of Cede & Co., as the nominee of DTC and no beneficial owner will receive certificates representing their interests in the Bonds. During the term of the Bonds, so long as the book-entry-only system is continued, the Issuer will make payments of principal of, premium, if any, and interest on the Bonds to DTC or its nominee as the Registered Owner of the Bonds. DTC will make book-entry-only transfers among its participants and receive and transmit payment of principal of, premium, if any, and interest on the Bonds to its participants who shall be responsible for transmitting payments to beneficial owners of the Bonds in accordance with agreements between such participants and the beneficial owners. The Issuer will not be responsible for maintaining, supervising or reviewing the records maintained by DTC, its participants or persons acting through such participants. In the event that: (a) DTC determines not to continue to act as securities depository for the Bonds, or (b) the Issuer determines that continuation of the book-entry-only form of evidence and transfer of ownership of the Bonds would adversely affect the interests of the beneficial owners of the Bonds, the Issuer will discontinue the book-entry-only form of registration with DTC. If the Issuer fails to identify another qualified securities depository to replace DTC, the Issuer will cause to be authenticated and delivered to the beneficial owners replacement Bonds in the form of fully registered certificates. Reference is made to the Official Statement for further information regarding the book-entry-only system of registration of the Bonds and DTC.

Redemption of Bonds Prior to Maturity.

General. Whenever the Issuer is to select Bonds for the purpose of redemption, it will, in the case of Bonds in denominations greater than the minimum Authorized Denomination, if less than all of the Bonds then outstanding are to be called for redemption, treat each minimum Authorized Denomination of face value of each such fully registered Bond as though it were a separate Bond in the minimum Authorized Denomination.

Optional Redemption. At the option of the Issuer, Bonds maturing on September 1 in the years 2036, and thereafter, will be subject to redemption and payment prior to maturity on September 1, 2035, and thereafter, as a whole or in part (selection of maturities and the amount of Bonds of each maturity to be redeemed to be determined by the Issuer in such equitable manner as it may determine) at any time, at the redemption price of 100% (expressed as a percentage of the principal amount), plus accrued interest to the date of redemption.

Mandatory Redemption. A bidder may elect to have all or a portion of the Bonds scheduled to mature in consecutive years issued as term bonds (the "Term Bonds") scheduled to mature in the latest of said consecutive years and subject to mandatory redemption requirements consistent with the schedule of serial maturities set forth above, subject to the following conditions: (a) not less than all Bonds of the same serial maturity shall be converted to Term Bonds with mandatory redemption requirements; and (b) a bidder shall make such an election by completing the applicable paragraph on the Official Bid Form or completing the applicable information on PARITY®.

Notice and Effect of Call for Redemption. Unless waived by any owner of Bonds to be redeemed, if the Issuer shall call any Bonds for redemption and payment prior to the maturity thereof, the Issuer shall give written notice of its intention to call and pay said Bonds to the Bond Registrar, any provider of municipal bond insurance and the Successful Bidder. In addition, the Issuer shall cause the Bond Registrar to give written notice of redemption to the registered owners of said Bonds. Each of said written notices shall be deposited in United States first class mail not less than 30 days prior to the Redemption Date. All notices of redemption shall state the Redemption Date, the redemption price, the Bonds to be redeemed, the place of surrender of Bonds so called for redemption and a statement of the effect of the redemption. The Issuer shall also give such additional notice as may be required by State law or regulation of the Securities and Exchange Commission in effect as of the date of such notice. If any Bond be called for redemption and payment as aforesaid, all interest on such Bond shall cease from and after the Redemption Date, provided funds are available for its payment at the price hereinbefore specified.

Authority, Purpose and Security. The Bonds are being issued pursuant to K.S.A. 13-1024a/Charter Ord. 41 and K.S.A. 12-685 *et seq.*, as amended, and an ordinance and a resolution adopted by the Governing Body (collectively the "Bond Resolution") for the purpose of paying a portion of the cost of certain internal improvements (the "Improvements"). The Bonds shall be general obligations of the Issuer payable as to both principal and interest from ad valorem taxes, which may be levied without limitation as to rate or amount upon all the taxable tangible property within the territorial limits of the Issuer. The full faith, credit and resources of the Issuer are irrevocably pledged for the prompt payment of the principal and interest on the Bonds as the same become due.

Submission of Bids. Email bids must be made on forms which may be procured from the Municipal Advisor and shall be addressed to the undersigned, and marked "Proposal for General Obligation Bonds, Series 2026." Email bids should be sent only once to the Municipal Advisor at greg.vahrenberg@raymondjames.com. Confirmation of receipt of email bids may be made by contacting the Municipal Advisor at the number listed below. Electronic bids via PARITY® must be submitted in accordance with its Rules of Participation, as well as the provisions of this Notice of Bond Sale. ***Any bid***

submitted shall include the initial offering prices to the public for each maturity of the Bonds. If provisions of this Notice of Bond Sale conflict with those of PARITY®, this Notice of Bond Sale shall control. Bids must be received prior to the Submittal Hour on the Sale Date accompanied by the Deposit (as hereinafter defined), which may be submitted separately. The Issuer and Municipal Advisor shall not be responsible for failure of the transmission or the receipt of any bid.

PARITY®. Information about the electronic bidding services of PARITY® may be obtained from i-Deal LLC at 1359 Broadway, 2nd Floor, New York, New York 10018, Phone No. (212) 849-5023.

Conditions of Bids. Proposals will be received on the Bonds bearing such rate or rates of interest as may be specified by the bidders, subject to the following conditions: (a) the same rate shall apply to all Bonds of the same maturity year; (b) no interest rate may exceed a rate equal to the daily yield for the 10-year Treasury Bond published by **THE BOND BUYER**, in New York, New York, on the Monday next preceding the day on which the Bonds are sold, plus 3%; (c) no supplemental interest payments will be considered; and (d) each interest rate specified shall be a multiple of 1/8 or 1/20 of 1%. No bid for less than **100%** of the principal amount of the Bonds and accrued interest thereon to the date of delivery will be considered. Each bid shall specify the total interest cost (expressed in dollars) during the term of the Bonds on the basis of such bid, the premium, if any, offered by the bidder, the net interest cost (expressed in dollars) on the basis of such bid, and an estimate of the TIC (as hereinafter defined) on the basis of such bid. Each bidder shall certify to the Issuer the correctness of the information contained on the Official Bid Form; the Issuer will be entitled to rely on such certification. Each bidder agrees that, if it is awarded the Bonds, it will provide the certification described under the caption “Establishment of Issue Price” in this Notice.

Good Faith Deposit. A good faith deposit (the “Deposit”) in the amount of \$268,300 payable to the order of the Issuer is required in order to secure the Issuer from any loss resulting from the failure of the bidder to comply with the terms of its bid.

The Deposit may be submitted at the address hereinafter set forth in either of the following forms:

(a) *Certified or Cashier’s Check.* Certified or cashier’s check drawn on a bank located in the United States of America received by the Municipal Advisor **prior to the Submittal Hour**; or

(b) *Wire Transfer.* Wire transfer submitted by the Successful Bidder in Federal Reserve funds, immediately available for use by the Issuer **not later than 2:00 p.m. applicable Central Time on the Sale Date** (wire transfer information may be obtained from the Municipal Advisor at the addresses set forth below).

Contemporaneously with the submission of a wire transfer Deposit, such bidder shall send an email to the Municipal Advisor at the email address set forth below, including the following information: (a) notification that a wire transfer has been made; (b) the amount of the wire transfer; and (c) return wire transfer instructions in the event such bid is unsuccessful. Checks submitted for Deposits by unsuccessful bidders will be returned; wire transfer Deposits submitted by unsuccessful bidders will not be accepted or shall be returned in the same manner received on the next business day following the Sale Date. The Issuer reserves the right to withhold reasonable charges for any fees or expenses incurred in returning a wire transfer Deposit. No interest on the Deposit will be paid by the Issuer. If a bid is accepted, the Deposit, or the proceeds thereof, will be held by the Issuer until the Successful Bidder has complied with all of the terms and conditions of this Notice at which time the amount of said Deposit shall be returned to the Successful Bidder or deducted from the purchase price at the option of the Issuer. If a bid is accepted but the Issuer fails to deliver the Bonds to the Successful Bidder in accordance with the terms and conditions of this Notice, said Deposit, or the proceeds thereof, will be returned to the Successful Bidder. If a bid is

accepted but the bidder defaults in the performance of any of the terms and conditions of this Notice, the proceeds of such Deposit will be retained by the Issuer as and for liquidated damages.

Basis of Award. Subject to the timely receipt of the Deposit set forth above, the award of the Bonds will be made on the basis of the lowest true interest cost (“TIC”), which will be determined as follows: the TIC is the discount rate (expressed as a per annum percentage rate) which, when used in computing the present value of all payments of principal and interest to be paid on the Bonds, from the payment dates to the Dated Date, produces an amount equal to the price bid, including any adjustments for premium, if any. Present value will be computed on the basis of semiannual compounding and a 360-day year of twelve 30-day months. Bidders are requested to provide a calculation of the TIC for the Bonds on the Official Bid Form, computed as specified herein on the basis of their respective bids, which shall be considered as informative only and not binding on either the Issuer or the bidder. The Issuer or its Municipal Advisor will verify the TIC based on such bids. If there is any discrepancy between the TIC specified and the bid price and interest rates specified, the specified bid price and interest rates shall govern and the TIC specified in the bid shall be adjusted accordingly. If two or more proper bids providing for identical amounts for the lowest TIC are received, the Governing Body will determine which bid, if any, will be accepted, and its determination is final.

The Issuer reserves the right to reject any and/or all bids and to waive any irregularities in a submitted bid. Any bid received after the Submittal Hour on the Sale Date will not be considered. Any disputes arising hereunder shall be governed by the laws of the State, and any party submitting a bid agrees to be subject to jurisdiction and venue of the federal and state courts within the State with regard to such dispute.

The Issuer’s acceptance of the Successful Bidder’s proposal for the purchase of the Bonds in accordance with this Notice of Bond Sale shall constitute a bond purchase agreement between the Issuer and the Successful Bidder for purposes of the laws of the State and a contract between the Issuer and the Successful Bidder for the purposes of Rule 15c2-12 of the Securities and Exchange Commission (the “Rule”) and Rule G-32 of the Municipal Securities Rulemaking Board (“Rule G-32”). The method of acceptance shall be determined solely by the Governing Body.

Bond Ratings. The Issuer has applied to S&P Global Ratings, a division of Standard & Poor’s Financial Services LLC for a rating on the Bonds herein offered for sale.

Optional Bond Insurance. The Issuer has **not** applied for any policy of municipal bond insurance with respect to the Bonds. If the Bonds qualify for municipal bond insurance, and any bidder desires to purchase such policy, such indication and the name of the desired insurer must be set forth on the bidder’s Official Bid Form. The Issuer specifically reserves the right to reject any bid specifying municipal bond insurance, even though such bid may result in the lowest TIC to the Issuer.

If the Successful Bidder elects to purchase the Bonds with municipal bond insurance, certain rating agencies will assign their ratings to the Bonds with the understanding that upon delivery of the Bonds, a policy insuring the payment when due of the principal of and interest on the Bonds will be issued by such bond insurer. All costs associated with the purchase and issuance of such municipal bond insurance policy and associated ratings and expenses (other than any independent rating requested by the Issuer) shall be paid by the Successful Bidder. Failure of the municipal bond insurer to issue the policy after the award of the Bonds shall not constitute cause for failure or refusal by the Successful Bidder to accept delivery of the Bonds.

CUSIP Numbers. CUSIP identification numbers will be assigned and printed on the Bonds, but neither the failure to print such number on any Bond nor any error with respect thereto shall constitute cause for failure or refusal by the purchaser thereof to accept delivery of and pay for the Bonds in accordance

with the terms of this Notice. The Municipal Advisor will apply for CUSIP numbers pursuant to Rule G-34 implemented by the Municipal Securities Rulemaking Board. All expenses in relation to the assignment and printing of CUSIP numbers on the Bonds will be paid by the Issuer.

Delivery and Payment. The Issuer will pay for the preparation of the Bonds and will deliver the Bonds properly prepared, executed and registered without cost on or about **APRIL 23, 2026** (the “Closing Date”), to DTC for the account of the Successful Bidder. The Successful Bidder will be furnished with a certified transcript of the proceedings evidencing the authorization and issuance of the Bonds and the usual closing documents, including a certificate that there is no litigation pending or threatened at the time of delivery of the Bonds affecting their validity and a certificate regarding the completeness and accuracy of the Official Statement. Payment for the Bonds shall be made in federal reserve funds, immediately available for use by the Issuer. The Issuer will deliver one Bond of each maturity registered in the nominee name of DTC.

Establishment of Issue Price.

(a) In order to provide the Issuer with information necessary for compliance with Section 148 of the Internal Revenue Code of 1986, as amended, and the Treasury Regulations promulgated thereunder (collectively, the “Code”), the Successful Bidder will be required to assist the Issuer in establishing the “issue price” of the Bonds and complete, execute and deliver to the Issuer prior to the Closing Date, a written certification in a form acceptable to the Successful Bidder, the Issuer and Bond Counsel (the “Issue Price Certificate”) containing the following for each maturity of the Bonds (and if different interest rates apply within a maturity, to each separate CUSIP number within that maturity): (1) the interest rate; (2) the reasonably expected initial offering price to the “public” (as said term is used in Treasury Regulation Section 1.148-1(f) (the “Regulation”)) or the sale price; and (3) pricing wires or equivalent communications supporting such offering or sale price. However, such Issue Price Certificate may indicate that the Successful Bidder has purchased the Bonds for its own account in a capacity other than as an underwriter or wholesaler, and currently has no intent to reoffer the Bonds for sale to the public. Any action to be taken or documentation to be received by the Issuer pursuant hereto may be taken or received by the Municipal Advisor or Bond Counsel on behalf of the Issuer.

(b) The Issuer intends that the sale of the Bonds pursuant to this Notice shall constitute a “competitive sale” as defined in the Regulation. In support thereof: (1) the Issuer shall cause this Notice to be disseminated to potential bidders in a manner reasonably designed to reach potential bidders; (2) all bidders shall have an equal opportunity to submit a bid; (3) the Issuer reasonably expects that it will receive bids from at least three bidders that have established industry reputations for underwriting municipal bonds such as the Bonds; and (4) the Issuer anticipates awarding the sale of the Bonds to the bidder that provides a bid with the lowest TIC in accordance with the section hereof entitled “Basis of Award.”

(c) Any bid submitted pursuant to this Notice shall be considered a firm offer for the purchase of the Bonds as specified therein. The Successful Bidder shall constitute an “underwriter” as said term is defined in the Regulation. By submitting its bid, the Successful Bidder confirms that it shall require any agreement among underwriters, a selling group agreement or other agreement to which it is a party relating to the initial sale of the Bonds, to include provisions requiring compliance with provisions of the Code and the Regulation regarding the initial sale of the Bonds.

(d) If all of the requirements of a “competitive sale” are not satisfied, the Issuer shall advise the Successful Bidder of such fact at the time of award of the sale of the Bonds to the Successful Bidder and the following provisions shall apply to the Bonds. ***In such event, any bid submitted will not be subject to cancellation or withdrawal.*** Within twenty-four (24) hours of the notice of award of the sale of the Bonds, the Successful Bidder shall advise the Issuer if a “substantial amount” (as defined in the Regulation (10%)) of any maturity of the Bonds (and if different interest rates apply within a maturity, to each separate

CUSIP number within that maturity) has been sold to the public and the price at which such substantial amount was sold. The Issuer will treat such sale price as the “issue price” for such maturity, applied on a maturity-by-maturity basis. The Issuer will *not* require the Successful Bidder to comply with that portion of the Regulation commonly described as the “hold-the-offering-price” requirement for the remaining maturities, but the Successful Bidder may elect such option. If the Successful Bidder exercises such option, the Issuer will apply the initial offering price to the public provided in the bid as the issue price for such maturities. If the Successful Bidder does not exercise that option, it shall thereafter promptly provide the Issuer the prices at which a substantial amount of such maturities are sold to the public; provided such determination shall be made and the Issuer notified of such prices not later than three (3) business days prior to the Closing Date. ***Any change in the issue price of any of the Bonds after the Submittal Hour will not affect the purchase price for the Bonds submitted in the bid of the Successful Bidder.***

(e) This agreement by the Successful Bidder to provide such information will continue to apply after the Closing Time if: (a) the Issuer requests the information in connection with an audit or inquiry by the Internal Revenue Service (the “IRS”) or the Securities and Exchange Commission (the “SEC”) or (b) the information is required to be retained by the Issuer pursuant to future regulation or similar guidance from the IRS, the SEC or other federal or state regulatory authority.

Preliminary Official Statement and Official Statement. The Issuer has prepared a Preliminary Official Statement dated March [], 2026, “deemed final” by the Issuer except for the omission of certain information as provided in the Rule, copies of which may be obtained from the Municipal Advisor. Upon the sale of the Bonds, the Issuer will adopt the final Official Statement and will furnish the Successful Bidder, without cost, within seven business days of the acceptance of the Successful Bidder’s proposal, with a sufficient number of copies thereof, which may be in electronic format, in order for the Successful Bidder to comply with the requirements of the Rule and Rule G-32. Additional copies may be ordered by the Successful Bidder at its expense.

Continuing Disclosure. In the Bond Resolution, the Issuer has covenanted to annually provide certain financial information and operating data and other information necessary to comply with the Rule, and to transmit the same to the Municipal Securities Rulemaking Board. This covenant is for the benefit of and is enforceable by any Registered Owner of the Bonds. For further information, reference is made to the caption “CONTINUING DISCLOSURE” in the Preliminary Official Statement.

Assessed Valuation and Indebtedness. The total assessed valuation of the taxable tangible property within the Issuer for the year 2025 is as follows:

Equalized Assessed Valuation of	
Taxable Tangible Property	\$251,041,317
Tangible Valuation of Motor Vehicles.....	<u>22,171,319</u>
Equalized Assessed Tangible Valuation	
for Computation of Bonded Debt Limitations	\$273,212,636

The total general obligation indebtedness of the Issuer as of the Dated Date, including the Bonds being sold, is \$35,290,000.

Legal Opinion. The Bonds will be sold subject to the approving legal opinion of GILMORE & BELL, P.C., WICHITA, KANSAS, Bond Counsel to the Issuer, which opinion will be furnished and paid for by the Issuer, will be printed on the Bonds, if the Bonds are printed, and will be delivered to the Successful Bidder when the Bonds are delivered. Said opinion will also include the opinion of Bond Counsel relating to the interest on the Bonds being excludable from gross income for federal income tax

purposes and exempt from income taxation by the State. Reference is made to the Preliminary Official Statement for further discussion of federal and State income tax matters relating to the interest on the Bonds.

Electronic Transactions. The transactions described herein may be conducted and related documents may be sent, received and stored by electronic means or transmissions. All bid documents, closing documents, certificates, ordinances, resolutions and related instruments may be executed by electronic means or transmissions. Copies, telecopies, electronic files and other reproductions of original executed documents (or documents executed by electronic means or transmissions) shall be deemed to be authentic and valid counterparts of such documents for all purposes, including the filing of any claim, action or suit in the appropriate court of law.

Additional Information. Additional information regarding the Bonds may be obtained from the undersigned or from the Municipal Advisor at the addresses set forth below:

DATED: March 4, 2026.

CITY OF EMPORIA, KANSAS
By: Janet Harrouff, Director of Finance

Issuer:

111 East 6th Avenue
Emporia, Kansas 66801
Attn: Janet Harrouff, Director of Finance
Phone No.: (620) 343-4950
Email: jharrouff@emporiaks.gov

Municipal Advisor – Email Bid and Good Faith Deposit Delivery Address:

Raymond James & Associates, Inc.
11551 Ash Street, Suite 250
Leawood, Kansas 66211
Attn: Greg Vahrenberg
Phone No.: (816) 509-5451
Email: greg.vahrenberg@raymondjames.com

SUMMARY NOTICE OF BOND SALE

\$13,415,000*
CITY OF EMPORIA, KANSAS
GENERAL OBLIGATION BONDS, SERIES 2026

(GENERAL OBLIGATION BONDS PAYABLE FROM UNLIMITED AD VALOREM TAXES)

Bids. SUBJECT to the Notice of Bond Sale dated March 4, 2026 (the “Notice”), email and electronic bids will be received on behalf of the Director of Finance of the City of Emporia, Kansas (the “Issuer”) in the case of email bids, at the address set forth below, and in the case of electronic bids, through **PARITY**[®] until 9:00 A.M. applicable Central Time, on **APRIL 1, 2026** for the purchase of the above-referenced bonds (the “Bonds”). No bid of less than **100%** of the principal amount of the Bonds and accrued interest thereon to the date of delivery will be considered.

Bond Details. The Bonds will consist of fully registered bonds in the denomination of \$5,000 or any integral multiple thereof. The Bonds will be dated April 23, 2026, and will become due on September 1 in the years as follows:

<u>Year</u>	<u>Principal Amount*</u>	<u>Year</u>	<u>Principal Amount*</u>
2027	\$505,000	2037	\$535,000
2028	700,000	2038	550,000
2029	710,000	2039	575,000
2030	735,000	2040	595,000
2031	750,000	2041	615,000
2032	685,000	2042	640,000
2033	705,000	2043	670,000
2034	725,000	2044	700,000
2035	745,000	2045	735,000
2036	775,000	2046	765,000

* Subject to change, see the Notice

The Bonds will bear interest from the date thereof at rates to be determined when the Bonds are sold as hereinafter provided, which interest will be payable semiannually on March 1 and September 1 in each year, beginning on March 1, 2027.

Book-Entry-Only System. The Bonds shall be registered under a book-entry-only system administered through DTC.

Paying Agent and Bond Registrar. Treasurer of the State of Kansas, Topeka, Kansas.

Good Faith Deposit. Each bid shall be accompanied (in the manner set forth in the Notice) by a good faith deposit in the form of a cashier’s or certified check drawn on a bank located in the United States of America or a wire transfer in Federal Reserve funds immediately available for use by the Issuer in the amount of \$268,300.

Delivery. The Issuer will pay for preparation of the Bonds and will deliver the same properly prepared, executed and registered without cost to the successful bidder on or about **April 23, 2026**, to DTC for the account of the successful bidder.

Assessed Valuation and Indebtedness. The Equalized Assessed Tangible Valuation for Computation of Bonded Debt Limitations for the year 2025 is \$273,212,636. The total general obligation indebtedness of the Issuer as of the Dated Date, including the Bonds being sold, is \$35,290,000.

Approval of Bonds. The Bonds will be sold subject to the legal opinion of GILMORE & BELL, P.C., WICHITA, KANSAS, Bond Counsel to the Issuer, whose approving legal opinion as to the validity

of the Bonds will be furnished and paid for by the Issuer, printed on the Bonds and delivered to the successful bidder as and when the Bonds are delivered.

Additional Information. Additional information regarding the Bonds may be obtained from the undersigned, or from the Municipal Advisor at the addresses set forth below:

DATED: March 4, 2026.

Issuer:

111 East 6th Avenue
Emporia, Kansas 66801
Attn: Janet Harrouff, Director of Finance
Phone No.: (620) 343-4950
Email: jharrouff@emporiaks.gov

Municipal Advisor –Email Bid and Good Faith Deposit Delivery Address:

Raymond James & Associates, Inc.
11551 Ash Street, Suite 250
Leawood, Kansas 66211
Attn: Greg Vahrenberg
Phone No.: (816) 509-5451
Email: greg.vahrenberg@raymondjames.com

KANSAS REGISTER

DOCUMENT NO. _____

(Above space for Register Office Use)

Submission Form
Municipal Bond Sale Notice
(K.S.A. 10-106 as amended)

TITLE OF DOCUMENT: SUMMARY NOTICE OF BOND SALE
Re: City of Emporia, Kansas, General Obligation Bonds, Series 2026, Dated April 23, 2026.

NUMBER OF PAGES: [] DESIRED PUBLICATION DATE: []

BILL TO: Janet Harrouff, Director of Finance
111 East 6th Avenue, Emporia, Kansas 66801

Please email an Affidavit of Publication to: jmiddleton@giomrebell.com at your earliest opportunity.

Any questions regarding this document should be directed to:

NAME: _____ PHONE: (316) 267-2091 _____

Certification

I hereby certify that I have reviewed the attached and herein described document, and that it conforms to all applicable **Kansas Register** publication guidelines. I further certify that submission of this item for publication in the **Kansas Register** is authorized by the municipality which has issued the notice.

Authorized Signature

Typed Name of Signer

Position

TRANSMIT TO: Kansas Register; Secretary of State; State Capitol, Topeka, KS 66612
PHONE: (785) 296-3489; FAX: (785) 291-3051; EMAIL: kansasregister@sos.ks.gov

THIS SPACE FOR REGISTER OFFICE USE ONLY

OFFICIAL BID FORM
 PROPOSAL FOR THE PURCHASE OF CITY OF EMPORIA, KANSAS
 GENERAL OBLIGATION BONDS, SERIES 2026

TO: Janet Harrouff, Director of Finance
 City of Emporia, Kansas

April 1, 2026

For \$13,415,000* principal amount of General Obligation Bonds, Series 2026, of the City of Emporia, Kansas (the "Issuer"), to be dated April 23, 2026, as described in the Notice of Bond Sale dated March 4, 2026 (the "Notice"), said Bonds to bear interest as follows:

<u>Stated Maturity</u> <u>September 1</u>	<u>Principal Amount*</u>	<u>Annual Rate of Interest</u>	<u>Initial Offering Price</u>	<u>Stated Maturity</u> <u>September 1</u>	<u>Principal Amount*</u>	<u>Annual Rate of Interest</u>	<u>Initial Offering Price</u>
2027	\$505,000	_____ %	_____ %	2037	\$535,000	_____ %	_____ %
2028	700,000	_____ %	_____ %	2038	550,000	_____ %	_____ %
2029	710,000	_____ %	_____ %	2039	575,000	_____ %	_____ %
2030	735,000	_____ %	_____ %	2040	595,000	_____ %	_____ %
2031	750,000	_____ %	_____ %	2041	615,000	_____ %	_____ %
2032	685,000	_____ %	_____ %	2042	640,000	_____ %	_____ %
2033	705,000	_____ %	_____ %	2043	670,000	_____ %	_____ %
2034	725,000	_____ %	_____ %	2044	700,000	_____ %	_____ %
2035	745,000	_____ %	_____ %	2045	735,000	_____ %	_____ %
2036	775,000	_____ %	_____ %	2046	765,000	_____ %	_____ %

* Subject to change, see the Notice

the undersigned will pay the purchase price for the Bonds set forth below, plus accrued interest to the date of delivery.

Principal Amount \$13,415,000*.00
 Plus Premium (if any)
 Total Purchase Price \$
 Total interest cost to maturity at the rates specified \$
 Net interest cost (adjusted for Premium) \$
 True Interest Cost %

The Bidder elects to have the following Term Bonds:

Maturity Date	Years	Amount*
September 1, _____	to _____	\$ _____
September 1, _____	to _____	\$ _____

*subject to mandatory redemption requirements in the amounts and at the times shown above.

This proposal is subject to all terms and conditions contained in the Notice, and if the undersigned is the Successful Bidder, the undersigned will comply with all of the provisions contained in the Notice. A cashier's or certified check or a wire transfer in the amount of \$268,300 payable to the order of the Issuer, submitted in the manner set forth in the Notice accompanies this proposal as an evidence of good faith. The acceptance of this proposal by the Issuer by execution below shall constitute a contract between the Issuer and the Successful Bidder for purposes of complying with Rule 15c2-12 of the Securities and Exchange Commission and a bond purchase agreement for purposes of the laws of the State of Kansas.

Submitted by: _____

(LIST ACCOUNT MEMBERS ON REVERSE)

By: _____
 Telephone No. (____) _____

ACCEPTANCE

Pursuant to action duly taken by the Governing Body of the Issuer the above proposal is hereby accepted on April 1, 2026.

Attest:

 Clerk

 Mayor

NOTE: No additions or alterations in the above proposal form shall be made, and any erasures may cause rejection of any bid. Email bids may be sent to Raymond James & Associates, Inc. at greg.vahrenberg@raymondjames.com, and electronic bids may be submitted via **PARITY**®, at or prior to 9:00 A.M. applicable Central Time, on April 1, 2026. Any bid received after such time will not be accepted or shall be returned to the bidder.

PRELIMINARY OFFICIAL STATEMENT DATED MARCH 5, 2026

NEW ISSUE – BOOK-ENTRY ONLY

RATING: S&P: “__”
See “Bond Rating” herein

In the opinion of Gilmore & Bell, P.C., Bond Counsel to the Issuer, under existing law and assuming continued compliance with certain requirements of the Internal Revenue Code of 1986, as amended (the “Code”): (1) the interest on the Bonds is excludable from gross income for federal income tax purposes and is not an item of tax preference for purposes of the federal alternative minimum tax; (2) the interest on the Bonds is exempt from income taxation by the State of Kansas; and (3) the Bonds are not “qualified tax-exempt obligations” within the meaning of Code §265(b)(3). See “TAX MATTERS – Opinion of Bond Counsel” in this Official Statement.

\$13,415,000*
CITY OF EMPORIA, KANSAS
GENERAL OBLIGATION BONDS
SERIES 2026

Dated: Date of Delivery

Due: September 1, As shown on the inside cover

The General Obligation Bonds, Series 2026 (the “Bonds”) will be issued by the City of Emporia, Kansas (the “Issuer” or the “City”), as fully registered bonds, without coupons, and, when issued, will be registered in the name of Cede & Co., as registered owner and nominee for The Depository Trust Company (“DTC”), New York, New York. DTC will act as securities depository for the Bonds. Purchases of the Bonds will be made in book-entry form, in the denominations of \$5,000 or any integral multiple thereof (the “Authorized Denomination”). Purchasers will not receive certificates representing their interests in Bonds purchased. So long as Cede & Co. is the registered owner of the Bonds, as nominee of DTC, references herein to the Bond owners or registered owners shall mean Cede & Co., as aforesaid, and shall not mean the Beneficial Owners (as herein defined) of the Bonds. Principal will be payable annually on September 1, beginning in 2024, and semiannual interest will be payable on March 1 and September 1, beginning on March 1, 2027 (the “Interest Payment Dates”). Principal will be payable upon presentation and surrender of the Bonds by the registered owners thereof at the office of the Treasurer of the State of Kansas, Topeka, Kansas, as paying agent and bond registrar (the “Paying Agent” and “Bond Registrar”). Interest payable on each Bond shall be paid to the persons who are the registered owners of the Bonds as of the close of business on the fifteenth day (whether or not a business day) of the calendar month preceding each interest payment date by check or draft of the Paying Agent mailed to such registered owner, or in the case of an interest payment to a registered owner of \$500,000 or more in aggregate principal amount of Bonds, by electronic transfer. So long as DTC or its nominee, Cede & Co., is the Owner of the Bonds, such payments will be made directly to DTC. DTC is expected, in turn, to remit such principal and interest to the DTC Participants (herein defined) for subsequent disbursement to the Beneficial Owners.

The Bonds and the interest thereon will constitute general obligations of the Issuer, payable from ad valorem taxes which may be levied without limitation as to rate or amount upon all the taxable tangible property, real and personal, within the territorial limits of the Issuer. The full faith, credit and resources of the Issuer are hereby irrevocably pledged for the prompt payment of the principal of and interest on the Bonds as the same become due. See “THE BONDS – Security for the Bonds” herein.

The Bonds maturing on September 1, 2036 and thereafter will be subject to redemption and payment prior to maturity at the option of the Issuer on September 1, 2035 and any date thereafter, in whole or in part, at the redemption price of par, plus accrued interest to the date of redemption as more fully described herein. See “THE BONDS – Redemption Provisions” herein.

The Bonds are offered when, as and if issued by the Issuer, subject to the approval of legality by Gilmore & Bell, P.C., Wichita, Kansas, Bond Counsel to the Issuer. It is expected that the Bonds will be available for delivery through the facilities of DTC on or about April 15, 2026.

THE COVER PAGE CONTAINS CERTAIN INFORMATION FOR QUICK REFERENCE ONLY. THE COVER PAGE IS NOT A SUMMARY OF THIS ISSUE. INVESTORS MUST READ THE ENTIRE OFFICIAL STATEMENT, INCLUDING ALL APPENDICES ATTACHED HERETO TO OBTAIN INFORMATION ESSENTIAL TO THE MAKING OF AN INFORMED INVESTMENT DECISION. “APPENDIX C – SUMMARY OF FINANCING DOCUMENTS” CONTAINS DEFINITIONS USED IN THIS OFFICIAL STATEMENT.

The date of this Official Statement is March __, 2026.

**Preliminary, subject to change.*

This Preliminary Official Statement and the information contained herein are subject to completion and amendment. Under no circumstances shall this Preliminary Official Statement constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of the Bonds, in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction. As of this date, this Preliminary Official Statement has been deemed “final” by the City for purposes of SEC Rule 15c2-12(b)(1) except for the omission of certain information permitted by SEC Rule 15c2-12(b)(1).

\$13,415,000*
CITY OF EMPORIA, KANSAS
GENERAL OBLIGATION BONDS
SERIES 2026

MATURITY SCHEDULE

SERIAL BONDS

<u>Stated Maturity</u> <u>September 1</u>	<u>Principal</u> <u>Amount*</u>	<u>Interest</u> <u>Rate</u>	<u>Yield</u>	<u>CUSIP⁽¹⁾</u>
2027	\$505,000			
2028	700,000			
2029	710,000			
2030	735,000			
2031	750,000			
2032	685,000			
2033	705,000			
2034	725,000			
2035	745,000			
2036	775,000			
2037	535,000			
2038	550,000			
2039	575,000			
2040	595,000			
2041	615,000			
2042	640,000			
2043	670,000			
2044	700,000			
20245	735,000			
2046	765,000			

[TERM BONDS

<u>Stated Maturity</u> <u>September 1</u>	<u>Principal</u> <u>Amount*</u>	<u>Interest</u> <u>Rate</u>	<u>Yield</u>	<u>CUSIP⁽¹⁾</u>
]

(All plus accrued interest, if any)

⁽¹⁾ CUSIP data is provided by CUSIP Global Services, which is managed on behalf of the American Bankers Association by FactSet Research Systems, Inc., Inc. and is included solely for the convenience of the Owners of the Bonds. Neither the Issuer nor the Underwriter shall be responsible for the selection or correctness of the CUSIP numbers set forth above.

*Preliminary, subject to change.

IN CONNECTION WITH THIS OFFERING, THE UNDERWRITER MAY OVERALLOT OR EFFECT TRANSACTIONS WHICH STABILIZE OR MAINTAIN THE MARKET PRICES OF THE BONDS AT LEVELS ABOVE THOSE WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

THE BONDS HAVE NOT BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION UNDER THE SECURITIES ACT OF 1933, AS AMENDED. THE BONDS ARE OFFERED PURSUANT TO AN EXEMPTION FROM REGISTRATION WITH THE SECURITIES AND EXCHANGE COMMISSION. THE REGISTRATION, QUALIFICATION OR EXEMPTION OF THE BONDS IN ACCORDANCE WITH THE APPLICABLE SECURITIES LAW PROVISIONS OF THE JURISDICTIONS IN WHICH THESE SECURITIES HAVE BEEN REGISTERED, QUALIFIED OR EXEMPTED SHOULD NOT BE REGARDED AS A RECOMMENDATION THEREOF. NEITHER THESE JURISDICTIONS NOR ANY OF THEIR AGENCIES HAVE GUARANTEED OR PASSED UPON THE SAFETY OF THE BONDS AS AN INVESTMENT, UPON THE PROBABILITY OF ANY EARNINGS THEREON OR UPON THE ACCURACY OR ADEQUACY OF THIS OFFICIAL STATEMENT. ANY REPRESENTATION TO THE CONTRARY MAY BE A CRIMINAL OFFENSE.

THIS OFFICIAL STATEMENT CONTAINS STATEMENTS THAT ARE “FORWARD-LOOKING STATEMENTS” AS DEFINED IN THE PRIVATE SECURITIES LITIGATION REFORM ACT OF 1995. WHEN USED IN THIS OFFICIAL STATEMENT, THE WORDS “ESTIMATE,” “INTEND,” “EXPECT” AND SIMILAR EXPRESSIONS ARE INTENDED TO IDENTIFY FORWARD-LOOKING STATEMENTS. SUCH STATEMENTS ARE SUBJECT TO RISKS AND UNCERTAINTIES THAT COULD CAUSE ACTUAL RESULTS TO DIFFER MATERIALLY FROM THOSE CONTEMPLATED IN SUCH FORWARD-LOOKING STATEMENTS. READERS ARE CAUTIONED NOT TO PLACE UNDUE RELIANCE ON THESE FORWARD-LOOKING STATEMENTS, WHICH SPEAK ONLY AS OF THE DATE HEREOF.

THIS PRELIMINARY OFFICIAL STATEMENT IS DEEMED TO BE FINAL (EXCEPT FOR PERMITTED OMISSIONS) BY THE ISSUER FOR PURPOSES OF COMPLYING WITH RULE 15c2-12 OF THE SECURITIES AND EXCHANGE COMMISSION.

IN MAKING AN INVESTMENT DECISION INVESTORS MUST RELY ON THEIR OWN EXAMINATION OF THE ISSUER AND THE TERMS OF THE OFFERING, INCLUDING THE MERITS AND RISKS INVOLVED.

**CITY OF EMPORIA, KANSAS
111 EAST 6th AVENUE
EMPORIA, KANSAS 66801**

CITY COMMISSION

Becky Smith, Mayor
Tammi Ogle, Vice Mayor
Kurt Steinkuhler, City Commissioner
Monica Duncan, City Commissioner
Erren Harter, City Commissioner

CITY STAFF

Trey Cocking, City Manager
Tayler Wash, Assistant City Manager
Janet Harrouff, Director of Finance
Kerry Sull, City Clerk
Christina Montgomery, City Attorney

CERTIFIED PUBLIC ACCOUNTANT

Hood and Associates, CPAs, P.C.
Overland Park, Kansas

BOND COUNSEL

Gilmore & Bell, P.C.
Wichita, Kansas

MUNICIPAL ADVISOR

Raymond James & Associates, Inc.
Leawood, Kansas

UNDERWRITER

No dealer, broker, salesman or other person has been authorized by the Issuer, Municipal Advisor or the Underwriter to give any information or to make any representations with respect to the Bonds other than those contained in this Official Statement, and, if given or made, such other information or representations must not be relied upon as having been authorized by any of the foregoing. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy the Bonds by any person in any jurisdiction in which it is unlawful for such person to make such offer, solicitation or sale. The information set forth herein concerning the Issuer has been furnished by the Issuer and other sources which are believed to be reliable, but such information is not guaranteed as to accuracy or completeness. The Underwriter has reviewed the information in this Official Statement in accordance with, and as a part of, its responsibilities to investors under the Federal Securities Laws as applied to the facts and circumstances of this transaction, but the Underwriter does not guarantee the accuracy or completeness of such information. The information and expressions of opinion herein are subject to change without notice and neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the affairs of the Issuer since the date hereof. This Official Statement does not constitute a contract between the Issuer or the Underwriter and any one or more of the purchasers, Owners or Beneficial Owners of the Bonds.

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OFFICIAL STATEMENT

\$13,415,000*
CITY OF EMPORIA, KANSAS
GENERAL OBLIGATION BONDS
SERIES 2026

INTRODUCTION

General Matters

The purpose of this Official Statement is to furnish information relating to the City of Emporia, Kansas (the “Issuer” or the “City”), and the General Obligation Bonds, Series 2026 (the “Bonds”), of the Issuer, dated as of April 15, 2026 (the “Dated Date”).

The Appendices to this Official Statement are integral parts of this document, to be read in their entirety.

The Issuer is a municipal corporation duly organized and existing under the laws of the State of Kansas (the “State”). Additional information regarding the Issuer is contained in *APPENDIX A* to this Official Statement.

The materials contained on the cover page, in the body and in the Appendices to this Official Statement are to be read in their entirety. All financial and other information presented herein has been compiled by Raymond James & Associates, Inc. (the “Municipal Advisor”). Except for the information expressly attributed to other sources deemed to be reliable, all information has been provided by the Issuer. The presentation of information herein, including tables of receipts from various taxes, is intended to show recent historic information, and is not intended to indicate future or continuing trends in the financial position or other affairs of the Issuer. No representation is made that past experience, as might be shown by such financial or other information, will necessarily continue or be repeated in the future. Except to the extent described under the section captioned “LEGAL MATTERS,” Bond Counsel expresses no opinion as to the accuracy or sufficiency of any other information contained herein.

Definitions

Capitalized terms not otherwise defined herein shall have the meanings ascribed thereto in “*APPENDIX C – SUMMARY OF FINANCING DOCUMENTS.*”

Continuing Disclosure

The Securities and Exchange Commission (the “SEC”) has promulgated amendments to Rule 15c2-12 (the “Rule”), requiring continuous secondary market disclosure. In connection with the issuance of the Bonds, the City will enter into a continuing disclosure undertaking (the “Disclosure Undertaking”) wherein the City covenants to provide annually certain financial information and operating data (collectively, the “Annual Report”) and other information necessary to comply with the Rule, and to transmit the same to the Municipal Securities Rulemaking Board. Pursuant to the Disclosure Undertaking, the City has agreed to file its Annual Report with the national repository (“EMMA”) not later than September 15th immediately following the end of the Issuer’s fiscal year commencing with the year ending December 31, 2025. In the Bond Resolution, hereinafter defined, the City covenants with the Underwriter and the Beneficial Owners to apply the provisions of the Disclosure Undertaking to the Bonds. This covenant is for the benefit of and is enforceable by the Beneficial Owners of the Bonds.

The City has previously entered into continuing disclosure undertakings required by Rule 15c2-12 in connection with bonds previously issued (the “Prior Undertakings”). For the past five years the City has filed its Annual Report within the time period prescribed by the Disclosure Undertaking and the Prior Undertakings. The City’s filings under the Rule for the past five years are set forth in the table below:

** Preliminary, subject to change*

<u>Fiscal Year</u> <u>Ending December 31</u>	<u>Filing Time</u> <u>Period</u>	<u>Financial Information</u> <u>Filing Date</u>	<u>Operating Data</u> <u>Filing Date</u>
2020	September 15 th	7/16/2021	7/16/2021
2021	September 15 th	6/29/2022	6/29/2022
2022	September 15 th	6/23/2023	6/23/2023
2023	September 15 th	6/28/2024	6/28/2024
2024	September 15 th	7/03/2025	7/03/2025
2025	September 15 th	Not Due Yet	Not Due Yet

During the past five years, the City may not have separately made timely filings of event notices on EMMA relating to all bond calls, defeasances or rating changes. The City believes this information was disseminated or available through other sources.

For more information regarding the County's continuing disclosure undertaking, see "**APPENDIX D – FORM OF DISCLOSURE UNDERTAKING.**"

Additional Information

Additional information regarding the Issuer or the Bonds may be obtained from the Clerk of the Issuer at the address set forth in the preface to this Official Statement, or from the Municipal Advisor, Raymond James & Associates, Inc., 11551 Ash Street, Suite 250, Leawood, Kansas 66211 (816) 391-4120.

THE BONDS

Authority for the Bonds

The Bonds are being issued pursuant to and in full compliance with the Constitution and statutes of the State, including K.S.A. 10-101 to 10-125, inclusive, K.S.A. 10-620 *et seq.*, K.S.A. 13-1024a, as amended by Charter Ordinance No. 41, and K.S.A. 65-162a *et seq.*, all as amended and supplemented from time to time (collectively, the "Act"), an ordinance passed by the governing body of the Issuer and a resolution adopted by the governing body of the Issuer (collectively the "Bond Resolution").

Security for the Bonds

The Bonds shall be general obligations of the Issuer payable as to both principal and interest from ad valorem taxes which may be levied without limitation as to rate or amount upon all the taxable tangible property, real and personal, within the territorial limits of the Issuer. The full faith, credit and resources of the Issuer are irrevocably pledged for the prompt payment of the principal of and interest on the Bonds as the same become due.

Levy and Collection of Annual Tax, Transfer to Debt Service Account

The governing body of the Issuer shall annually make provision for the payment of principal of, premium, if any, and interest on the Bonds as the same become due by, to the extent necessary, levying and collecting the necessary taxes upon all of the taxable tangible property within the Issuer in the manner provided by law. Such taxes shall be extended upon the tax rolls in each of the several years, respectively, and shall be levied and collected at the same time and in the same manner as the other ad valorem taxes of the Issuer are levied and collected. The proceeds derived from said taxes shall be deposited in the Bond and Interest Fund, shall be kept separate and apart from all other funds of the Issuer, shall thereafter be transferred to the Debt Service Account and shall be used solely for the payment of the principal of and interest on the Bonds as and when the same become due, taking into account any scheduled mandatory redemptions, and the fees and expenses of the Paying Agent.

Description of the Bonds

The Bonds shall consist of fully registered book-entry-only bonds in an Authorized Denomination and shall be numbered in such manner as the Bond Registrar shall determine. All of the Bonds shall be dated as of the Dated Date, become due in the amounts on the Stated Maturities, subject to redemption and payment prior to their Stated Maturities, and shall

bear interest at the rates per annum set forth on the inside cover page of this Official Statement (computed on the basis of twelve 30-day months) from the later of the Dated Date or the most recent Interest Payment Date to which interest has been paid, on the Interest Payment Dates in the manner hereinafter set forth.

Designation of Paying Agent and Bond Registrar

The Issuer will at all times maintain a paying agent and bond registrar meeting the qualifications set forth in the Bond Resolution. The Issuer reserves the right to appoint a successor paying agent or bond registrar. No resignation or removal of the paying agent or bond registrar shall become effective until a successor has been appointed and has accepted the duties of paying agent or bond registrar. Every paying agent or bond registrar appointed by the Issuer shall at all times meet the requirements of Kansas law.

The Treasurer of the State of Kansas, Topeka, Kansas (the “Bond Registrar” and “Paying Agent”) has been designated by the Issuer as paying agent for the payment of principal of and interest on the Bonds and bond registrar with respect to the registration, transfer and exchange of Bonds.

Method and Place of Payment of the Bonds

The principal of, or Redemption Price, and interest on the Bonds shall be payable in any coin or currency which, on the respective dates of payment thereof, is legal tender for the payment of public and private debts. The principal or Redemption Price of each Bond shall be paid at Maturity or at the Redemption Date to the Person in whose name such Bond is registered on the Bond Register at the Maturity or at the Redemption Date thereof, upon presentation and surrender of such Bond at the principal office of the Paying Agent.

The interest payable on each Bond on any Interest Payment Date shall be paid to the Owner of such Bond as shown on the Bond Register at the close of business on the Record Date for such interest (a) by check or draft mailed by the Paying Agent to the address of such Owner shown on the Bond Register or at such other address as is furnished to the Paying Agent in writing by such Owner; or (b) in the case of an interest payment to Cede & Co. or any Owner of \$500,000 or more in aggregate principal amount of Bonds, by electronic transfer to such Owner upon written notice given to the Bond Registrar by such Owner, not less than 15 days prior to the Record Date for such interest, containing the electronic transfer instructions including the bank, ABA routing number and account number to which such Owner wishes to have such transfer directed.

Notwithstanding the foregoing, any Defaulted Interest with respect to any Bond shall cease to be payable to the Owner of such Bond on the relevant Record Date and shall be payable to the Owner in whose name such Bond is registered at the close of business on the Special Record Date for the payment of such Defaulted Interest, which Special Record Date shall be fixed as hereinafter specified. The Issuer shall notify the Paying Agent in writing of the amount of Defaulted Interest proposed to be paid on each Bond and the date of the proposed payment (which date shall be at least 30 days after receipt of such notice by the Paying Agent) and shall deposit with the Paying Agent an amount of money equal to the aggregate amount proposed to be paid in respect of such Defaulted Interest. Following receipt of such funds the Paying Agent shall fix a Special Record Date for the payment of such Defaulted Interest which shall be not more than 15 nor less than 10 days prior to the date of the proposed payment. The Paying Agent shall notify the Issuer of such Special Record Date and shall cause notice of the proposed payment of such Defaulted Interest and the Special Record Date therefor to be mailed, by first class mail, postage prepaid, to each Owner of a Bond entitled to such notice not less than 10 days prior to such Special Record Date.

SO LONG AS CEDE & CO., REMAINS THE REGISTERED OWNER OF THE BONDS, THE PAYING AGENT SHALL TRANSMIT PAYMENTS TO THE SECURITIES DEPOSITORY, WHICH SHALL REMIT SUCH PAYMENTS IN ACCORDANCE WITH ITS NORMAL PROCEDURES. See “THE BONDS – Book-Entry Bonds; Securities Depository.”

Payments Due on Saturdays, Sundays and Holidays

In any case where a Bond Payment Date is not a Business Day, then payment of principal, Redemption Price or interest need not be made on such Bond Payment Date but may be made on the next succeeding Business Day with the same force and effect as if made on such Bond Payment Date, and no interest shall accrue for the period after such Bond Payment Date.

Book-Entry Bonds; Securities Depository

The Bonds shall initially be registered to Cede & Co., the nominee for the Securities Depository, and no Beneficial Owner will receive certificates representing their respective interests in the Bonds, except in the event the Bond Registrar issues Replacement Bonds. It is anticipated that during the term of the Bonds, the Securities Depository will make book-entry transfers among its Participants and receive and transmit payment of principal of, premium, if any, and interest on, the Bonds to the Participants until and unless the Bond Registrar authenticates and delivers Replacement Bonds to the Beneficial Owners as described in the following paragraphs.

The Issuer may decide, subject to the requirements of the Operational Arrangements of DTC (or a successor Securities Depository), and the following provisions of this section to discontinue use of the system of book-entry transfers through DTC (or a successor Securities Depository):

(a) If the Issuer determines (1) that the Securities Depository is unable to properly discharge its responsibilities, or (2) that the Securities Depository is no longer qualified to act as a securities depository and registered clearing agency under the Securities and Exchange Act of 1934, as amended, or (3) that the continuation of a book-entry system to the exclusion of any Bonds being issued to any Owner other than Cede & Co. is no longer in the best interests of the Beneficial Owners of the Bonds; or

(b) if the Bond Registrar receives written notice from Participants having interest in not less than 50% of the Bonds Outstanding, as shown on the records of the Securities Depository (and certified to such effect by the Securities Depository), that the continuation of a book-entry system to the exclusion of any Bonds being issued to any Owner other than Cede & Co. is no longer in the best interests of the Beneficial Owners of the Bonds, then the Bond Registrar shall notify the Owners of such determination or such notice and of the availability of certificates to owners requesting the same, and the Bond Registrar shall register in the name of and authenticate and deliver Replacement Bonds to the Beneficial Owners or their nominees in principal amounts representing the interest of each, making such adjustments as it may find necessary or appropriate as to accrued interest and previous calls for redemption; provided, that in the case of a determination under (a)(1) or (a)(2) of this paragraph, the Issuer, with the consent of the Bond Registrar, may select a successor securities depository in accordance with the following paragraph to effect book-entry transfers.

In such event, all references to the Securities Depository herein shall relate to the period of time when the Securities Depository has possession of at least one Bond. Upon the issuance of Replacement Bonds, all references herein to obligations imposed upon or to be performed by the Securities Depository shall be deemed to be imposed upon and performed by the Bond Registrar, to the extent applicable with respect to such Replacement Bonds. If the Securities Depository resigns and the Issuer, the Bond Registrar or Owners are unable to locate a qualified successor of the Securities Depository, then the Bond Registrar shall authenticate and cause delivery of Replacement Bonds to Owners, as provided herein. The Bond Registrar may rely on information from the Securities Depository and its Participants as to the names of the Beneficial Owners of the Bonds. The cost of printing, registration, authentication, and delivery of Replacement Bonds shall be paid for by the Issuer.

In the event the Securities Depository resigns, is unable to properly discharge its responsibilities, or is no longer qualified to act as a securities depository and registered clearing agency under the Securities and Exchange Act of 1934, as amended, the Issuer may appoint a successor Securities Depository provided the Bond Registrar receives written evidence satisfactory to the Bond Registrar with respect to the ability of the successor Securities Depository to discharge its responsibilities. Any such successor Securities Depository shall be a securities depository which is a registered clearing agency under the Securities and Exchange Act of 1934, as amended, or other applicable statute or regulation that operates a securities depository upon reasonable and customary terms. The Bond Registrar upon its receipt of a Bond or Bonds for cancellation shall cause the delivery of the Bonds to the successor Securities Depository in appropriate denominations and form as provided in the Bond Resolution.

Registration, Transfer and Exchange of Bonds

As long as any of the Bonds remain Outstanding, each Bond when issued shall be registered in the name of the Owner thereof on the Bond Register. Bonds may be transferred and exchanged only on the Bond Register as hereinafter provided. Upon surrender of any Bond at the principal office of the Bond Registrar, the Bond Registrar shall transfer or exchange such Bond for a new Bond or Bonds in any authorized denomination of the same Stated Maturity and in the same aggregate principal amount as the Bond that was presented for transfer or exchange. Bonds presented for transfer or exchange shall be accompanied by a written instrument or instruments of transfer or authorization for exchange, in a form and with

guarantee of signature satisfactory to the Bond Registrar, duly executed by the Owner thereof or by the Owner's duly authorized agent.

In all cases in which the privilege of transferring or exchanging Bonds is exercised, the Bond Registrar shall authenticate and deliver Bonds in accordance with the provisions of the Bond Resolution. The Issuer shall pay the fees and expenses of the Bond Registrar for the registration, transfer and exchange of Bonds. Any additional costs or fees that might be incurred in the secondary market, other than fees of the Bond Registrar, are the responsibility of the Owners of the Bonds. In the event any Owner fails to provide a correct taxpayer identification number to the Paying Agent, the Paying Agent may make a charge against such Owner sufficient to pay any governmental charge required to be paid as a result of such failure.

The Issuer and the Bond Registrar shall not be required (a) to register the transfer or exchange of any Bond that has been called for redemption after notice of such redemption has been mailed by the Paying Agent and during the period of 15 days next preceding the date of mailing of such notice of redemption; or (b) to register the transfer or exchange of any Bond during a period beginning at the opening of business on the day after receiving written notice from the Issuer of its intent to pay Defaulted Interest and ending at the close of business on the date fixed for the payment of Defaulted Interest.

Mutilated, Lost, Stolen or Destroyed Bonds

If (a) any mutilated Bond is surrendered to the Bond Registrar or the Bond Registrar receives evidence to its satisfaction of the destruction, loss or theft of any Bond, and (b) there is delivered to the Issuer and the Bond Registrar such security or indemnity as may be required by each of them, then, in the absence of notice to the Issuer or the Bond Registrar that such Bond has been acquired by a bona fide purchaser, the Issuer shall execute and, upon the Issuer's request, the Bond Registrar shall authenticate and deliver, in exchange for or in lieu of any such mutilated, destroyed, lost or stolen Bond, a new Bond of the same Stated Maturity and of like tenor and principal amount. If any such mutilated, destroyed, lost or stolen Bond has become or is about to become due and payable, the Issuer, in its discretion, may pay such Bond instead of issuing a new Bond. Upon the issuance of any new Bond, the Issuer may require the payment by the Owner of a sum sufficient to cover any tax or other governmental charge that may be imposed in relation thereto and any other expenses (including the fees and expenses of the Paying Agent) connected therewith.

Nonpresentation of Bonds

If any Bond is not presented for payment when the principal thereof becomes due at Maturity, if funds sufficient to pay such Bond have been made available to the Paying Agent all liability of the Issuer to the Owner thereof for the payment of such Bond shall forthwith cease, determine and be completely discharged, and thereupon it shall be the duty of the Paying Agent to hold such funds, without liability for interest thereon, for the benefit of the Owner of such Bond, who shall thereafter be restricted exclusively to such funds for any claim of whatever nature on his part under this Bond Resolution or on, or with respect to, said Bond. If any Bond is not presented for payment within four (4) years following the date when such Bond becomes due at Maturity, the Paying Agent shall repay to the Issuer the funds theretofore held by it for payment of such Bond, and such Bond shall, subject to the defense of any applicable statute of limitation, thereafter be an unsecured obligation of the Issuer, and the Owner thereof shall be entitled to look only to the Issuer for payment, and then only to the extent of the amount so repaid to it by the Paying Agent, and the Issuer shall not be liable for any interest thereon and shall not be regarded as a trustee of such money.

Redemption Provisions

Optional Redemption. At the option of the Issuer, the Bonds maturing September 1, 2036 and thereafter may be called for redemption and payment prior to their Stated Maturity on September 1, 2035, and thereafter as a whole or in part (selection of maturities and the amount of Bonds of each maturity to be redeemed to be determined by the Issuer in such equitable manner as it may determine) at any time, at the Redemption Price of 100% (expressed as a percentage of the principal amount), plus accrued interest thereon to the Redemption Date.

[Mandatory Redemption. (a) _____ Term Bonds. The _____ Term Bonds shall be subject to mandatory redemption and payment prior to Stated Maturity pursuant to the mandatory redemption requirements hereinafter set forth at a Redemption Price equal to 100% of the principal amount thereof plus accrued interest to the Redemption Date. The payments which are to be deposited into the Debt Service Account shall be sufficient to redeem, and the Issuer shall redeem on September 1 in each year, the following principal amounts of such _____ Term Bonds:

<u>Principal Amount</u>	<u>Year</u>
\$	*

*Final Maturity]

Selection of Bonds to be Redeemed. Bonds shall be redeemed only in an Authorized Denomination. When less than all of the Bonds are to be redeemed and paid prior to their Stated Maturity, such Bonds shall be redeemed in such manner as the Issuer shall determine. Bonds of less than a full Stated Maturity shall be selected by the Bond Registrar in minimum Authorized Denomination in such equitable manner as the Bond Registrar may determine. In the case of a partial redemption of Bonds by lot when Bonds of denominations greater than a minimum Authorized Denomination are then Outstanding, then for all purposes in connection with such redemption each minimum Authorized Denomination of face value shall be treated as though it were a separate Bond of a minimum Authorized Denomination. If it is determined that one or more, but not all, of the minimum Authorized Denomination of face value represented by any Bond is selected for redemption, then upon notice of intention to redeem such minimum Authorized Denomination, the Owner or the Owner's duly authorized agent shall forthwith present and surrender such Bond to the Bond Registrar: (1) for payment of the Redemption Price and interest to the Redemption Date of such minimum Authorized Denomination of face value called for redemption, and (2) for exchange, without charge to the Owner thereof, for a new Bond or Bonds of the aggregate principal amount of the unredeemed portion of the principal amount of such Bond. If the Owner of any such Bond fails to present such Bond to the Paying Agent for payment and exchange as aforesaid, such Bond shall, nevertheless, become due and payable on the redemption date to the extent of the minimum Authorized Denomination value called for redemption (and to that extent only).

Notice and Effect of Call for Redemption. Unless waived by any Owner of Bonds to be redeemed, if the Issuer shall call any Bonds for redemption and payment prior to the Stated Maturity thereof, the Issuer shall give written notice of its intention to call and pay said Bonds to the Bond Registrar and the Underwriter. In addition, the Issuer shall cause the Bond Registrar to give written notice of redemption to the Owners of said Bonds. Each of said written notices shall be deposited in the United States first class mail not less than 30 days prior to the Redemption Date.

All official notices of redemption shall be dated and shall contain the following information: (a) the Redemption Date; (b) the Redemption Price; (c) if less than all Outstanding Bonds are to be redeemed, the identification (and, in the case of partial redemption of any Bonds, the respective principal amounts) of the Bonds to be redeemed; (d) a statement that on the Redemption Date the Redemption Price will become due and payable upon each such Bond or portion thereof called for redemption and that interest thereon shall cease to accrue from and after the Redemption Date; and (e) the place where such Bonds are to be surrendered for payment of the Redemption Price, which shall be the principal office of the Paying Agent. The failure of any Owner to receive notice given as heretofore provided or an immaterial defect therein shall not invalidate any redemption.

Prior to any Redemption Date, the Issuer shall deposit with the Paying Agent an amount of money sufficient to pay the Redemption Price of all the Bonds or portions of Bonds that are to be redeemed on such Redemption Date. Official notice of redemption having been given as aforesaid, the Bonds or portions of Bonds to be redeemed shall become due and payable on the Redemption Date, at the Redemption Price therein specified, and from and after the Redemption Date (unless the Issuer defaults in the payment of the Redemption Price) such Bonds or portion of Bonds shall cease to bear interest.

For so long as the Securities Depository is effecting book-entry transfers of the Bonds, the Bond Registrar shall provide the notices specified to the Securities Depository. It is expected that the Securities Depository shall, in turn, notify its Participants and that the Participants, in turn, will notify or cause to be notified the Beneficial Owners. Any failure on the part of the Securities Depository or a Participant, or failure on the part of a nominee of a Beneficial Owner of a Bond (having been mailed notice from the Bond Registrar, the Securities Depository, a Participant or otherwise) to notify the Beneficial Owner of the Bond so affected, shall not affect the validity of the redemption of such Bond.

In addition to the foregoing notice, the Issuer shall provide such notices of redemption as are required by the Disclosure Undertaking. The Paying Agent is also directed to comply with any mandatory or voluntary standards then in effect for processing redemptions of municipal securities established by the State or the Securities and Exchange Commission. Failure to comply with such standards shall not affect or invalidate the redemption of any Bond.

THE DEPOSITORY TRUST COMPANY

1. The Depository Trust Company (“DTC”), New York, New York, will act as securities depository for the Bonds. The Bonds will be issued as fully-registered securities registered in the name of Cede & Co. (DTC’s partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered bond certificate will be issued for each scheduled maturity of the Bonds, and will be deposited with DTC.

2. DTC, the world’s largest depository, is a limited-purpose trust company organized under the New York Banking Law, a “banking organization” within the meaning of the New York Banking Law, a member of the Federal Reserve System, a “clearing corporation” within the meaning of the New York Uniform Commercial Code, and a “clearing agency” registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.6 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments from over 100 countries that DTC’s participants (“Direct Participants”) deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants’ accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation (“DTCC”). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly (“Indirect Participants”). DTC has a S&P Global Ratings’ rating of “AA+”. The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com.

3. Purchases of Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Bonds on DTC’s records. The ownership interest of each actual purchaser of each Bond (“Beneficial Owner”) is in turn to be recorded on the Direct and Indirect Participants’ records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in Bonds, except in the event that use of the book-entry system for the Bonds is discontinued.

4. To facilitate subsequent transfers, all Bonds deposited by Direct Participants with DTC are registered in the name of DTC’s partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Bonds; DTC’s records reflect only the identity of the Direct Participants to whose accounts such Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

5. Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time.

6. Redemption notices shall be sent to DTC. If less than all of the Bonds within an issue are being redeemed, DTC’s practice is to determine by lot the amount of the interest of each Direct Participant in such issue to be redeemed.

7. Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the Bonds unless authorized by a Direct Participant in accordance with DTC’s MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the Issuer as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.’s consenting or voting rights to those Direct Participants to whose accounts Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

8. Redemption proceeds, distributions, and dividend payments on the Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC’s practice is to credit Direct Participants’ accounts upon DTC’s receipt of funds and corresponding detail information from the Issuer or Paying Agent, on the payment date in accordance with their respective holdings shown on DTC’s records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in “street name,” and will be the responsibility of such Participant and not of DTC nor its nominee, the Paying Agent, or the Issuer, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of redemption proceeds, distributions, and dividend payments to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Issuer or Paying Agent, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

9. A Beneficial Owner shall give notice to elect to have its Bonds purchased or tendered, through its Participant, to the Paying Agent, and shall effect delivery of such Bonds by causing the Direct Participant to transfer the Participant’s interest in the Bonds, on DTC’s records, to the Paying Agent. The requirement for physical delivery of the Bonds in connection with an optional tender or a mandatory purchase will be deemed satisfied when the ownership rights in the Bonds are transferred by Direct Participants on DTC’s records and followed by a book-entry credit of tendered Bonds to the Paying Agent’s DTC account.

10. DTC may discontinue providing its services as depository with respect to the Bonds at any time by giving reasonable notice to the Issuer or Paying Agent. Under such circumstances, in the event that a successor securities depository is not obtained, Bond certificates are required to be printed and delivered.

11. The Issuer may decide to discontinue use of the system of book-entry-only transfers through DTC (or a successor securities depository). In that event, Bond certificates will be printed and delivered to DTC.

12. The information in this section concerning DTC and DTC’s book-entry system has been obtained from sources that the Issuer believes to be reliable, but the Issuer takes no responsibility for the accuracy thereof.

THE PROJECT

The Bonds are being issued to finance certain improvements (collectively, the “Improvements”), more specifically described as follows:

<u>Project Description</u>	<u>Ord./Res. No.</u>	<u>Authority (K.S.A.)</u>	<u>Amount</u>
Fire Station #2			\$ 7,000,000
Flint Hills Crossing			3,200,000
Overlander			1,000,000
Street Sweeper			400,000
Aerial Fire Truck			<u>2,200,000</u>
Total:			<u>\$13,800,000</u>

A portion of the costs of the Improvements will be financed from the proceeds of the Bonds and available funds of the City.

SOURCES AND USES OF FUNDS

The following table summarizes the sources and uses of funds associated with the issuance of the Bonds:

Sources of Funds:

Principal Amount of the Bonds	\$13,415,000.00*
Original Issue Premium	
Available funds of the Issuer	<u>500,000.00</u>

Total

Uses of Funds:

Deposit to Improvement Fund
Deposit to Costs of Issuance Account
Underwriter's Discount

Total

* Preliminary, subject to Change.

RISK FACTORS AND INVESTMENT CONSIDERATIONS

A PROSPECTIVE PURCHASER OF THE BONDS DESCRIBED HEREIN SHOULD BE AWARE THAT THERE ARE CERTAIN RISKS ASSOCIATED WITH THE BONDS WHICH MUST BE RECOGNIZED. THE FOLLOWING STATEMENTS REGARDING CERTAIN RISKS ASSOCIATED WITH THE OFFERING SHOULD NOT BE CONSIDERED AS A COMPLETE DESCRIPTION OF ALL RISKS TO BE CONSIDERED IN THE DECISION TO PURCHASE THE BONDS. PROSPECTIVE PURCHASERS OF THE BONDS SHOULD ANALYZE CAREFULLY THE INFORMATION CONTAINED IN THIS OFFICIAL STATEMENT AND ADDITIONAL INFORMATION IN THE FORM OF THE COMPLETE DOCUMENTS SUMMARIZED HEREIN, COPIES OF WHICH ARE AVAILABLE AND MAY BE OBTAINED FROM THE ISSUER OR THE UNDERWRITER.

Taxation of Interest on the Bonds

An opinion of Bond Counsel will be obtained to the effect that interest earned on the Bonds is excludable from gross income for federal income tax purposes under current provisions of the Internal Revenue Code of 1986, as amended (the "Code"), and applicable rulings and regulations under the Code; however, an application for a ruling has not been made and an opinion of counsel is not binding upon the Internal Revenue Service. There can be no assurance that the present provisions of the Code, or the rules and regulations thereunder, will not be adversely amended or modified, thereby rendering the interest earned on the Bonds includable in gross income for federal income tax purposes.

The Issuer has covenanted in the Bond Resolution and in other documents and certificates to be delivered in connection with the issuance of the Bonds to comply with the provisions of the Code, including those which require the Issuer to take or omit to take certain actions after the issuance of the Bonds. Because the existence and continuation of the excludability of the interest on the Bonds depends upon events occurring after the date of issuance of the Bonds, the opinion of Bond Counsel described under "TAX MATTERS" assumes the compliance by the Issuer with the provisions of the Code described above and the regulations relating thereto. No opinion is expressed by Bond Counsel with respect to the excludability of the interest on the Bonds in the event of noncompliance with such provisions. The failure of the Issuer to comply with the provisions described above may cause the interest on the Bonds to become includable in gross income as of the date of issuance.

Market for the Bonds

Bond Rating. The Bonds have been assigned the financial rating set forth in the section hereof entitled "RATING." There is no assurance that a particular rating will remain in effect for any given period of time or that it will not be revised, either downward or upward, or withdrawn entirely, if in the judgment of the agency originally establishing such rating, circumstances so warrant. Any downward revision or withdrawal of any rating may have an adverse affect on the market price of the Bonds.

Secondary Market. There is no assurance that a secondary market will develop for the purchase and sale of the Bonds. It is the present practice of the Underwriter, however, to make a secondary market as dealers in issues of municipal Bonds which the Underwriter distributes. The Underwriter intends to continue this practice with respect to the Bonds, but is not obligated to do so. Prices of bonds traded in the secondary market, though, are subject to adjustment upward and downward in response to changes in the credit markets. From time to time it may be necessary for the Underwriter to suspend

indefinitely secondary market trading in the Bonds as a result of the financial condition or market position of the Underwriter, prevailing market conditions, lack of adequate current financial information about the Issuer, or a material adverse change in the financial condition of the Issuer, whether or not the Bonds are in default as to principal and interest payments, and other factors which in the opinion of the Underwriter may give rise to uncertainty concerning prudent secondary market practices.

Premium on Bonds

[The initial offering price of the Bonds that are subject to optional redemption are in excess of the principal amount thereof]. Any person who purchases a Bond in excess of its principal amount, whether during the initial offering or in a secondary market transaction, should consider that the Bonds are subject to redemption at par under the various circumstances described under "THE BONDS – Redemption Provisions."

Legal Matters

Various state and federal laws, regulations and constitutional provisions apply to the obligations created by the Bonds. There is no assurance that there will not be any change in, interpretation of, or addition to such applicable laws, provisions and regulations which would have a material effect, either directly or indirectly, on the Issuer or the taxing authority of the Issuer.

Limitations on Remedies Available to Owners of Bonds

The enforceability of the rights and remedies of the owners of Bonds, and the obligations incurred by the Issuer in issuing the Bonds, are subject to the following: the federal Bankruptcy Code and applicable bankruptcy, insolvency, reorganization, moratorium, or similar laws relating to or affecting the enforcement of creditors' rights generally, now or hereafter in effect; usual equity principles which may limit the specific enforcement under state law of certain remedies; the exercise by the United States of America of the powers delegated to it by the United States Constitution; and the reasonable and necessary exercise, in certain unusual situations, of the police power inherent in the State of Kansas and its governmental subdivisions in the interest of serving a legitimate and significant public purpose. Bankruptcy proceedings, or the exercise of powers by the federal or state government, if initiated, could subject the owners of the Bonds to judicial discretion and interpretation of their rights in bankruptcy and otherwise, and consequently may involve risks of delay, limitation or modification of their rights.

No Additional Interest or Mandatory Redemption upon Event of Taxability

The Bond Resolution does not provide for the payment of additional interest or penalty on the Bonds or the mandatory redemption thereof if the interest thereon becomes includable in gross income for federal income tax purposes. Likewise, the Bond Resolution does not provide for the payment of any additional interest or penalty on the Bonds if the interest thereon becomes subject to income taxation by the State.

Suitability of Investment

The tax exempt feature of the Bonds is more valuable to high tax bracket investors than to investors who are in low tax brackets, and so the value of the interest compensation to any particular investor will vary with individual tax rates. Each prospective investor should carefully examine this Official Statement, including the Appendices hereto, and its own financial condition to make a judgment as to its ability to bear the economic risk of such an investment, and whether or not the Bonds are an appropriate investment.

Debt Service Source

The Bonds are general obligations of the Issuer payable as to both principal and interest, if necessary, from ad valorem taxes which may be levied without limitation as to rate or amount upon all the taxable tangible property, real and personal, within the territorial limits of the Issuer. The Legislature may from time to time adopt changes in the property tax system or method of imposing and collecting property taxes within the State. Taxpayers may also challenge the fair market value of property assigned by the county appraiser. The effects of such legislative changes and successful challenges to the appraiser's determination of fair market value could affect the Issuer's property tax collections. If a taxpayer valuation challenge is successful, the liability of the Issuer to refund property taxes previously paid under protest may have a material impact on the Issuer's financial situation. See "**APPENDIX A – FINANCIAL INFORMATION – Property Valuations and Property Tax Levies and Collections.**"

Kansas Public Employees Retirement System

As described in “*APPENDIX A – FINANCIAL INFORMATION – Pension and Employee Retirement Plans*,” the Issuer participates in the Kansas Public Employees Retirement System (“KPERs”), as an instrumentality of the State to provide retirement and related benefits to public employees in Kansas. KPERs administers three statewide defined benefit retirement plans for public employees which are separate and distinct with different membership groups, actuarial assumptions, experience, contribution rates and benefit options. The Issuer participates in the Police and Firemen’s Retirement System (“KP&F”) and]the Public Employees Retirement System – Local Group (the “Plan”). Under existing law, employees make contributions and the Issuer makes all employer contributions to the Plan; neither the employees nor the Issuer are directly responsible for any unfunded accrued actuarial liability (“UAAL”). However, the Plan contribution rates may be adjusted by legislative action over time to address any UAAL. According to KPERs’ Valuation Reports, the Local Group had an UAAL of approximately \$2.089 billion in calendar year 2023 and KP&F had an UAAL of approximately \$1.381 billion.

Cybersecurity Risks

Security breaches, including electronic break-ins, computer viruses, attacks by hackers and similar breaches could create disruptions or shutdowns of the Issuer and the services it provides, or the unauthorized disclosure of confidential personal, health-related, credit and other information. If a security breach occurs, the Issuer may incur significant costs to remediate possible injury to the affected persons, and the Issuer may be subject to sanctions and civil penalties. Any failure to maintain proper functionality and security of information systems could interrupt the Issuer’s operations, delay receipt of revenues, damage its reputation, subject it to liability claims or regulatory penalties and could have a material adverse effect on its operations, financial condition and results of operations.

Natural Disasters, Terrorist or Cyber Attacks

The occurrence of a terrorist attack or cyber security breach in the Issuer, or natural disasters, such as fires, tornadoes, winter storms, extreme cold, earthquakes, floods or droughts, could damage the Issuer and its systems and infrastructure, and interrupt services or otherwise impair operations of the Issuer.

Potential Impacts Resulting from Epidemics or Pandemics

The City’s finances may be materially adversely affected by unforeseen impacts of future epidemics and pandemics, such as the Coronavirus (COVID-19) pandemic. The City cannot predict future impacts of epidemics or pandemics, any similar outbreaks, or their impact on travel, on assemblies or gatherings, on the local, State, national or global economy, or on securities markets, or whether any such disruptions may have a material adverse impact on the financial condition or operations of the City, including but not limited to the payment and debt service on the Bonds.

BOND RATING

The Issuer has applied to S&P Global Ratings, a division of S&P Global Inc., for a rating on the Bonds. S&P Global Ratings, a division of the S&P Global Inc. has assigned an independent rating of "___" to the Bonds. Such rating reflects only the view of such rating agency, and an explanation of the significance of such rating may be obtained therefrom. No such rating constitutes a recommendation to buy, sell, or hold any bonds, including the Bonds, or as to the market price or suitability thereof for a particular investor. The Issuer furnished such rating agency with certain information and materials relating to the Bonds that have not been included in this Official Statement. Generally, rating agencies base their ratings on the information and materials so furnished and on investigations, studies and assumptions by the rating agencies. There is no assurance that a particular rating will remain in effect for any given period of time or that it will not be revised, either downward or upward, or withdrawn entirely, if in the judgment of the agency originally establishing such rating, circumstances so warrant. Any downward revision or withdrawal of any rating may have an adverse effect on the market price of the Bonds.

ABSENCE OF LITIGATION

The Issuer, in the ordinary course of business, is a party to various legal proceedings. In the opinion of management of the Issuer, any judgment rendered against the Issuer in such proceedings would not materially adversely affect the financial position of the Issuer.

The Issuer certifies that there is no controversy, suit or other proceeding of any kind pending or threatened wherein or whereby any question is raised or may be raised, questioning, disputing or affecting in any way the legal organization of the Issuer or its boundaries, or the right or title of any of its officers to their respective offices, or the legality of any official act or the constitutionality or validity of the indebtedness represented by the Bonds or the validity of said Bonds, or any of the proceedings had in relation to the authorization, issuance or sale thereof, or the levy and collection of a tax to pay the principal and interest thereof.

LEGAL MATTERS

Approval of Bonds

All matters incident to the authorization and issuance of the Bonds are subject to the approval of Gilmore & Bell, P.C., Wichita, Kansas (“Bond Counsel”), bond counsel to the Issuer. The factual and financial information appearing herein has been supplied or reviewed by certain officials of the Issuer and its certified public accountants, as referred to herein. Bond Counsel has participated in the preparation of the Official Statement but expresses no opinion as to the accuracy or sufficiency thereof, except for the matters appearing in the sections of this Official Statement captioned “THE BONDS,” “LEGAL MATTERS,” “TAX MATTERS” and “*APPENDIX C – SUMMARY OF FINANCING DOCUMENTS.*” Payment of the legal fee of Bond Counsel is contingent upon the delivery of the Bonds.

TAX MATTERS

The following is a summary of the material federal and State of Kansas income tax consequences of holding and disposing of the Bonds. This summary is based upon laws, regulations, rulings and judicial decisions now in effect, all of which are subject to change (possibly on a retroactive basis). This summary does not discuss all aspects of federal income taxation that may be relevant to investors in light of their personal investment circumstances or describe the tax consequences to certain types of holders subject to special treatment under the federal income tax laws (for example, dealers in securities or other persons who do not hold the Bonds as a capital asset, tax-exempt organizations, individual retirement accounts and other tax deferred accounts, and foreign taxpayers), and, except for the income tax laws of the State of Kansas, does not discuss the consequences to an owner under state, local or foreign tax laws. The summary does not deal with the tax treatment of persons who purchase the Bonds in the secondary market at a premium or a discount. Prospective investors are advised to consult their own tax advisors regarding federal, state, local and other tax considerations of holding and disposing of the Bonds.

Opinion of Bond Counsel

In the opinion of Bond Counsel, under the law existing as of the issue date of the Bonds:

Federal Tax Exemption. The interest on the Bonds is excludable from gross income for federal income tax purposes.

Alternative Minimum Tax. Interest on the Bonds is not an item of tax preference for purposes of computing the federal alternative minimum tax.

Bank Qualification. The Bonds are not “qualified tax-exempt obligations” within the meaning of Code §265(b)(3).

Kansas Tax Exemption. The interest on the Bonds is exempt from income taxation by the State of Kansas.

Bond Counsel’s opinions are provided as of the date of the original issue of the Bonds, subject to the condition that the Issuer comply with all requirements of the Code that must be satisfied subsequent to the issuance of the Bonds in order that interest thereon be, or continue to be, excludable from gross income for federal income tax purposes. The Issuer has

covenanted to comply with all of these requirements. Failure to comply with certain of these requirements may cause the inclusion of interest on the Bonds in gross income for federal income tax purposes retroactive to the date of issuance of the Bonds. Bond Counsel is expressing no opinion regarding other federal, state or local tax consequences arising with respect to the Bonds.

Other Tax Consequences

[**Original Issue Premium.** For federal income tax purposes, premium is the excess of the issue price of a Bond over its stated redemption price at maturity. The stated redemption price at maturity of a Bond is the sum of all payments on the Bond other than “qualified stated interest” (*i.e.*, interest unconditionally payable at least annually at a single fixed rate). The issue price of a Bond is generally the first price at which a substantial amount of the Bonds of that maturity have been sold to the public. Under Code § 171, premium on tax-exempt obligations amortizes over the term of the Bond using constant yield principles, based on the purchaser’s yield to maturity. As premium is amortized, the owner’s basis in the Bond and the amount of tax-exempt interest received will be reduced by the amount of amortizable premium properly allocable to the owner, which will result in an increase in the gain (or decrease in the loss) to be recognized for federal income tax purposes on sale or disposition of the Bond prior to its maturity. Even though the owner’s basis is reduced, no federal income tax deduction is allowed. Prospective investors should consult their own tax advisors concerning the calculation and accrual of premium]

Sale, Exchange or Retirement of Bonds. Upon the sale, exchange or retirement (including redemption) of a Bond, an owner of the Bond generally will recognize gain or loss in an amount equal to the difference between the amount of cash and the fair market value of any property received on the sale, exchange or retirement of the Bond (other than in respect of accrued and unpaid interest) and such owner’s adjusted tax basis in the Bond. To the extent the Bonds are held as a capital asset, such gain or loss will be capital gain or loss and will be long-term capital gain or loss if the Bond has been held for more than 12 months at the time of sale, exchange or retirement.

Reporting Requirements. In general, information reporting requirements will apply to certain payments of principal, interest and premium paid on Bonds, and to the proceeds paid on the sale of Bonds, other than certain exempt recipients (such as corporations and foreign entities). A backup withholding tax will apply to such payments if the owner fails to provide a taxpayer identification number or certification of foreign or other exempt status or fails to report in full dividend and interest income. The amount of any backup withholding from a payment to an owner will be allowed as a credit against the owner’s federal income tax liability.

Collateral Federal Income Tax Consequences. Prospective purchasers of the Bonds should be aware that ownership of the Bonds may result in collateral federal income tax consequences to certain taxpayers, including, without limitation, financial institutions, property and casualty insurance companies, individual recipients of Social Security or Railroad Retirement benefits, certain S corporations with “excess net passive income,” foreign corporations subject to the branch profits tax, life insurance companies, and taxpayers who may be deemed to have incurred or continued indebtedness to purchase or carry or have paid or incurred certain expenses allocable to the Bonds. Bond Counsel expresses no opinion regarding these tax consequences. Purchasers of Bonds should consult their tax advisors as to the applicability of these tax consequences and other federal income tax consequences of the purchase, ownership and disposition of the Bonds, including the possible application of state, local, foreign and other tax laws

Bond Counsel notes that interest on the Bonds may be included in adjusted financial statement income of applicable corporations for purposes of determining the applicability and amount of the federal corporate alternative minimum tax.

MUNICIPAL ADVISOR

Raymond James & Associates, Inc., Leawood, Kansas has acted as a Municipal Advisor to the Issuer in connection with the sale of the Bonds. The Municipal Advisor is a “municipal advisor” as defined in the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010. The Municipal Advisor has assisted the Issuer in the preparation of this Official Statement and in other matters relating to the issuance of the Bonds. The fees of the Municipal Advisor are contingent upon the issuance of the Bonds. The Municipal Advisor will not be a manager or a member of any underwriting group submitting a proposal for the purchase of the Bonds pursuant to Municipal Securities Rulemaking Board Rule G-23.

UNDERWRITING

The Bonds are being purchased for reoffering by the Underwriter at a price equal to the principal amount of the Bonds, less an underwriting discount of \$ _____ plus a net original issue premium of \$ _____. The Bond Purchase Agreement provides that the Underwriter will purchase all of the Bonds if any are purchased. The obligation of the Underwriter to accept delivery of the Bonds is subject to various conditions contained in the Bond Purchase Agreement.

The Bonds will be offered to the public initially at the prices determined to produce the yields set forth on the inside cover page of this Official Statement. The Underwriter may offer and sell the Bonds to certain dealers (including dealers depositing the Bonds into investment trusts) at prices other than the price stated on the inside cover page hereof and may change the initial offering price from time to time subsequent to the date hereof. In connection with the offering, the Underwriter may over allot or effect transactions which stabilize or maintain the market price of the Bonds at a level above that which might otherwise prevail in the open market. Such stabilizing, if commenced, may be discontinued at any time.

AUTHORIZATION OF OFFICIAL STATEMENT

The preparation of this Official Statement and its distribution has been authorized by the governing body of the Issuer as of the date on the cover page hereof. This Official Statement is submitted in connection with the issuance of the Bonds and may not be reproduced or used as a whole or in part for any other purpose. This Official Statement does not constitute a contract between the Issuer or the Underwriter and any one or more of the purchasers, Owners or Beneficial Owners of the Bonds.

CITY OF EMPORIA, KANSAS

By: _____
Mayor

APPENDIX A

INFORMATION CONCERNING THE ISSUER

APPENDIX A

INFORMATION CONCERNING THE ISSUER

GENERAL

Size and Location

The City of Emporia, Kansas (the “City”) is the county seat of Lyon County, Kansas (the “County”). The City is located approximately 110 miles southwest of Kansas City, Missouri, 50 miles south of Topeka, Kansas and 85 miles northeast of Wichita, Kansas. The City encompasses approximately 11.61 square miles and has a current estimated population of 24,418 persons. The City is located on the eastern edge of the Flint Hills region at the intersection of the Kansas Turnpike and Interstate Highway 35.

Government and Organization of the Issuer

The City was established in 1857 and is a city of the first class. The City operates under the Commission-Manager form of government. The five Commission members are elected at large and serve two or four year terms. The Mayor presides over Commission meetings and appoints certain City officials, subject to Commission approval. The City Manager is appointed by the Commission and is charged with the efficient and effective administration of the City.

Municipal Services and Utilities

Retail electric power is provided in the City by Evergy and natural gas service is provided by Kansas Gas Service. Treated water is distributed from the City-owned facilities. The City’s water treatment plant currently produces 11.19 million gallons of water daily with a capacity of 20 million gallons daily. Sewage treatment is provided by City-owned facilities. The wastewater treatment plant currently treats 4.6 million gallons per day with a capacity of 8 million gallons daily. Refuse services are provided by the City.

Transportation and Communication Facilities

The City is intersected by Interstate Highway I-35, U.S. Highway 50 and Kansas Highways 57 and 99, in addition to the Kansas Turnpike. Emporia’s motor freight service is provided by several freight companies with direct and connecting schedules to all major cities in the United States.

The Burlington Northern Santa Fe Railroad provides rail service with daily package-care service in and out of Emporia, with lines radiating in three directions. The existing terminals have adequate capacity to handle present and future needs. The City’s location is also beneficial to bus service with transportation available at regular intervals in all directions.

Emporia Municipal Airport is located within seven miles of the City and provides service for small and private aircraft and has a 5,000-foot paved and lighted runway. Dwight D. Eisenhower National Airport in Wichita, Kansas and Kansas City International Airport in Kansas City, Missouri provide commercial air service through the major airline companies.

Educational Institutions and Facilities

The City is home to a complete educational system from primary level to higher education institutions. Unified School District No. 253 provides public education through its six elementary schools, two intermediate schools, one middle school and one senior high school. Total enrollment for the Unified School District No. 253 is approximately 4,593. The City also has three private elementary schools.

Emporia State University, a state-supported university, offers 72 undergraduate and 37 graduate fields of study and awards 17 different degrees. The University was founded in 1863 as the state’s first school for training teachers and is governed by the Board of Regents of Kansas Universities. The campus has 18 buildings and encompasses nearly 200 acres. In September, 2022, Emporia State University announced plans to reduce its workforce by seven percent, including tenured faculty members.

The Flint Hills Technical College located in the City provides technical skilled training needed by local industry. The Technical College has received top ratings as one of the finest in the country by educational agencies.

Medical and Health Facilities

Newman Regional Health, which is owned by Lyon County, is a 25-bed critical access hospital serving the City and surrounding area. Newman Regional Health has more than 70 specialty and primary care physicians and advanced practice providers that work in the hospital and outpatient clinic. Approximately 600 clinical, professional and support services employees and 225

volunteers support the medical staff at Newman Regional Health. In addition, there are two medical clinics in the City and approximately 34 doctors and 20 dentists practice in the City. There are also nursing homes or assisted living facilities in the City.

Recreational and Cultural Facilities

The City has 18 parks comprising approximately 323 acres, an 18-hole municipal golf course, swimming pools, community center, municipal library, municipal gymnasium and fitness center and tennis courts. Emporia State University provides additional cultural and recreational opportunities for the students and community members. The Emporia Arts Council provides quality cultural opportunities through performances in music and theater as well as fine art exhibitions. The Lyon County Historical Museum has preserved the history of the County. The Emporia Zoo’s natural appearing exhibits contain nearly 400 specimens of birds, mammals, and reptiles.

ECONOMIC INFORMATION

The City’s location at the junction of Interstate Highway I-35 and the Kansas Turnpike has attracted numerous national and regional companies to open manufacturing or distribution centers in the City. The City is home to over 15 manufacturing and processing companies producing a wide variety of goods including bakery products, graphic arts equipment, automobile parts, pet food, processed beef, and steel products. These companies include Bunge Corporation, Hostess Brands, Norfolk Iron & Metal, Simmons Pet Food, Hills Pet Nutrition, Michelin and Hopkins Manufacturing, among others. In order to attract additional industrial growth the City has approximately 218 acres of available industrial sites located in two industrial parks.

Over the last decade, the City has developed numerous programs to promote economic development activity. Incentives for potential economic development projects include industrial revenue bonds, loans from an Economic Development Trust Fund, property tax exemption, retailers’ sales tax exemptions, state provided Community Development Block Grants, and grants from the City’s Job Creation Incentive Program.

Major Employers

Listed below are the major employers located in the City and the number employed by each:

<u>Major Employers</u>	<u>Product/Service</u>	<u>Number of Full-& Part-time Employees</u>
Simmons Pet Food	Pet Food	1,613
Unified School District No. 253	Education	928
Emporia State University	Higher Education	644
Hostess Brands, LLC	Cake Products	630
Newman Regional Health Hospital	Healthcare	482
Michelin	Rubber Products	316
Lyon County	County Government	260
City of Emporia	City Government	236
Wal-Mart Super Center	Retail	213
Hopkins Manufacturing Corporation ⁽¹⁾	Automotive Products	201
Hill’s Pet Nutrition	Pet Food	143
Evco Wholesale Food Corporation	Wholesale Food Distributor	126
Norfolk Iron & Metal Company	Steel Distribution Center	124
ValuNet FIBER	Internet Service	108
Holman Distribution	Warehousing, Shipping, Transportation	100
Vektek, Inc.	Hydraulic Clamping Equipment	91
Fanestil Meats	Wholesale Meat Processing	83
Flint Hills Technical College	Technical College	83
Cargill Animal Nutrition	Dry Pet Food	68
Dynamic Discs/Distribution	Disc Golf Equipment	67
Glendo Corporation	Specialized Tools for Engraving	67
Better Life Technologies	Plastic Home Products	66
Sauder Custom Fabrication	Custom Pressure Vessel Columns	61
Bunge Corporation	Processors of Soybeans and Meal	57
Redline Trucking	Transportation	49
Thermal Ceramics	Refractory Ceramic Fiber Products	34
Pratt Industrial	Industrial Valves and Actuators	21
W.A. Moyer, L.C.	Glass Level Vials	11
BPE, Inc.	Archery Products	6

(1) On February 23, 2026 Hopkins Manufacturing Corporation notified its employees of an immediate closure given the failed sale of the company. Hopkins Manufacturing Corporation is a wholly-owned subsidiary of First Brands Group LLC, which is currently in bankruptcy proceedings. An unnamed buyer backed out of a proposed purchase after learning that key intellectual property consisting of patents, trademarks and brand names would be excluded from the sale. While the facility is in the process of winding down operations, the exact date of final shutdown was not formally announced as of February 24, 2026.

Source: Emporia Chamber of Commerce

Labor Force and Employment

The following table sets forth the labor force and employment figures for Lyon County and the State of Kansas:

LYON COUNTY

<u>Year</u>	<u>Total Labor Force</u>	<u>Employed</u>	<u>Unemployed</u>	<u>Unemployed Rate</u>
2015	16,729	16,010	719	4.3%
2016	17,691	17,005	686	3.9%
2017	17,639	17,009	630	3.6%
2018	17,446	16,874	572	3.3%
2019	17,622	17,061	561	3.2%
2020	17,466	16,701	765	4.4%
2021	17,729	17,229	500	2.8%
2022	17,961	17,532	429	2.4%
2023	17,838	17,370	468	2.6%
2024	17,748	17,158	590	3.3%

STATE OF KANSAS

<u>Year</u>	<u>Total Labor Force</u>	<u>Employed</u>	<u>Unemployed</u>	<u>Unemployed Rate</u>
2015	1,498,032	1,435,515	62,517	4.2%
2016	1,498,060	1,437,436	60,624	4.0%
2017	1,490,478	1,436,329	54,149	3.6%
2018	1,491,449	1,442,061	49,388	3.3%
2019	1,502,265	1,454,669	47,596	3.2%
2020	1,501,633	1,414,277	87,356	5.8%
2021	1,499,635	1,448,835	50,800	3.4%
2022	1,507,842	1,466,588	41,254	2.7%
2023	1,524,404	1,480,579	43,825	2.9%
2024	1,545,790	1,490,553	55,237	3.6%

Source: Labor Market Information Services, Kansas Dept. of Labor in cooperation with BLS, U.S. Dept. of Labor

Sales Tax Collections

In 1984, voters in the City approved a continual one-half cent citywide local option sales tax. In 1994, voters in the City approved an additional one-half cent citywide local option sales tax for a period of ten years, which was most recently renewed and extended to 2039 by voters at an election held in 2020. The total sales tax for goods and services in the City is now 8.5%, which consists of 6.5% imposed by the State of Kansas, 1.0% imposed by Lyon County and a 1% citywide local option sales tax.

Sales tax collections are the responsibility of the Kansas Department of Revenue. The Department of Revenue distributes the local option countywide and citywide sales taxes on a monthly basis. Countywide sales taxes are distributed between the levying county and the cities within the county based on population and relative tax levies. Citywide local option sales taxes are distributed solely to the City.

The City uses sales tax receipts from the 1984 one-half cent local option citywide sales tax to fund infrastructure improvements. Receipts from the additional one-half cent local option citywide sales are used to provide property tax relief and for economic development. During 2000, the City conducted an election during which the voters approved the use of a portion of the sales tax for purposes of constructing an aquatic center.

The voters in Lyon County approved a 1% countywide sales tax at an election held in August, 2008. This sales tax is shared with cities in Lyon County. The County began collecting the sales tax during 2009. The City expects to receive approximately 48% of the countywide general sales tax collections.

The following table lists the total local option sales tax receipts of the City of Emporia in the years indicated:

CITY SALES TAX COLLECTIONS

<u>Year</u>	<u>½ Cent City Sales Tax Receipts</u>	<u>Additional ½ Cent City Sales Tax Receipts</u>	<u>Total City Sales Tax</u>
2016	\$2,305,720	\$2,305,720	\$4,611,441
2017	2,324,761	2,324,761	4,649,522
2018	2,421,680	2,421,680	4,843,361
2019	2,480,468	2,480,468	4,960,937
2020	2,495,797	2,495,797	4,991,594
2021	2,719,833	2,719,833	5,439,666
2022	3,042,597	3,042,597	6,085,194
2023	3,207,428	3,207,428	6,414,856
2024	3,236,771	3,236,771	6,473,541
2025	3,313,711	3,313,711	6,627,422

Source: City Clerk

CITY PORTION OF COUNTYWIDE SALES TAX

<u>Year</u>	<u>City Portion of Countywide Sales Tax Receipts</u>
2016	\$2,278,050
2017	2,271,487
2018	2,385,756
2019	2,463,818
2020	2,535,236
2021	2,822,749
2022	3,112,240
2023	3,371,272
2024	3,316,346
2025	3,457,388

Source: City Clerk

The following table lists the sales tax collections for the State of Kansas portion of the total sales tax in Lyon County during the years as indicated:

LYON COUNTY - STATE SALES TAX COLLECTIONS

<u>Year</u>	<u>Sales Tax Collections</u>	<u>Per Capita Sales Tax</u>
2015	\$38,766,815	\$471.37
2016	41,138,552	503.40
2017	42,435,739	521.37
2018	52,328,415	557.41
2019	55,704,010	649.89
2020	60,783,796	705.91
2021	67,785,307	785.28
2022	74,771,687	853.10
2023	72,956,507	900.17
2024	70,786,764	-

Source: Kansas Statistical Abstract

Financial and Banking Institutions

There are currently 9 banks with 13 banking locations in Lyon County. For the years listed, deposits of the banks located in Lyon County are as follows:

<u>Year</u>	<u>Total Bank Deposits</u>
2016	\$520,018,000
2017	538,880,000
2018	564,434,000
2019	569,603,000
2020	639,188,000
2021	725,471,000
2022	763,257,000
2023	710,973,000
2024	746,694,000
2025	770,554,000

Source: FDIC

Building Permits

The following table indicates the total valuation of building permits issued within the City in the years indicated. These numbers reflect permits issued either for new construction or for major renovation.

<u>Year</u>	<u>New Single Family Dwellings</u>	<u>Total Value New Single Family Dwellings</u>	<u>Total Permits</u>	<u>Total Construction Value</u>
2016	20	\$3,264,781	431	\$19,080,680
2017	32	7,561,767	429	39,861,843
2018	23	4,341,300	705	37,007,253
2019	12	1,447,993	731	23,364,363
2020	17	3,192,895	531	21,094,280
2021	16	3,481,781	755	62,810,742
2022	10	2,250,530	1,434	70,132,430
2023	10	2,260,968	767	45,598,879
2024	11	1,510,672	692	48,442,653
2025	11	1,492,200	639	51,925,601

Source: City Clerk

Population

The following table shows the approximate population of the City and Lyon County in the years indicated:

<u>Year</u>	<u>City of Emporia Population</u>	<u>Lyon County Population</u>
1960	18,190	26,928
1970	23,116	32,071
1980	25,287	35,108
1990	25,512	34,732
2000	26,760	33,920
2010	24,916	33,371
2020	24,139	33,195
2025	24,418	32,454

Source: U.S. Bureau of the Census; Kansas Statistical Abstract

Personal Income

The Lyon County personal and per capita personal income and State of Kansas per capita personal income are listed for the years indicated in the following table:

<u>Year</u>	<u>Lyon County Total Personal Income</u>	<u>Lyon County Per Capita Personal Income</u>	<u>State of Kansas Per Capita Personal Income</u>
2014	\$1,096,824	\$33,485	\$46,290
2015	1,130,214	34,608	46,597
2016	1,174,522	35,821	46,718
2017	1,207,934	37,076	48,272
2018	,1263,809	38,834	50,283
2019	1,284,054	39,656	52,156
2020	1,412,352	43,981	55,101
2021	1,520,270	46,905	59,021
2022	1,517,458	47,375	62,326
2023	1,593,432	49,529	66,115

Source: U.S. Bureau of Economic Analysis

FINANCIAL INFORMATION OF THE ISSUER

Accounting, Budgeting and Auditing Procedures

The City has established a uniform system of accounting maintained in accordance with the laws of the State of Kansas and generally accepted accounting principles. The accounts are maintained on the modified accrual basis for all budgetary funds and on the accrual basis for all other funds.

An annual budget of estimated receipts and disbursements for the coming calendar year is required by statute to be prepared for all funds (unless specifically exempted). The budget is prepared utilizing the modified accrual basis which is further modified by the encumbrance method of accounting. For example, commitments such as purchase orders and contracts, in addition to disbursements and accounts payable, are recorded as expenditures. The budget lists estimated receipts by funds and sources and estimated disbursements by funds and purposes. The proposed budget is presented to the governing body of the City prior to August 1, with a public hearing required to be held prior to August 15, with the final budget to be adopted by a majority vote of the governing body of the City prior to August 25 of each year (or September 20 if the City must conduct a public hearing to levy taxes in excess of its revenue neutral rate described below). Budgets may be amended upon action of the governing body after notice and public hearing, provided that no additional tax revenues may be raised after the original budget is adopted.

The City may levy taxes in accordance with the requirements of its adopted budget. Property tax levies are based on the adopted budget of the City and the assessed valuations provided by the County appraiser. In 2021, the Kansas Legislature passed legislation (the "Revenue Neutral Tax Act") that repeals the "tax lid" (formerly K.S.A. 79-2925c) and provides that, beginning January 1, 2021, a taxing subdivision (which includes any political subdivision of the State that levies an ad valorem property tax, including the City) is not authorized to levy a property tax rate in excess of its revenue neutral rate without first providing notice, holding a public hearing, and authorizing such property tax rate by majority vote of its governing body. The revenue neutral rate means the tax rate for the current tax year that would generate the same property tax revenue as levied the previous tax year using the current tax year's total assessed valuation.

The Revenue Neutral Tax Act provides that by June 15 of every year, each county clerk shall calculate the revenue neutral rate for each taxing subdivision in their respective county. If a taxing subdivision desires to levy a tax rate in excess of its revenue neutral rate, it must first publish notice of a public hearing and notify, by July 20, the county clerk of the taxing subdivision's intent to exceed the revenue neutral rate. The county clerk is required to provide notice of the public hearing to each taxpayer with property in the taxing subdivision, along with following information concerning the taxing subdivision: (1) the revenue neutral rate, (2) the proposed property tax revenue needed to fund the proposed budget, (3) the proposed tax rate based on the proposed budget, (4) the tax rate and property tax of each taxing subdivision on the taxpayer's property from the previous year's tax statement, (5) the appraised value and assessed value of the taxpayer's property, (6) estimates of the tax for the current tax year on the taxpayer's property based on the revenue neutral rate of each taxing subdivision and any proposed tax rates that exceed the revenue neutral rates, (7) the difference between the estimates of tax based on the proposed tax rate and the revenue neutral rate. The public hearing regarding exceeding the revenue neutral rate is to be held between August 20 and September 20, and can be held in conjunction with the taxing

subdivision's budget hearing. If multiple taxing subdivisions within the county are required to hold a public hearing, the county clerk's notices to the taxpayer can be combined into a single notice. After the public hearing, the taxing subdivision can approve exceeding the revenue neutral rate by governing body approval of a resolution or ordinance, and thereafter the taxing subdivisions will hold the public hearing and adopt the budget by majority vote of its governing body. The amount of tax to be levied and the adopted budget must be certified to the county clerk by October 1. The taxing subdivision's adopted budget shall not result in a tax rate in excess of its proposed rate stated in the notice provided to the taxpayers. If a taxing subdivision fails to comply with the requirements of the Revenue Neutral Tax Act, it shall refund to the taxpayers any property taxes over-collected based on the amount of the levy that was in excess of the revenue neutral rate.

The City cannot predict the impact of the Revenue Neutral Tax Act on the ratings on the Notes, or the general rating of the City. A change in the rating on the Notes or a change in the general rating of the City may adversely impact the market price of the Notes in the secondary market.

Kansas law prohibits governmental units from creating indebtedness unless there are funds on hand in the proper accounts and unencumbered by previous action with which to pay such indebtedness. An exception to this cash-basis operation is made where provision has been made for payment of obligations by bonds or other specific debt obligations authorized by law.

The financial records of the City are audited annually by a firm of independent certified public accountants in accordance with generally accepted auditing standards. In recent years, the annual audit has been performed by Hood and Associates, CPAs, PC, Certified Public Accountants, Overland Park, Kansas. Copies of the audit reports for the past five (5) years are on file in the Clerk's office and are available for review. The audit for the Fiscal Year ended December 31, 2023 is attached hereto as *Appendix B*. The financial information contained in the Appendices to this Official Statement are an integral part of this document and are intended to be read in conjunction herewith.

Property Valuations

The determination of assessed valuation and the collection of property taxes for all political subdivisions in the state of Kansas is the responsibility of the various counties under the direction of state statutes. The County Appraiser's office determines the assessed valuation that is to be used as a basis for the mill levy on property located in the City.

Property subject to ad valorem taxation is divided into two classes, real property and personal property. Real property is divided into seven subclasses; there are six subclasses of personal property. The real property (Class 1) subclasses are: (i) real property used for residential purposes including multi-family mobile or manufactured homes and the real property on which such homes are located, assessed at 11.5%, (ii) agricultural land, valued on the basis of agricultural income or productivity, assessed at 30%, (iii) vacant lots, assessed at 12%, (iv) real property, owned and operated by a not-for-profit organization not subject to federal income taxation, pursuant to Section 501 of the Internal Revenue Code, assessed at 12%, (v) public utility real property, except railroad real property, assessed at the average rate that all other commercial and industrial property is assessed, assessed at 33%, (vi) real property used for commercial and industrial purposes and buildings and other improvements located on land devoted to agricultural use, assessed at 25%, and (vii) all other urban and real property not otherwise specifically classified, assessed at 30%. Tangible personal property (Class 2) subclasses are: (i) mobile homes used for residential purposes, assessed at 11.5%, (ii) mineral leasehold interests, except oil leasehold interests, the average daily production from which is 5 barrels or less, and natural gas leasehold interests, the average daily production from which is 100 mcf or less, which shall be assessed at 25%, assessed at 30%, (iii) public utility tangible personal property, including inventories thereof, except railroad personal property, including inventories thereof, which shall be assessed at the average rate all other commercial and industrial property is assessed, assessed at 33%, (iv) all categories of motor vehicles not defined and specifically valued and taxed pursuant to law enacted prior to January 1, 1985, assessed at 20%, (v) commercial and industrial machinery and equipment which if its economic life is 7 years or more, shall be valued at its retail cost, when new, less seven-year straight-line depreciation, or which, if its economic life is less than 7 years, shall be valued at its retail cost when new, less straight-line depreciation over its economic life, except that, the value so obtained for such property, notwithstanding its economic life and as long as such property is being used, shall not be less than 20% of the retail cost when new of such property, assessed at 25%, and (vi) all other tangible personal property not otherwise specifically classified, assessed at 30%. All property used exclusively for state, county, municipal, literary, educational, scientific, religious, benevolent and charitable purposes, farm machinery and equipment, merchants' and manufacturers' inventories, other than public utility inventories included in subclass (3) of class 2, livestock, and all household goods and personal effects not used for the production of income, shall be exempted from property taxation.

The 2006 Legislature exempted from all property or ad valorem property taxes levied under the laws of the State all commercial, industrial, telecommunications and railroad machinery and equipment acquired by qualified purchase or lease after June 30, 2006 or transported into the State after June 30, 2006 for the purpose of expanding an existing business or creation of a new business.

The Legislature may from time to time adopt changes in the property tax system or method of imposing and collecting property taxes within the State. Taxpayers may also challenge the fair market value of property assigned by the county appraiser. The effects of such legislative changes and successful challenges to the appraiser's determination of fair market value could affect the Issuer's property tax collections. If a taxpayer valuation challenge is successful, the liability of the Issuer to refund property taxes previously paid under protest may have a material impact on the Issuer's financial situation.

Assessed Valuation

The following table shows the assessed value of the taxable tangible property of the City by category in the years as indicated:

<u>Year</u>	<u>Real Property</u>	<u>Personal Property</u>	<u>Utilities</u>	<u>Motor Vehicles</u>	<u>Total Assessed Valuation</u>
2016	\$131,455,041	\$5,769,153	\$9,831,192	\$20,379,614	\$167,435,000
2017	138,600,594	5,535,440	10,316,325	20,630,111	175,082,470
2018	144,232,409	5,267,883	11,351,626	20,972,334	181,824,252
2019	153,856,995	4,843,288	12,160,955	21,636,964	192,498,202
2020	158,688,533	3,940,329	12,912,607	21,939,568	197,481,037
2021	168,566,680	3,770,470	14,014,075	22,838,681	209,189,906
2022	183,076,993	3,697,834	13,822,054	21,836,515	222,433,396
2023	207,591,187	3,701,436	14,393,526	21,836,515	247,522,664
2024	216,670,240	3,433,926	15,754,078	22,343,810	258,202,054
2025	231,330,544	3,318,013	16,392,760	22,171,319	273,212,636

Source: County Clerk

Estimated Actual Valuation

Based on an average assessment percentage of 19%, the following table provides estimated actual valuation figures for the taxable tangible property, including motor vehicles, for the City in the years indicated.

<u>Year</u>	<u>Estimated Actual Valuation</u>	<u>Year</u>	<u>Estimated Actual Valuation</u>
2016	\$881,236,842	2021	\$1,100,999,505
2017	921,486,684	2022	1,170,702,084
2018	956,969,747	2023	1,302,750,863
2019	1,013,148,432	2024	1,358,958,179
2020	1,039,373,879	2025	1,437,961,242

Property Tax Levies and Collections

Tax Collections

Tax statements are mailed November 1 each year and may be paid in full or one-half on or before December 20 with the remaining one-half due on or before May 10 of the following year. Taxes that are unpaid on the due dates are considered delinquent and accrue interest at the rate of 12% per annum until paid or until the property is sold for taxes. Real estate bearing unpaid taxes is advertised for sale on or before August 1 of each year and is sold by the County for taxes and all legal charges on the first Tuesday in September. Properties that are sold and not redeemed within two years after the tax sale are subject to foreclosure sale, except homestead properties which are subject to foreclosure sale after three years.

Personal taxes are due and may be paid in the same manner as real estate taxes, with the same interest applying to delinquencies. If personal taxes are not paid when due, and after written notice, warrants are issued and placed in the hands of the Sheriff for collection. If not paid on or before October 1, legal judgment is entered and the delinquent tax becomes a lien on the property. Unless renewed, a non-enforced lien expires five years after it is entered.

Motor vehicle taxes are collected periodically throughout the year concurrently with the renewal of motor vehicle tags based upon the value of such vehicles. Such tax receipts are distributed to all taxing subdivisions, including the State of Kansas, in proportion to the number of mills levied within each taxpayer's tax levy unit.

Special Assessments and Collections

The City has pursued a policy of utilizing special benefit districts to assign the cost of certain internal improvement projects to the property which was directly benefited from the construction thereof. Kansas statutes allow for the creation of special benefit districts to pay for the cost of a variety of improvements including street construction, storm water drains, sanitary sewer system improvements, street lighting, water system improvements, recreational facilities, flood control projects, bridges and parking facilities.

The City has typically utilized special benefit districts to pay for the costs associated with constructing streets, sidewalks, water lines, sewers, curbs, gutters and lighting in new residential developments within the City.

The creation of special benefit districts, the determination of property benefited and the method of allocating the cost of the improvements is at the discretion of the City. Property owners have the ability to suggest improvement to be made through a petition process and to comment on the final amount of their assessment. The City may or may not be included as part of the special benefit district. All property owners have the option to pay their portion of the improvement cost with a one-time payment during an assessment prepayment period or pay in annual installments with interest over a certain number of years.

Upon completion of the special benefit district improvement projects and a prepayment period, the City issues general obligation bonds to provide for permanent project financing. The payment of the principal of and interest on such bonds is paid from the special assessments levied annually on the benefited property owners. Special assessments are paid at the same time and in the same manner as ad valorem property taxes. If at any time the special assessments received from the property owners are insufficient to provide for the payment of the principal of and interest on the bonds, the City is obligated to provide for the balance of such payments through its ability to levy unlimited ad valorem property taxes.

Tax Levies

Property tax levies are determined by the County Clerk based upon the assessed valuations provided by the County Appraiser. The following table provides the mill levy per \$1,000 of assessed valuation of the City for the years indicated:

<u>Levy Year</u>	<u>General</u>	<u>Special Revenue</u>	<u>Bond and Interest</u>	<u>Total</u>
2016/17	25.060	5.047	12.840	42.947
2017/18	27.167	5.003	10.405	42.575
2018/19	27.508	5.034	10.312	42.854
2019/20	27.608	5.064	10.427	43.099
2020/21	27.858	5.002	10.002	42.862
2021/22	27.817	4.895	9.988	42.800
2022/23	29.210	5.073	10.143	44.426
2023/24	29.731	5.132	9.741	44.604
2024/25	31.799	5.118	9.202	46.119
2025/26	32.115	5.000	8.892	46.007

Source: County Clerk

Aggregate Tax Levies

The following table sets forth the aggregate tax levies of jurisdictions with boundaries overlapping the City:

<u>Levy Year</u>	<u>Budget Year</u>	<u>State/County</u>	<u>City</u>	<u>School</u>	<u>Total</u>
2016	2017	60.896	42.947	63.059	166.902
2017	2018	60.826	42.575	63.349	166.450
2018	2019	60.088	42.854	63.184	166.126
2019	2020	59.303	43.099	63.333	165.535
2020	2021	56.923	42.862	63.187	162.972
2021	2022	54.781	42.800	62.931	160.512
2022	2023	54.476	44.426	64.400	163.301
2023	2024	59.012	44.604	64.766	168.382
2024	2025	58.119	46.119	64.770	169.008
2025	2026	57.948	46.007	66.956	170.908

Source: County Clerk

Tax Collection Record

The following table sets forth the property tax collection information for the City for the years indicated:

<u>Year</u>	<u>Total Tax Levy</u>	<u>Current Tax Collections</u>	<u>% Current Tax Collected</u>	<u>Prior Years Tax Collected</u>	<u>Total Tax Collections</u>	<u>Ratio of Collections versus Levy</u>
2015/16	\$6,384,574	\$6,174,797	96.71%	\$13,920	\$6,188,767	96.93%
2016/17	6,547,585	6,339,949	96.83%	12,231	6,352,162	97.01%
2017/18	6,782,067	6,608,840	97.45%	92,888	6,701,728	98.82%
2018/19	7,089,369	6,936,700	97.85%	27,598	6,964,298	98.24%
2019/20	7,502,534	7,248,617	97.38%	34,055	7,282,672	97.81%
2020/21	7,653,671	7,366,096	98.77%	96,153	7,462,249	97.50%
2021/22	8,085,317	8,018,802	99.18%	146,094	8,164,896	100.98%
2022/23	9,452,048	8,935,610	94.54%	8,652	8,944,262	94.63%
2023/24	10,157,883	9,801,554	96.49%	45,747	9,847,301	96.94%
2024/25	10,938,893	10,595,933	97.57%	64,887	10,660,820	97.46%
2025/26	11,597,985	1,501,509	12.95%	-0-	1,501,509	12.95%

Source: County Clerk

Major Taxpayers

The following table sets forth the largest taxpayers in the City for 2025:

<u>Business</u>	<u>Assessed Valuation</u>	<u>Total Tax Paid</u>
Every Kansas Central, Inc.	\$10,970,968	\$1,875,026.28
Hill's Pet Nutrition, Inc.	6,351,351	1,085,496.70
Simmons Pet Food KS, Inc.	5,264,591	930,321.88
Agree Limited Partnership	2,873,253	491,061.96
Kansas Gas Service	2,672,103	456,683.80
Iowa Beef Processors, Inc. / Tyson*	1,812,050	309,693.84
Wal-Mart Real Estate Business Trust	1,793,639	306,547.26
BNSF Railroad	1,741,429	297,624.16
Bunge Corporation	1,706,008	291,570.42
Hostess Brands, Inc.	1,347,646	230,323.48

Source: County Clerk

Pension and Employee Retirement Plans

The Issuer participates in the Kansas Public Employees Retirement System ("KPERs") established in 1962, as an instrumentality of the State, pursuant to K.S.A. 74-4901 *et seq.*, to provide retirement and related benefits to public employees in Kansas. KPERs is governed by a board of trustees consisting of nine members each of whom serve four-year terms. The board of trustees appoints an executive director to serve as the managing officer of KPERs and manage a staff to carry out daily operations of the system.

As of December 31, 2024, KPERs serves approximately 350,000 members and approximately 1,500 participating employers, including the State, school districts, counties, cities, public libraries, hospitals and other governmental units. KPERs administers the following three statewide, defined benefit retirement plans for public employees:

- (a) Kansas Public Employees Retirement System;
- (b) Kansas Police and Firemen's Retirement System; and
- (c) Kansas Retirement System for Judges.

These three plans are separate and distinct with different membership groups, actuarial assumptions, experience, contribution rates and benefit options. The Kansas Public Employees Retirement System is the largest of the three plans, accounting for approximately 95% of the members. The Kansas Public Employees Retirement System is further divided into two separate groups, as follows:

(a) *State/School Group* - includes members employed by the State, school districts, community colleges, vocational-technical schools and educational cooperatives. The State of Kansas makes all employer contributions for this group, the majority of which comes from the State General Fund.

(b) *Local Group* - all participating cities, counties, library boards, water districts and political subdivisions are included in this group. Local employers contribute at a different rate than the State/School Group rate.

KPERS is currently a qualified, governmental, § 401(a) defined benefit pension plan, and has received IRS determination letters attesting to the plan’s qualified status dated October 14, 1999 and March 5, 2001. KPERS is also a “contributory” defined benefit plan, meaning that employees make contributions to the plan. This contrasts it from noncontributory pension plans, which are funded solely by employer contributions. The Issuer's employees currently annually contribute 6% of their gross salary to the plan if such employees are KPERS Tier 1 members (covered employment prior to July 1, 2009), KPERS Tier 2 members (covered employment on or after July 1, 2009), or KPERS Tier 3 members (covered employment on or after January 1, 2015).

In 2004, 2015 and 2021, the Kansas Development Finance Authority, on behalf of the State, issued pension obligation bonds and contributed the proceeds thereof to KPERS to assist with improving the status of the unfunded actuarial pension liability. In 2022 the Legislature provided for additional contributions totaling \$1.125 billion in four payments to be deposited into the KPERS trust fund for the School Group. For more information about the Legislature’s actions related to KPERS, please see the 2022 Valuation Report referenced below.

The Issuer's contribution varies from year to year based upon the annual actuarial valuation and appraisal made by KPERS, subject to legislative caps on percentage increases. The Issuer's contribution is 9.26% of the employee’s gross salary for calendar year 2024, and is projected to change to 9.71% of the employee’s gross salary for calendar year 2025. In addition, the Issuer contributes 1% of the employee’s gross salary for Death and Disability Insurance for covered employees.

According to the Valuation Report as of December 31, 2024 (the “2024 Valuation Report”) the KPERS Local Group, of which the Issuer is a member, carried an unfunded accrued actuarial liability (“UAAL”) of approximately \$2.17 billion at the end of 2024. The amount of the UAAL in 2024 changed from the previous year’s amount due to the factors discussed in the 2024 Valuation Report; such report also includes additional information relating to the funded status of the KPERS Local Group, including recent trends in the funded status of the KPERS Local Group. A copy of the 2024 Valuation Report is available on the KPERS website at kpers.org/about/reports. The Issuer has no means to independently verify any of the information set forth on the KPERS website or in the 2024 Valuation Report, which is the most recent financial and actuarial information available on the KPERS website relating to the funded status of the KPERS Local Group. The 2023 Valuation Report sets the employer contribution rate for the period beginning January 1, 2026, for the KPERS Local Group, and KPERS’ actuaries identified that an employer contribution rate of 9.6% of covered payroll would be necessary, in addition to statutory contributions by covered employees, to eliminate the UAAL by the end of the actuarial period set forth in the 2024 Valuation Report. The statutory contribution rate of employers currently equals the 2024 Valuation Report’s actuarial rate. As a result, members of the Local Group are adequately funding their projected actuarial liabilities and the UAAL can be expected to diminish over time. The required employer contribution rate may increase up to the maximum statutorily allowed rate, which is 1.2% in fiscal year 2017 and thereafter.

DEBT STRUCTURE

The following table summarizes certain key statistics with respect to the City's general obligation debt:

	Gross Debt	Net of Self-Supporting Debt
Assessed Valuation ⁽²⁾	\$273,212,636	\$273,212,636
Appraised Valuation	\$1,437,961,242	\$1,437,961,242
Outstanding General Obligation Debt ⁽¹⁾	\$35,290,000	\$4,700,000
Net Overlapping Debt	\$51,147,598	\$51,147,598
Population	24,418	24,418
Direct Debt Per Capita	\$1,445.25	\$192.48
Direct and Overlapping Debt Per Capita	\$3,539.91	\$2,287.15
Direct Debt as a Percentage of Assessed Valuation	12.92%	1.72%
Direct and Overlapping Debt as a Percentage of Assessed Valuation.....	31.64%	20.44%
Direct Debt as a Percentage of Appraised Valuation.....	2.45%	0.33%
Direct and Overlapping Debt as a Percentage of Appraised Valuation.....	6.01%	3.88%

⁽¹⁾ *Outstanding General Obligation Bonds as of December 31, 2024. Gross Debt includes any self-supporting bonds which are payable from revenues of the Water System and, if not so paid, from ad valorem taxes or bonds which are payable from revenues of the Sewer System and, if not so paid, from ad valorem taxes. Net of Self-Supporting Debt excludes any self-supporting bonds which are primarily payable from revenues of the Water System or Sewer System and, if not so paid, from ad valorem taxes.*

Current Indebtedness of the City

The following tables set forth as of the date of issuance of the Bonds all of the outstanding obligations of the City and the Issuer, including the Bonds:

Tax and Assessment Supported General Obligation Bonds

<u>Series</u>	<u>Original Amount</u>	<u>Final Maturity</u>	<u>Currently Outstanding</u>
2016	\$2,620,000	9/1/2029	\$65,000
2018	1,000,000	9/1/2028	160,000
2020	4,055,000	9/1/2035	2,065,000
2022	3,540,000	9/1/2037	2,410,000
2026	12,380,000	9/1/2046	<u>13,415,000</u>
Subtotal of Tax and Assessment Supported General Obligation Bonds =			<u>\$18,115,000</u>

In addition to the above-referenced bonds, the City also has issued general obligation bonds to refund certain utility system revenue bonds and provide funding for certain utility system improvements. The City intends to provide for the payment of such general obligation bonds with the net revenues derived from the operation of its water system and sewer system. If, however, such net revenues are not sufficient to make the required payments, the City is obligated to provide for the payment through its ability to levy unlimited ad valorem taxes. The following is a list of the revenue-supported general obligation bonds of the City:

Utility System Revenue Supported General Obligation Bonds

<u>Series</u>	<u>Original Amount</u>	<u>Final Maturity</u>	<u>Currently Outstanding</u>
2015 (Water)	\$3,775,000	9/1/2030	\$1,475,000
2016 (Water)	2,220,000	9/1/2026	255,000
2018 (Water, Sewer, Solid Waste)	6,190,000	9/1/2033	3,290,000
2020 (Water & Sewer)	2,885,000	9/1/2035	905,000
2022 (Water & Sewer)	3,365,000	9/1/2037	2,555,000
2023 (Water & Sewer)	9,505,000	9/1/2043	<u>8,695,000</u>
Subtotal of Utility Revenue Supported General Obligation Bonds =			<u>\$17,175,000</u>
Total Outstanding General Obligation Bonds =			<u>\$35,290,000</u>

Public Building Commission Revenue Bonds

<u>Series</u>	<u>Original Amount</u>	<u>Final Maturity</u>	<u>Currently Outstanding</u>
2025A (Fire Station)	\$12,210,000	9/1/2044	\$12,210,000

History of Indebtedness

The following table sets forth general obligation debt information pertaining to the City as of the years set forth below:

<u>Year</u>	<u>Population</u>	<u>Assessed Valuation</u>	<u>General Obligation Bonds⁽¹⁾</u>	<u>Debt to Assessed</u>	<u>Debt Per Capita</u>
2016	24,649	\$167,435,000	\$9,190,000	5.49%	\$372.83
2017	24,649	175,082,470	6,720,000	3.84%	272.62
2018	24,816	181,824,252	6,105,000	3.35%	246.01
2019	24,598	192,498,202	4,475,000	2.32%	181.92
2020	24,343	197,481,037	7,650,000	3.80%	314.26
2021	24,343	209,189,906	6,240,000	2.90%	256.34
2022	23,343	222,433,396	8,325,000	3.74%	356.63
2023	24,105	247,522,664	6,430,000	2.60%	266.74
2024	24,105	258,202,054	5,555,000	2.15%	230.45
2025	24,418	275,198,371	4,700,000	1.71%	192.48

⁽¹⁾ Excludes the general obligation debt that is payable primarily from the net revenues of the City's Sewer System and Water System.

Vehicle and Equipment Lease Obligations

In addition to the foregoing debt obligations, the City has entered into the following lease obligations. Lease obligations of the City constitute valid and binding obligations of the City in accordance with their terms subject to funds budgeted and appropriated for that purpose during the City's current budget year or funds made available from any lawfully operated revenue producing source as per K.S.A. 10-1116b. The City has entered into the following leases, but does not expect to purchase the equipment at the end of the lease term. The lease obligations outstanding as of December 31, 2025 are as follows:

<u>Purpose of Indebtedness</u>	<u>Original Principal Amount</u>	<u>Amount Outstanding</u>
Vehicles	\$770,900	

State Loans

In addition to the foregoing, the City has entered into the following State Loans for Water and Wastewater System improvement projects as of December 31, 2025:

<u>Purpose of Indebtedness</u>	<u>Dated Date</u>	<u>Final Payment Date</u>	<u>Original Loan Amount</u>	<u>Amount Outstanding</u> ⁽¹⁾
Wastewater Plant Improvements	11/7/2017	9/1/2038	\$32,285,000	\$22,327,032
Water Infrastructure Improvements	9/3/2019	8/1/2046	4,000,000	3,555,686
Total				\$25,882,718

Debt Payment Record

The City has never in its history defaulted on the payment of any of its debt obligations.

Overlapping Indebtedness

The following table sets forth the overlapping general obligation indebtedness as of December 31, 2025 and the percent attributable (on the basis of assessed valuation) to the City:

<u>Taxing Jurisdiction</u>	<u>Gross Outstanding General Obligation Indebtedness</u>	<u>Percent Applicable To Issuer</u>	<u>Gross Amount Applicable To Issuer</u>	<u>Net Amount Applicable To Issuer</u> ⁽¹⁾⁽²⁾
Lyon County	\$ -0-	54%	\$ -0-	\$ -0-
U.S.D. No. 253	70,860,000	79%	56,206,152	51,147,598
		Total =	\$56,206,152	\$51,147,598

⁽¹⁾ Excludes the Lyon County, Kansas Public Building Commission bonds for a hospital project which are payable from payments made by the Newman Regional Health System.

⁽²⁾ For bonds approved by voters prior to July 1, 2015, the State of Kansas will pay 64% of the debt service on bonds issued by Unified School District No. 253. For bonds approved by voters after July 1, 2015, but before July 1, 2022, the State of Kansas will pay 9% of debt service for Unified School District No. 253. For bonds approved by voters after July 1, 2022, the State of Kansas will pay 18% of debt service for Unified School District No. 253.

Future Indebtedness

The City anticipates that it may issue temporary notes, general obligation bonds or public building commission revenue bonds to finance certain improvements, including soccer complex, golf course building, fire and EMS apparatus, public works equipment, recreation center and residential housing infrastructure improvement projects. However, the City does not have any immediate plans to issue additional indebtedness in the near future.

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APPENDIX B

**FINANCIAL STATEMENTS AND REPORT OF
INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS
(FOR THE FISCAL YEAR ENDED DECEMBER 31, 2024)**

APPENDIX C

SUMMARY OF FINANCING DOCUMENTS



Commission Action Report

Approve KWPCRF Proj. No. C20 002 01 Amendment No. 4 (Final)
to the Loan Agreement with KDHE

Title: Approve KWPCRF Proj. No. C20 002 01 Amendment No. 4 (Final) to the Loan Agreement with KDHE

Agenda Date: February 18, 2026

Presented By: James Ubert, City Engineer

Background:

The City entered into a Kansas Water Pollution Control Revolving Fund Loan Agreement with KDHE on December 23, 2016, in an amount not to exceed \$28,000,000 at 1.94% interest for Wastewater Treatment Plant Improvements. Effective June 13, 2017, Amendment No. 1 added a loan repayment schedule. On December 20, 2017, the City approved Amendment No. 2 that increased the loan to \$28,735,000 (added \$735,000 to the loan) for adding the City's cost share of a \$2.35 million KS Department of Commerce CDBG 2018 Sanitary Sewer project in downtown. The City approved Amendment No. 3 on February 27, 2019, to the loan increasing the loan amount to \$32,285,000 to complete additional repairs to the 2018 Downtown Sanitary Sewer project, the Wastewater Treatment Plant, and Lift Stations #1 & #2. Amendments No. 2 & 3 increased the original loan amount at the same 1.94% interest rate.

Discussion:

Amendment No. 4 (Final) will reduce the KDHE KWPCRF Loan in the amount of \$118,081.43 and the total amount from \$32,285,000.00 to \$32,166,918.57 to reflect the final amount borrowed for the projects.

Financial considerations:

This will establish the final loan amount at \$32,166,918.57 at a KDHE KWPCRF Loan interest rate of 1.94% for the term of 20 years (40 half year payments that began March 2019 and end September 2038). Please see the attached Amendment No. 4 and the loan repayment schedule.

Recommended action:

City staff recommends approval of the KDHE KWPCRF Project No. C20 2002 01 Amendment No. 4 (Final) as a deduct in the amount of (\$118,081.43) to lower the Loan to \$32,166,918.57 and authorize the mayor to sign the agreement.

Attachments:

Amendment No. 4 and Original Agreement

Division of Environment
Curtis State Office Building
1000 SW Jackson St., Suite 400
Topeka, KS 66612-1367



Phone: 785-296-1535
Fax: 785-559-4264
www.kdheks.gov

Janet Stanek, Secretary

Laura Kelly, Governor

February 11, 2026

RECEIVED
FEB 16 2026
BY:

The Honorable Becky Smith, Mayor
City of Emporia
P.O. Box 928
Emporia, Kansas 66801

Re: KWPCRF Project No.: C20 2002 01

Dear Mayor Smith:

Two copies of Amendment No. 4 (Final) to the Loan Agreement for the referenced project are enclosed for your review. This Fourth (Final) Amendment decreases the loan amount by \$118,081.43 to a total of \$32,166,918.57 to reflect the final amount borrowed for the project.

If acceptable, please sign both copies of the enclosed amendment, keep one copy for the city's records and return the other copy to KDHE. Since the Amendment reduces the final loan amount, a new ordinance, proof of publication, meeting minutes, and attorney opinion letter will not be necessary.

Please call me at (785) 296-5527 if you have any questions.

Sincerely yours,

Cara C. Hendricks, P.E.
Chief, Municipal Programs
Bureau of Water

CCH

Enclosure
Fourth (Final) Amendment

pc: Southeast District
Ryan Eldredge/2.1 File w/enclosure

=====

FOURTH AMENDMENT TO THE
LOAN AGREEMENT

By and Between

THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT
ACTING ON BEHALF OF
THE STATE OF KANSAS

AND

CITY OF EMPORIA, KANSAS
KWPCRF PROJECT NO.: C20 2002 01

ORIGINAL LOAN AGREEMENT
EFFECTIVE AS OF DECEMBER 23, 2016

AMENDMENT NO.: 4
EFFECTIVE AS OF FEBRUARY 6, 2026

=====

Fourth Amendment to
the Loan Agreement by and between the
Kansas Department of Health and Environment
Acting on Behalf of the State of Kansas
and the City of Emporia, Kansas
Effective as of February 6, 2026

WHEREAS, the City of Emporia, Kansas (the Municipality) has entered into a Loan Agreement with the Kansas Department of Health and Environment, acting on behalf of the State of Kansas, effective as of December 23, 2016 (the "Loan Agreement"); and

WHEREAS, said Loan Agreement was entered into for the benefit of the Municipality, KWPCRF Project No. C20 2002 01; and

WHEREAS, the Municipality and KDHE hereby determines that it is necessary to amend certain exhibits to the Loan Agreement, and

WHEREAS, this Fourth Amendment to the Loan Agreement is entered into and effective as of February 56, 2026;

THEREFORE, the Loan Agreement is amended as follows:

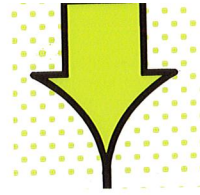
SECTION 1. Article II, Loan Terms, Section 2.01, Amount of Loan and Exhibit B of the LOAN AGREEMENT BY AND BETWEEN THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT AND CITY OF EMPORIA, KANSAS are hereby amended to read as set forth on the pages attached hereto.

SECTION 2. Except as herein specifically set out, the Loan Agreement is confirmed and ratified.

ARTICLE II

LOAN TERMS

Section 2.01. Amount of the Loan. Subject to all of the terms, provisions and conditions of this Loan Agreement, and subject to the availability of State and Federal funds, KDHE will loan an amount not to exceed ~~Thirty-Two Million Two Hundred Eighty-Five Thousand Dollars [\$32,285,000]~~ Thirty-Two Million One Hundred Sixty-Six Thousand Nine Hundred Eighteen Dollars and Fifty-Seven Cents [\$32,166,918.57] to the Municipality to pay all or a portion of Project Costs described in ***Exhibit A*** hereto. The final actual amount of the Loan may be reduced without revision of any other terms, provisions or conditions of this Loan Agreement, other than the Loan Repayment Schedule (***Exhibit B*** hereto), to reflect reductions in the estimated or actual total Project Costs as impacted by opening of bids for construction, change orders, final actual costs, and prepayments. The Municipality shall be responsible for any costs incurred by the Municipality in connection with the Project in addition to the amount of the Loan. Any amendment to ***Exhibit B*** shall be effected by written amendment to the Loan Agreement executed by all parties.



IN WITNESS WHEREOF, KDHE and the City of Emporia have caused this Fourth Amendment to the Loan Agreement for the Municipality to be executed, sealed and delivered, effective as of February 6, 2026.



The KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT, acting on behalf of THE STATE OF KANSAS

By Janet Stanek
Janet Stanek
Secretary
Kansas Department of Health and Environment

Date: 2-10-2026

CITY OF EMPORIA, KANSAS

By _____

Title: _____

(Seal)

ATTEST:

By _____

Title: _____

The "Municipality"

Date: _____

EXHIBIT B

LOAN REPAYMENT SCHEDULE

(See Page 6)

DEDICATED SOURCE OF REVENUES AND LOAN REPAYMENT SCHEDULE

Dedicated Source of Revenue

The Municipality shall impose and collect such rates, fees and charges for the use and services furnished by or through the System, including all improvements and additions thereto hereafter constructed or acquired by the Municipality as will provide System Revenues or levy ad valorem taxes without limitation as to rate or amount upon all the taxable tangible property, real or personal, within the territorial limits of the Municipality to produce amounts which are sufficient to (a) pay the cost of the operation and maintenance of the System, (b) pay the principal of and interest on the Loan as and when the same become due, and (c) pay all other amounts due at any time under the Loan Agreement; provided, however, no lien or other security interest is granted by the Municipality to KDHE on the System Revenues under this Agreement. In the event that the System Revenues are insufficient to meet the obligations under the Loan and the Loan Agreement, the Municipality shall levy ad valorem taxes without limitation as to rate or amount upon all the taxable tangible property, real or personal, within the territorial limits of the Municipality to produce the amounts necessary for the prompt payment of the obligations under the Loan and Loan Agreement.

Loan Repayment Schedule

The Municipality and KDHE have agreed that interest becoming due semiannually on the Loan during the construction period for the Project may be capitalized and repaid as a part of the Loan. In this regard, KDHE shall give the Municipality written notice of each semiannual installment of interest becoming due during the construction period. At its option, the Municipality may elect to pay such amounts, and if so elected, must pay such amounts within 30 days of receipt of the notice of their becoming due. If the Municipality does not elect to pay such amounts within 30 days of receipt of such notice, the amount then due and owing as semiannual interest on the Loan shall be capitalized and added to the principal amount of the Loan and shall bear interest at the rate of interest set forth in **Section 2.02** hereof.

KANSAS WATER POLLUTION CONTROL REVOLVING FUND

Project Principal: 32,166,918.57
 Interest During Const.: 0.00
 Service Fee During Const.: 0.00
 Gross Loan Costs: 32,166,918.57

Actual Draws - Actual Interest Rate
 Amortization of Loan Costs - FINAL

Prepared for:
 City of Emporia, Project No. C20 2002 01

2/6/2026 Gross Rate: 1.94% Ist Payment Date: 3/1/2019
 Service Fee Rate: 0.25% Number of Payments: 40
 Loan Interest Rate: 1.69%

Payment Number	Payment Date	Beginning Balance	Interest Payment	Principal Payment	Service Fee	Total Payment	Ending Balance
1	3/1/2019	32,166,918.57	193,522.90	648,014.34	28,627.64	870,164.88	31,518,904.23
2	9/1/2019	31,518,904.23	220,152.11	617,445.89	32,566.88	870,164.88	30,901,458.34
3	3/1/2020	30,901,458.34	229,312.64	606,930.25	33,921.99	870,164.88	30,294,528.09
4	9/1/2020	30,294,528.09	226,528.93	610,125.75	33,510.20	870,164.88	29,684,402.34
5	3/1/2021	29,684,402.34	235,250.37	600,114.16	34,800.35	870,164.88	29,084,288.18
6	9/1/2021	29,084,288.18	233,950.81	601,605.96	34,608.11	870,164.88	28,482,682.22
7	3/1/2022	28,482,682.22	229,175.44	734,190.27	33,901.69	997,267.40	27,748,491.95
8	9/1/2022	27,748,491.95	222,971.53	741,311.92	32,983.95	997,267.40	27,007,180.03
9	3/1/2023	27,007,180.03	216,707.44	748,502.65	32,057.31	997,267.40	26,258,677.38
10	9/1/2023	26,258,677.38	217,818.58	747,227.13	32,221.69	997,267.40	25,511,450.25
11	3/1/2024	25,511,450.25	214,423.23	751,124.76	31,719.41	997,267.40	24,760,325.49
12	9/1/2024	24,760,325.49	209,224.75	757,092.24	30,950.41	997,267.40	24,003,233.25
13	3/1/2025	24,003,233.25	202,827.32	764,436.04	30,004.04	997,267.40	23,238,797.21
14	9/1/2025	23,238,797.21	196,367.84	771,851.06	29,048.50	997,267.40	22,466,946.15
15	3/1/2026	22,466,946.15	189,845.69	779,338.03	28,083.68	997,267.40	21,687,608.12
16	9/1/2026	21,687,608.12	183,260.29	770,746.69	27,109.51	981,116.49	20,916,861.43
17	3/1/2027	20,916,861.43	176,747.48	778,222.93	26,146.08	981,116.49	20,138,638.50
18	9/1/2027	20,138,638.50	170,171.50	785,771.69	25,173.30	981,116.49	19,352,866.81
19	3/1/2028	19,352,866.81	163,531.72	793,393.69	24,191.08	981,116.49	18,559,473.12
20	9/1/2028	18,559,473.12	156,827.55	801,089.60	23,199.34	981,116.49	17,758,383.52
21	3/1/2029	17,758,383.52	150,058.34	808,860.17	22,197.98	981,116.49	16,949,523.35
22	9/1/2029	16,949,523.35	143,223.47	816,706.12	21,186.90	981,116.49	16,132,817.23
23	3/1/2030	16,132,817.23	136,322.31	824,628.16	20,166.02	981,116.49	15,308,189.07
24	9/1/2030	15,308,189.07	129,354.20	832,627.05	19,135.24	981,116.49	14,475,562.02
25	3/1/2031	14,475,562.02	122,318.50	840,703.54	18,094.45	981,116.49	13,634,858.48
26	9/1/2031	13,634,858.48	115,214.55	848,858.37	17,043.57	981,116.49	12,786,000.11
27	3/1/2032	12,786,000.11	108,041.70	857,092.29	15,982.50	981,116.49	11,928,907.82
28	9/1/2032	11,928,907.82	100,799.27	865,406.09	14,911.13	981,116.49	11,063,501.73
29	3/1/2033	11,063,501.73	93,486.59	873,800.52	13,829.38	981,116.49	10,189,701.21
30	9/1/2033	10,189,701.21	86,102.98	882,276.38	12,737.13	981,116.49	9,307,424.83
31	3/1/2034	9,307,424.83	78,647.74	890,834.47	11,634.28	981,116.49	8,416,590.36
32	9/1/2034	8,416,590.36	71,120.19	899,475.56	10,520.74	981,116.49	7,517,114.80
33	3/1/2035	7,517,114.80	63,519.62	908,200.48	9,396.39	981,116.49	6,608,914.32
34	9/1/2035	6,608,914.32	55,845.33	917,010.02	8,261.14	981,116.49	5,691,904.30
35	3/1/2036	5,691,904.30	48,096.59	925,905.02	7,114.88	981,116.49	4,765,999.28
36	9/1/2036	4,765,999.28	40,272.69	934,886.30	5,957.50	981,116.49	3,831,112.98
37	3/1/2037	3,831,112.98	32,372.90	943,954.70	4,788.89	981,116.49	2,887,158.28
38	9/1/2037	2,887,158.28	24,396.49	953,111.05	3,608.95	981,116.49	1,934,047.23
39	3/1/2038	1,934,047.23	16,342.70	962,356.23	2,417.56	981,116.49	971,691.00
40	9/1/2038	971,691.00	8,210.79	971,691.00	1,214.70	981,116.49	0.00
Totals			5,712,365.07	32,166,918.57	845,024.49	38,724,308.13	

LOAN AGREEMENT

Between

**THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT
ACTING ON BEHALF OF
THE STATE OF KANSAS**

AND

**EMPORIA, KANSAS
KWPCRF PROJECT NO.: C20 2002 01**

EFFECTIVE AS OF DECEMBER 23, 2016

The interest of the Kansas Department of Health and Environment ("KDHE") in the Loan Repayments to be made by the Municipality and certain other revenues (the "Revenues") under this Loan Agreement have been pledged and assigned to the Kansas Development Finance Authority (the "Authority") pursuant to a Pledge Agreement, between KDHE and the Authority. The interest of the Authority in the Revenues has been pledged as security for the payment of the principal of, redemption premium, if any, and interest on the Authority's Kansas Water Pollution Control Revolving Fund Revenue Bonds, pursuant to a Master Bond Resolution adopted by the Authority.

LOAN AGREEMENT

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**KANSAS WATER POLLUTION CONTROL REVOLVING FUND
LOAN AGREEMENT**

THIS LOAN AGREEMENT, effective as of December 23, 2016 by and between the KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT ("KDHE"), acting on behalf of THE STATE OF KANSAS (the "State"), and EMPORIA, KANSAS, a "Municipality" according to K.S.A. 65-3321 hereinafter referenced as the "Municipality";

WITNESSETH:

WHEREAS, the Federal Water Quality Act of 1987 (the "Federal Act") established a state revolving fund program as a means to phase-out the Environmental Protection Agency (EPA) construction grants program and replace it with a revolving loan program operated by the individual states; and

WHEREAS, to fund the state revolving fund program, the EPA will make annual capitalization grants to the states (CFDA 66.458), on the condition that each state provide a state match for such state's revolving fund; and

WHEREAS, by passage of the Kansas Water Pollution Control Revolving Fund Act, K.S.A. 65-3321 through 65-3329, inclusive (the "Loan Act"), the State of Kansas (the "State") has established the Kansas Water Pollution Control Revolving Fund (the "Revolving Fund") for purposes of the Federal Act; and

WHEREAS, under the Loan Act, the Secretary (the "Secretary") of the Kansas Department of Health and Environment ("KDHE") is given the responsibility for administration and management of the Revolving Fund; and

WHEREAS, the Secretary, the Kansas Department of Administration, Division of Accounts and Reports ("the DOA"), and the Kansas Development Finance Authority (the "Authority") have entered into an Inter-Agency Agreement effective March 1, 1999, (the "Inter-Agency Agreement"), to define the cooperative relationship between KDHE, DOA, and the Authority, to jointly administer certain provisions of the Loan Act; and

WHEREAS, the Authority and KDHE have supplemented the Inter-Agency Agreement by entering into a Combined Master Pledge Agreement, dated as of November 1, 1992, as the same has been amended and may be further amended and supplemented from time to time, (jointly the "Pledge Agreement"), pursuant to which KDHE agrees to enter into Loan Agreements with Municipalities (as defined in the Loan Act) for Wastewater Treatment Projects (the "Projects") and to pledge the Loan Repayments received pursuant to such Loan Agreements and certain other revenues to the Authority; and

WHEREAS, the Authority is authorized under K.S.A. 74-8905(a) and the Loan Act to issue revenue bonds (the "Bonds") for the purpose of providing funds to implement the State's requirements under the Federal Act and to loan the same, together with available funds from the EPA capitalization grants, to Municipalities within the State for the payment of Project Costs (as said terms are defined in the Loan Act);

WHEREAS, the Municipality has made timely application to KDHE for a Loan to finance all or a portion of the Project Costs; and

WHEREAS, KDHE has approved the Municipality's application for a Loan, subject to the receipt of capitalization grants from the EPA pursuant to the Federal Act and proceeds of the Bonds when issued by the Authority; and

NOW, THEREFORE, for and in consideration of the award of the Loan by KDHE, the Municipality agrees to complete its Project and to perform under this Loan Agreement in accordance with the conditions, covenants and procedures set forth herein and attached hereto as a part hereof, as follows:

ARTICLE I

DEFINITIONS

Section 1.01. Definitions. The following terms as used in this Loan Agreement shall, unless the context clearly requires otherwise or as otherwise defined in the Master Resolution, have the following meanings:

"Act" means the Constitution and laws of the State, including particularly the Loan Act and K.S.A. 74-8905(a), as amended and supplemented.

"Additional Payments" means the payments described in **Section 2.06** hereof.

"Additional Revenue Obligations" means any obligation for the payment of money undertaken by the Municipality which is payable from or secured by a pledge of, or lien upon, the System Revenues incurred after the date of execution and delivery of this Loan Agreement, and all Existing Revenue Obligations.

"Authority" means the Kansas Development Finance Authority, a public body politic and corporate and an instrumentality of the State, and its successors and assigns.

"Authorized Municipality Representative" means any person authorized pursuant to a resolution of the governing body of the Municipality to perform any act or execute any document relating to the Loan, or this Loan Agreement.

"Bonds" means the Kansas Development Finance Authority, Water Pollution Control Revolving Loan Fund Revenue Bonds, issued in one or more series, pursuant to Master Bond Resolution No. 37, and supplements thereto.

“Code” means the Internal Revenue Code of 1986, as amended, and the regulations thereunder promulgated by the Department of the Treasury.

“Dedicated Source of Revenue” shall have the meaning ascribed thereto in *Exhibit B* attached hereto.

“EPA” means the Environmental Protection Agency of the United States, its successors and assigns.

“Event of Default” means any occurrence of the following events:

(a) failure by the Municipality to pay, or cause to be paid, any Loan Repayment required to be paid hereunder when due;

(b) failure by the Municipality to observe and perform any duty, covenant, obligation or agreement on its part to be observed or performed under this Loan Agreement, other than as referred to in paragraph (a) of this Section, which failure shall continue for a period of thirty (30) days after written notice, specifying such failure and requesting that it be remedied, is given to the Municipality by KDHE, unless KDHE shall agree in writing to an extension of such time prior to its expiration; provided, however, if the failure stated in such notice is correctable but cannot be corrected within the applicable period KDHE may not unreasonably withhold its consent to an extension of such time up to 90 days from the delivery of the written notice referred to above if corrective action is instituted by the Municipality within the applicable period and diligently pursued until the Event of Default is corrected;

(c) failure by the KDHE to observe and perform any duty, covenant, obligation or agreement on its part to be observed or performed under this Agreement which shall continue for a period of thirty (30) days after written notice, specifying such failure and requesting that it be remedied, is given to KDHE by the Municipality, unless the Municipality shall agree in writing to an extension of such time prior to its expiration; provided, however, if the failure stated in such notice is correctable but cannot be corrected within the applicable period the Municipality may not unreasonably withhold its consent to an extension of such time up to 90 days from the delivery of the written notice referred to above if corrective action is instituted by KDHE within the applicable period and diligently pursued until the Event of Default is corrected;

(d) any representation made by or on behalf of the Municipality contained in this Loan Agreement, or in any instrument furnished in compliance with or with reference to this Loan Agreement or the Loan, is intentionally false or misleading in any material respect;

(e) any representation made by or on behalf of KDHE contained in this Agreement, or in any instrument furnished in compliance with or with reference to this Agreement, is intentionally false or misleading in any material respect;

(f) a petition is filed by or against the Municipality under any federal or state bankruptcy or insolvency law or other similar law in effect on the date of this Loan Agreement or thereafter enacted, unless in the case of any such petition filed against the Municipality, such petition shall be dismissed within thirty (30) days after such filing and such dismissal shall be final and not subject to appeal;

(g) the Municipality shall generally fail to pay its debts as such debts become due;

(h) failure of KDHE to promptly pay any Project Costs when reasonably requested to do so by the Municipality pursuant to **Section 2.03** hereof.

“Existing Revenue Obligation” means any obligation for the payment of money undertaken by the Municipality, which is payable from or secured, by a pledge of, or lien upon, the System Revenues existing or outstanding at the time of execution and delivery of this Loan Agreement by the Municipality.

“Federal Act” means the Federal Water Quality Act of 1987, as amended.

“GAAP” means generally accepted accounting principles as applicable to municipal utility systems.

“Indebtedness” means any financial obligation of the Municipality evidenced by an instrument executed by the Municipality, including this Loan, Existing Revenue Obligations, Additional Revenue Obligations, general obligation bonds or notes, lease or lease-purchase agreement or similar financial transactions.

“KDHE” means the Kansas Department of Health and Environment or its successors in interest.

“Loan Act” means the Constitution and laws of the State of Kansas, including particularly K.S.A. 65-3321 through 65-3329, inclusive, as amended and supplemented.

“Loan Agreement” means this Loan Agreement, including the Exhibits attached hereto, as it may be supplemented, modified or amended from time to time in accordance with the terms hereof.

“Loan Repayments” means the payments payable by the Municipality pursuant to **Section 2.05** of this Loan Agreement.

“Loan Terms” means the terms of this Loan Agreement provided in **Article II** hereof.

“Master Resolution” means the Master Bond Resolution adopted by the Board of Directors of the Authority, as amended and supplemented from time to time by Supplemental Resolutions.

“Municipality” means Emporia, Kansas, its successors and assigns.

“Project” means the acquisition, construction, improvement, repair, rehabilitation or extension of the System described in **Exhibit A** hereto, which constitutes a project pursuant to the Loan Act for which KDHE is making a Loan to the Municipality pursuant to this Loan Agreement.

“Project Costs” means all costs or expenses which are necessary or incident to the Project and which are directly attributable thereto, including, but not limited to: (a) costs of any Loan reserves; (b) interest on the Loan during the construction of the Project; (c) financing and administrative costs associated with the Loan Agreement; and (d) subject to the approval of Bond Counsel and the Authority,

payment of temporary financing obligations issued by the Municipality to pay Project Costs;

“Regulations” means Kansas Administrative Regulations (K.A.R.) 28-16-110 to 28-16-138, and any amendments thereto promulgated by KDHE pursuant to the Loan Act.

“Revolving Fund” means the Kansas Water Pollution Control Revolving Fund established by the Loan Act.

“SEC Rule” means Rule 15c2-12 adopted by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as may be amended from time to time or such other similar rule regarding disclosure of information in securities transactions.

“Secretary” means the Secretary of KDHE

“State” means the State of Kansas, acting, unless otherwise specifically indicated, by and through KDHE, and its successors and assigns.

“System” means wastewater collection and treatment system of the Municipality, as the same may be modified or enlarged from time to time, including the Project described in **Exhibit A**, for which the Municipality is making the borrowing under this Loan Agreement, which constitutes or includes a Wastewater Treatment System.

“System Revenues” means all revenues derived by the Municipality from the ownership and operation of the System.

“Wastewater Treatment System” means any Wastewater Treatment Works, as defined in the Federal Act, that is publicly owned, and as further described in the Regulations.

Section 1.02. Rules of Interpretation.

(a) Words of the masculine gender shall be deemed and construed to include correlative words of the feminine and neuter genders.

(b) Unless the context shall otherwise indicate, words importing the singular number shall include the plural and vice versa, and words importing persons shall include firms, associations and corporations, including public bodies, as well as natural persons.

(c) All references in this Loan Agreement to designated “Articles,” “Sections” and other subdivisions are, unless otherwise specified, to the designated Articles, Sections and subdivisions of this Loan Agreement as originally executed. The words “herein,” “hereof,” “hereunder” and other words of similar import refer to this Loan Agreement as a whole and not to any particular Article, Section or other subdivision.

(d) The Table of Contents and the Article and Section headings of this Loan Agreement shall not be treated as a part of this Loan Agreement or as affecting the true meaning of the provisions hereof.

ARTICLE II

LOAN TERMS

Section 2.01. Amount of the Loan. Subject to all of the terms, provisions and conditions of this Loan Agreement, and subject to the availability of State and Federal funds and proceeds of Bonds, KDHE will loan an amount not to exceed Twenty Eight million dollars [\$28,000,000] to the Municipality to pay all or a portion of Project Costs described in *Exhibit A* hereto. The final actual amount of the Loan and the amount of the principal forgiveness may be reduced without revision of any other terms, provisions or conditions of this Loan Agreement, other than the Loan Repayment Schedule (*Exhibit B* hereto), to reflect reductions in the estimated or actual total Project Costs as impacted by opening of bids for construction, change orders, final actual costs, and prepayments. The Municipality shall be responsible for any costs incurred by the Municipality in connection with the Project in addition to the amount of the Loan. Any amendment to *Exhibit B* shall be effected by written amendment to the Loan Agreement executed by all parties.

Section 2.02. Interest Rate. The interest rate on the loan shall be [Gross Loan Rate] 1.94% per annum, which shall be assessed on the unpaid principal balance to be paid as set out in the Loan Repayment Schedule, *Exhibit B* hereto. This interest rate consists of a net loan interest rate, and a service fee, as described in *Exhibit B*. Any subsequent revision to the amount of the Loan or *Exhibit B* hereto shall not change the gross interest rate on the Loan.

Section 2.03. Disbursement of Loan Proceeds.

(a) Subject to the conditions described in this Section, KDHE agrees to disburse the proceeds of the Loan during the progress of the Project for Project Costs. Requests for disbursement may be submitted by the Municipality (in substantially the form attached hereto as *Exhibit E*), not more than once per month, in accordance with the procedures set forth by KDHE. Any request for disbursement must be supported by proper invoices and a certificate of the Authorized Municipality Representative to the effect that all representations made in this Loan Agreement remain true as of the date of the request and, based upon that information then available to such person, no adverse developments affecting the financial condition of the Municipality or its ability to complete the Project or to repay the Loan have occurred.

The Municipality may request disbursement for the following Project Costs:

- (1) any eligible planning/design costs incurred prior to execution of this Loan Agreement;
- (2) disbursement for eligible Project Costs if such Project Costs have been incurred and are due and payable to Project contractors (actual payment of such Project Costs by the Municipality is not required as a condition of the payment request); or
- (3) interest becoming due on the Loan prior to the initial scheduled payment of principal; and

(4) the principal of and interest on any temporary financing obligations issued by the Municipality to pay Project Costs.

(b) KDHE shall not be under any obligation to disburse any Loan proceeds to the Municipality under this Loan Agreement unless:

(1) there are moneys available in the Revolving Fund to fund the Loan, as determined solely by KDHE;

(2) the Municipality shall certify to KDHE that it has executed a Project contract or contracts and has funds available to pay for that portion of the Project Costs not eligible (pursuant to the Loan Act or the Federal Act) to be funded under this Loan Agreement, if any;

(3) no Event of Default by the Municipality shall have occurred and be continuing; and

(4) the Municipality continues to maintain reasonable progress towards completion of the Project.

Section 2.04. Schedule of Compliance; Completion of Project.

(a) The Municipality agrees to complete the Project in accordance with the Conditions Applicable to Construction of the Project set forth in *Exhibit C* attached hereto.

(b) The completion of the construction of the Project shall be evidenced to KDHE by a certificate signed by the Authorized Municipality Representative stating: (1) that the construction of the Project has been completed in accordance with the plans and specifications therefore; and (2) that all Project Costs have been paid, except Project Costs the payment of which is not yet due or is being retained or contested in good faith by the Municipality. Such certificate shall be given not later than the date established by KDHE, which shall be approximately the date that the Project is capable of being placed into operation by the Municipality. Notwithstanding the foregoing, such certificate shall state that it is given without prejudice to any rights against third parties which exist at the date of such certificate or which may subsequently come into being.

Section 2.05. Repayment of the Loan.

(a) *Loan Repayments.* The Municipality shall pay to KDHE, on or before the due dates, installments of principal and interest on the Loan in accordance with *Exhibit B* attached hereto, until the Loan has been paid in full. Installments of principal and interest on the Loan shall be computed and paid in accordance with the Loan Repayment Schedule on *Exhibit B* as in effect at any time under this Loan Agreement. Notwithstanding any other provision of this Loan Agreement, the first payment of principal and interest due on the Loan shall be made the earlier of two years after receipt by the Municipality of the first disbursement under the Loan or one year after Project completion. The final installment of principal under the Loan shall be fully repaid not later than 20 years after Project completion.

(b) *Prepayment of the Loan.* The Municipality may prepay the outstanding principal of the Loan, in whole, or in part, at any time, without penalty, upon giving 60 days written notice to KDHE of its intent to so prepay, such notice shall indicate the actual source of funds that will be used to make the prepayment (specifically proceeds from a tax exempt bond issue, proceeds from a taxable bond issue, cash on hand, or some other instrument); provided, however, a partial prepayment may be made only if the prepayment amount is the greater of 10% of the original principal amount of the Loan or \$50,000. A new *Exhibit B* will be prepared by KDHE following receipt of any acceptable partial prepayment, re-amortizing the remaining principal amount over the remaining term of the Loan.

Section 2.06. Additional Payments. The Municipality shall pay as Additional Payments the following amounts:

(a) Any amounts required to be paid by the Authority to the United States of America as arbitrage rebate, arising due to the Municipality's failure to expend proceeds of the Loan at the times certified to KDHE by the Municipality, that result in arbitrage rebate liability for the Authority, but only to the extent that the funds in the Rebate Fund established by the Master Resolution are insufficient to make such payments; and.

(b) All other payments of whatever nature which the Municipality has agreed to pay or assume hereunder.

ARTICLE III

REPRESENTATIONS AND COVENANTS OF MUNICIPALITY

Section 3.01. Representations of the Municipality. The Municipality makes the following representations:

(a) ***Organization and Authority.***

(1) The Municipality is a municipal corporation duly created and validly existing under and pursuant to the constitution and statutes of the State.

(2) The Municipality has full legal right and authority and all necessary licenses and permits required as of the date hereof to own, operate and maintain its System, to carry on its activities relating thereto, to execute and deliver this Loan Agreement, to undertake and complete the Project, and to carry out and consummate all transactions contemplated by this Loan Agreement.

(3) The Ordinance (adopted substantially in the form attached hereto as ***Exhibit F***) and other proceedings of the Municipality's governing body approving this Loan Agreement and authorizing its execution, issuance and delivery on behalf of the Municipality, and authorizing the Municipality to undertake and complete the Project have been duly and lawfully adopted.

(4) This Loan Agreement has been duly authorized, executed and delivered on behalf of the Municipality, and, constitutes the legal, valid and binding obligation of the Municipality enforceable in accordance with its terms.

(b) **Full Disclosure.** To the best knowledge of the Municipality, there is no fact that the Municipality has not disclosed to KDHE in writing on the Municipality's application for the Loan or otherwise that materially adversely affects or that will materially adversely affect the properties, activities, or its System, or the ability of the Municipality to make all Loan Repayments and otherwise observe and perform its duties, covenants, obligations and agreement under this Loan Agreement.

(c) **Non-Litigation.** There is no controversy, suit or other proceeding of any kind pending or threatened wherein or whereby any question is raised or may be raised, questioning, disputing or affecting in any way: (1) the legal organization of the Municipality; (2) its boundaries; (3) the right or title of any of its officers to their respective offices; (4) the legality of any official act taken in connection with obtaining the Loan; (5) the constitutionality or validity of the indebtedness represented by the Loan Agreement; (6) any of the proceedings had in relation to the authorization or execution of this Loan Agreement; (7) the collection of revenues of the System; (8) the levy and collection of unlimited *ad valorem* taxes to pay the principal of and interest on the Loan; or (9) the ability of the Municipality to make all Loan Repayments or otherwise observe and perform its duties, covenants, obligations and agreements under this Loan Agreement.

(d) **Compliance with Existing Laws and Agreements.** To the best knowledge of the Municipality, the authorization, execution and delivery of this Loan Agreement by the Municipality, and the performance by the Municipality of its duties, covenants, obligations and agreements thereunder will not result in any breach of any existing law or agreement to which the Municipality is a party.

(e) **No Defaults.** No event has occurred and no condition exists that would constitute an Event of Default. The Municipality is not presently aware of any violation of any agreement, which would materially adversely affect the ability of the Municipality to make all Loan Repayments or otherwise observe and perform its duties, covenants, obligations and agreements under this Loan Agreement.

(f) **Compliance with Law.** The Municipality has, to the best of the Authorized Municipality's Representative's knowledge:

(1) complied with all laws, ordinances, governmental rules and regulations to which it is subject, including, without limitation, any public hearing or public notice requirements or environmental review requirements contained in the Loan Act, the Regulations and the Federal Act, the failure to comply with which would materially adversely affect the ability of the Municipality to conduct its activities, enter into this Loan Agreement or undertake or complete the Project; and

(2) obtained all licenses, permits, franchises or other governmental authorizations presently necessary for the ownership of its property which, if not obtained, would materially adversely affect the ability of the Municipality to complete the Project or operate the Project.

(g) **Use of Loan Proceeds.** The Municipality will apply the proceeds of the Loan as described in **Exhibit D**: (1) to finance or refinance a portion of the Project Cost; and (2) where applicable, to reimburse the Municipality for a portion of the Project Costs, which portion was paid or incurred in anticipation of reimbursement by KDHE and is eligible for such reimbursement pursuant to the Regulations and the Code.

(h) **Project Costs.** The Municipality certifies that the Project Costs, as listed in **Exhibit D**, is a reasonable and accurate estimation and, upon direction of KDHE, will supply the same with a certificate from its engineer stating that such Costs are reasonable and accurate estimations, taking into account investment income to be realized during the course of construction of the Project, if any, and other lawfully available money that would, absent the Loan, have been used to pay the Project Costs.

Section 3.02. Particular Covenants of the Municipality.

(a) **Dedicated Source of Revenue for Repayment of the Loan.** The Municipality hereby establishes the Dedicated Source of Revenue described on **Exhibit B** attached hereto, which Dedicated Source of Revenue is hereby pledged to the Loan Repayments, Additional Payments and all other obligations of the Municipality under this Loan Agreement.

(b) **Performance Under Loan Agreement.** The Municipality covenants and agrees in the performance of its obligations under this Loan Agreement:

(1) to comply with all applicable State and federal laws, rules and regulations (including, but not limited to the conditions set forth in **Exhibit C** hereto) as are applicable to this Loan Agreement; and

(2) to cooperate with KDHE in the observance and performance of the respective duties, covenants, obligations and agreements of the Municipality and KDHE under this Loan Agreement (including, without limitation the requirements contained in **Exhibit C** hereto).

(c) **Completion of Project and Provision of Moneys Therefore.** The Municipality covenants and agrees:

(1) to exercise its best efforts in accordance with prudent utility practice to complete the Project and to so accomplish such completion on or before the estimated Project completion date set forth in **Exhibit C** hereto; and

(2) to provide, from its own financial resources, all moneys, in excess of the total amount of proceeds it receives under the Loan, required to complete the Project.

(d) **Delivery of Documents and Payment of Fees.** Concurrently with the delivery of this Loan Agreement and the closing of the Loan, the Municipality will cause to be delivered to KDHE:

(1) fully executed counterparts of this Loan Agreement;

(2) copies of the ordinance of the governing body of the Municipality authorizing the execution and delivery of this Loan Agreement, certified by an Authorized Municipality Representative, which shall be in substantially the form attached hereto as **Exhibit F** together with an affidavit of publication thereof in the official newspaper of the Municipality;

(3) an opinion of the Municipality's counsel substantially in the form set forth in **Exhibit G** attached hereto;

(4) such other certificates, documents, opinions and information as KDHE may reasonably require.

(e) **Operation and Maintenance of System.** The Municipality covenants and agrees that it shall, in accordance with prudent wastewater treatment utility practice:

(1) at all times operate the properties of its System in an efficient manner in accordance with applicable laws and regulations;

(2) maintain its System, making all necessary and proper repairs, renewals, replacements, additions, betterments and improvements necessary to maintain its System in good repair, working order and operating condition;

(3) implement any modification of the rates fees and charges for use of the System that comprise the Dedicated Source of Revenues as the Secretary may require to ensure repayment of the Loan in accordance with the provisions of the Loan Act; and

(4) take such other action as the Secretary may require in accordance with powers granted to the Secretary under the Loan Act and the Regulations.

(f) **Disposition of System.** The Municipality shall not sell, lease or otherwise transfer ownership of all or substantially all of its System without the consent of the Secretary. In no event shall the Municipality sell, abandon or otherwise transfer ownership of the System to any person or entity other than a city, county, township, sewer district, improvement district, or other political subdivision of the State, or any combination thereof, that has legal responsibility to treat wastewater. The Municipality shall provide the Secretary with ninety (90) days' prior written notice to KDHE of such sale, lease or transfer. No such sale, lease or transfer shall be effective unless compliance is with the provisions of **Section 4.02** hereof, assuming such sale, lease or transfer is deemed to be an assignment for the purposes of such Section. The provisions of this paragraph shall not be construed to prohibit the lease of portions of the System by the Municipality in connection with a lease-purchase transaction to finance improvements to the System; provided that a termination or an event of default by the Municipality under such arrangement shall not have a material adverse effect on the Municipality's Dedicated Source of Revenues.

(g) **Records and Accounts**

(1) The Municipality shall keep accurate records and accounts for its System (the "System Records"), separate and distinct from its other records and accounts (the "General

Accounts”). Such System Records shall be audited annually in accordance with generally accepted auditing standards if the total Disbursement of Loan Proceeds exceed \$25,000 for the Municipalities fiscal year. This audit shall be completed by an independent certified public accountant or firm of independent certified public accountants, or by an independent registered municipal accountant, and may be part of the single agency audit made on the Municipality's General Accounts in accordance with the Federal Single Audit Act of 1984, OMB Circular No. A-133, **Audits of States, Local Governments, and Non-Profit Organizations** as amended in 1996 and 2003 and as may be further amended and revised. Such System Records and General Accounts shall be made available for inspection by KDHE at any reasonable time, and a copy of the Municipality's annual audit, including all written comments and recommendations of such accountant, shall be furnished to KDHE within 270 days of the close of the Municipal Fiscal Year being so audited.

(2) The Municipality shall maintain Project accounts in accordance with generally accepted government accounting standards defined in the Government Accounting, Auditing, and Financial Reporting Manual (1994 Ed.), or any revised edition, issued by the Government Finance Officers Association.

(h) **Inspections.** The Municipality shall permit the EPA, KDHE and any party designated by KDHE to examine, visit and inspect, at any and all reasonable times, the property, if any, constituting the Project, and to inspect and make copies of any accounts, books and records, including (without limitation) its records regarding receipts, disbursements, contracts, investments and any other matters relating thereto and to its financial standing, including the System Records and General Accounts, and shall supply such reports and information as the EPA and KDHE may reasonably require in connection therewith.

(i) **Financial Information.** The Municipality specifically agrees to provide to KDHE a reasonable number of copies of such financial information and operating data of the Municipality and the System to the extent necessary for KDHE to comply with its continuing disclosure obligations set forth in the SEC Rule and the Pledge Agreement. Such financial information shall be accompanied by an audit report prepared in accordance with the provisions of *subsection (g)(2)* hereof, unless such subsection exempts the Municipality from such audit report requirement. The financial information shall be prepared in accordance with GAAP, unless the Municipality has received a waiver from such requirement as permitted by State Law. Any such requested financial information and operating data shall be supplied to KDHE within 270 days after the end of the Municipal Fiscal Year. Such requirement may be satisfied by submitting the Municipality's comprehensive annual financial report (CAFR) and/or annual report of its System, unless KDHE notifies the Municipality of the need for additional information. If an audit report is required to be prepared, but is not available within 270 days of the end of the Municipal Fiscal Year, un-audited financial information shall be provided to KDHE pending receipt of the audit report. In addition, the Municipality shall provide KDHE with prompt notification of the occurrence of certain material events. For purposes of this paragraph, "material event" shall mean: (a) principal and interest payment delinquencies on any Indebtedness; (b) non-payment related defaults in agreements authorizing any Indebtedness; (c) rating changes on any Indebtedness; (d) adverse tax opinions or events affecting the tax-exempt status of any Indebtedness; or (e) unscheduled draws on debt service reserves or credit enhancements on any Indebtedness reflecting financial difficulties.

(j) **Insurance.** The Municipality will carry and maintain such reasonable amount of all-risk insurance on all properties and all operations of its System as would be carried by similar municipal operators of Systems, insofar as the properties are of an insurable nature. The Municipality also will carry general liability insurance in amounts not less than the maximum liability of a governmental entity for claims arising out of a single occurrence, as provided by the Kansas Tort Claims Act, K.S.A. 75-6101 *et seq.*, or other similar future law (currently \$500,000 per occurrence).

(k) **Notice of Material Adverse Change.** The Municipality shall promptly notify KDHE of any material adverse change in the activities, prospects or condition (financial or otherwise) of the System, or in the ability of the Municipality to make all Loan Repayments and otherwise observe and perform its duties, covenants, obligations and agreements under this Loan Agreement.

(l) **Additional Covenants and Requirements.** The parties hereto acknowledge that this Loan Agreement may be assigned or pledged to secure financings of the Authority. Should it be necessary to modify any covenants or obtain or enhance the security of the financings, the parties agree to take all reasonable actions and make reasonable covenants and agreements necessary to accomplish such purpose to the extent permitted by applicable laws.

ARTICLE IV

ASSIGNMENT

Section 4.01. Assignment and Transfer by KDHE. The Municipality hereby approves and consents to any assignment or transfer of this Loan Agreement that KDHE deems necessary in connection with the operation and administration of the Revolving Fund. The Municipality hereby specifically approves the assignment and pledging of the Loan Repayments and Additional Payments to the Authority, and the Authority's pledging of all or a portion of the same to the Bonds.

Section 4.02. Assignment by the Municipality. This Loan Agreement may not be assigned by the Municipality for any reason, unless the following conditions shall be satisfied:

(a) KDHE and the Authority shall have approved said assignment in writing;

(b) the assignee is a city, county, township, sewer district, improvement district or other political subdivision of the State or any combination thereof that has legal responsibility to treat wastewater;

(c) the assignee shall have expressly assumed in writing the full and faithful observance and performance of the Municipality's duties, covenants, and obligations under this Loan Agreement; provided, however, such assignment shall not relieve the Municipality of its duties, covenants, and obligations under this Loan Agreement;

(d) the assignment will not adversely impact KDHE's ability to meet its duties, covenants and obligations to the Authority under the Pledge Agreement, nor may the sale endanger the exclusion from gross income for federal income tax purposes of the interest on the Bonds; and

(e) the Municipality shall, at its expense, provide KDHE and the Authority with an opinion of a qualified attorney that each of the conditions set forth in *subparagraphs (b), (c), and (d)* hereof have been met.

ARTICLE V

EVENTS OF DEFAULT AND REMEDIES

Section 5.01. Notice of Default. If an Event of Default shall occur, the non-defaulting party shall give the party in default and the Authority prompt telephonic notice of the occurrence of such Event of Default, provided the non-defaulting party has knowledge of such Event of Default. Such telephonic notice shall be immediately followed by written notice of such Event of Default given in the manner set forth in **Section 6.01** hereof.

Section 5.02. Remedies on Default.

(a) Whenever an Event of Default shall have occurred and be continuing, KDHE or the Municipality shall have the right to take whatever action at law or in equity may appear necessary or desirable to collect the amounts then due and to become due or to enforce the performance and observance of any obligation or agreement of KDHE or the Municipality (including, without limitation, withholding remaining Loan disbursements, cancellation of the Loan Agreement and acceleration of the remaining scheduled principal payments set forth on **Exhibit B**, or such other remedies provided to the Secretary in the Loan Act and the Regulations.

(b) Upon the occurrence of an Event of Default on the part of KDHE, and to the extent permitted by law and availability of appropriated funds by the Kansas Legislature, KDHE shall, on demand, pay to the Municipality the reasonable fees and expenses incurred by the Municipality in the enforcement of performance or observation of any other duties, covenants, obligations or agreements of KDHE contained herein. Prior to incurring any such expenses, the Municipality shall provide written notice to KDHE that it intends to incur such expenses; provided, however, a failure by the Municipality to give such notice shall not affect the Municipality's right to receive payment for such expenses. Upon request by KDHE, the Municipality shall provide copies of statements evidencing the fees and expenses for which the Municipality is requesting payment.

Section 5.03. Expenses. Upon the occurrence of an Event of Default on the part of the Municipality, and to the extent permitted by law, the Municipality shall, on demand, pay to KDHE the reasonable fees and expenses incurred by KDHE in the collection of Loan Repayments or any other sum due hereunder or in the enforcement of performance or observation of any other duties, covenants, obligations or agreements of the Municipality contained herein. Prior to incurring any such expenses, KDHE shall provide written notice to the Municipality that it intends to incur such expenses; provided, however, a failure by KDHE to give such notice shall not affect KDHE's right to receive payment for

such expenses. Upon request by the Municipality, KDHE shall provide copies of statements evidencing the fees and expenses for which KDHE is requesting payment.

Section 5.04. Application of Moneys. Any moneys collected by KDHE pursuant to **Section 5.02** hereof shall be applied: (a) first, to pay interest on the Loan as the same becomes due and payable; (b) second, to pay principal due and payable on the Loan; (c) third, to pay expenses owed by the Municipality pursuant to **Section 5.03** hereof; and (d) fourth, to pay any other amounts due and payable hereunder as such amounts become due and payable.

Section 5.05. No Remedy Exclusive; Waiver; Notice. No remedy herein conferred upon or reserved to the Parties hereto is intended to be exclusive and every such remedy shall be cumulative and shall be in addition to every other remedy given under this Loan Agreement or now or hereafter existing at law or in equity. The parties hereto, in good faith, shall exercise such remedies with due diligence in a timely manner, however, no delay or omission to exercise any right, remedy or power accruing upon any Event of Default shall impair any such right, remedy or power or shall be construed to be a waiver thereof, but any such right, remedy or power may be exercised from time to time and as often as may be deemed expedient. In order to entitle the parties hereto to exercise any remedy reserved to them in this **Article V**, it shall not be necessary to give any notice, other than such notice as may be required in this **Article V**.

Section 5.06. Retention of Rights. Notwithstanding any assignment or transfer of this Loan Agreement pursuant to the provisions hereof, or anything else to the contrary contained herein, the parties hereto shall have the right upon the occurrence of an Event of Default to take any action, including (without limitation) bringing an action against the defaulting party at law or in equity, as such party may, in its discretion, deem necessary to enforce the obligations of the defaulting party pursuant to this Loan Agreement.

Section 5.07. Financial and Management. Upon failure of the Municipality to pay one or more installments of the Loan Repayments in a timely manner, or in the event that the Secretary deems it advisable or necessary, the Secretary, after consultation with the governing body of the Municipality, may require the Municipality to undergo a financial and management operations review. The governing body shall correct any deficiencies noted during such review and adopt charges or surcharges as may be required by the Secretary during the term of this Loan Agreement.

ARTICLE VI

MISCELLANEOUS

Section 6.01. Notices. All notices, certificates or other communications hereunder shall be sufficiently given and shall be deemed given when: (a) hand delivered; (b) mailed by registered or certified United States mail, postage prepaid; or (c) via telefax, with confirmation in the manner set forth in *subsection (b)*, to the parties hereinafter set forth at the following addresses:

(1) to KDHE:

Department of Health and
Environment
1000 SW Jackson Street, Suite 420
Topeka, Kansas 66612-1367
Attention: Bureau of Water

with a copy to its General Counsel

(2) to the Authority:

Kansas Development Finance
Authority
534 South Kansas Avenue, Suite 800
Topeka, Kansas 66603
Attention: President,

with a copy to its General Counsel

(3) to the Municipality:

at the address set forth on ***Exhibit H***.

All notices given by telefax as aforesaid shall be deemed given as of the date of evidence of receipt thereof by the recipient. All notices given by registered or certified mail as aforesaid shall be deemed duly given as of the date they are so deposited in the United States Postal Service, if postage is prepaid. Any of the foregoing parties may designate any further or different addresses to which subsequent notices, certificates or other communications shall be sent, by notice in writing given to the others.

Section 6.02. Binding Effect. This Loan Agreement shall inure to the benefit of and shall be binding upon KDHE and the Municipality and their respective successors and assigns.

Section 6.03. Severability. In the event any provision of this Loan Agreement shall be held illegal, invalid or unenforceable by any court of competent jurisdiction, such holding shall not invalidate, render unenforceable or otherwise affect any other provision hereof.

Section 6.04. Amendments, Supplements and Modifications. This Loan Agreement may not be amended, supplemented or modified without the prior written consent of the Authority.

Section 6.05. Execution in Counterparts. This Loan Agreement may be executed in several counterparts, each of which shall be deemed to be an original and all of which shall constitute but one and the same instrument.

Section 6.06. Governing Law and Regulations. This Loan Agreement shall be governed by and construed in accordance with the laws of the State, including the Loan Act and the Regulations, which Regulations are, by this reference thereto, incorporated herein as a part of this Loan Agreement.

Section 6.07. Consents and Approvals. Whenever the written consent or approval of the State shall be required under the provisions of this Loan Agreement, such consent or approval may only be given by the Secretary.

Section 6.08. Further Assurances. The Municipality shall, at the request of KDHE, authorize, execute, acknowledge and deliver such further resolutions, conveyances, transfers, assurances, financing statements and other instruments as may be reasonably necessary or desirable for better assuring, conveying, granting, assigning and confirming the rights, security interests and agreements granted or intended to be granted by this Loan Agreement.

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IN WITNESS WHEREOF, KDHE and the Municipality have caused this Loan Agreement to be executed, sealed and delivered, effective as of the date above first written.

THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT, acting on behalf of THE STATE OF KANSAS



By: Henry Murr, Deputy Secretary, for Dr. Murr
Title: Secretary

"KDHE"

Date: 1-3-17

EMPORIA, KANSAS

(Seal)

By: _____
Title: Mayor

"Municipality"

Date: _____

ATTEST:

By: _____
Title: Clerk

EXHIBIT A

DESCRIPTION OF THE PROJECT

The project will construction various upgrades to the wastewater treatment facilities, to improve effluent quality and reduce nutrients in the effluent discharge.



EXHIBIT B

DEDICATED SOURCE OF REVENUES AND LOAN REPAYMENT SCHEDULE

Dedicated Source of Revenue

The Municipality shall impose and collect such rates, fees and charges for the use and services furnished by or through the System, including all improvements and additions thereto hereafter constructed or acquired by the Municipality as will provide System Revenues or levy ad valorem taxes without limitation as to rate or amount upon all the taxable tangible property, real or personal, within the territorial limits of the Municipality to produce amounts which are sufficient to (a) pay the cost of the operation and maintenance of the System, (b) pay the principal of and interest on the Loan as and when the same become due, and (c) pay all other amounts due at any time under the Loan Agreement; provided, however, no lien or other security interest is granted by the Municipality to KDHE on the System Revenues under this Agreement. In the event that the System Revenues are insufficient to meet the obligations under the Loan and the Loan Agreement, the Municipality shall levy ad valorem taxes without limitation as to rate or amount upon all the taxable tangible property, real or personal, within the territorial limits of the Municipality to produce the amounts necessary for the prompt payment of the obligations under the Loan and Loan Agreement.

Loan Repayment Schedule

The Municipality and KDHE have agreed that interest becoming due semiannually on the Loan during the construction period for the Project may be capitalized and repaid as a part of the Loan. In this regard, KDHE shall give the Municipality written notice of each semiannual installment of interest becoming due during the construction period. At its option, the Municipality may elect to pay such amounts, and if so elected, must pay such amounts within 30 days of receipt of the notice of their becoming due. If the Municipality does not elect to pay such amounts within 30 days of receipt of such notice, the amount then due and owing as semiannual interest on the Loan shall be capitalized and added to the principal amount of the Loan and shall bear interest at the rate of interest set forth in **Section 2.02** hereof.

KANSAS WATER POLLUTION CONTROL REVOLVING LOAN FUND

Estimated Draws - Actual Interest Rate
Amortization of Loan Costs

Project Principal: 27,646,425.81
Interest During Const.: 322,898.80
Service Fee During Const.: 30,675.39
Gross Loan Costs: 28,000,000.00

Prepared for:
City of Emporia, Project No. C20 2002-01

12/23/2016 Gross Rate: 1.94% 1st Payment Date: 9/1/2018
Service Fee Rate: 0.25% Number of Payments: 40
Loan Interest Rate: 1.69%

Payment Number	Payment Date	Beginning Balance	Interest Payment	Principal Payment	Service Fee	Total Payment	Ending Balance
1	9/1/2018	28,000,000.00	236,600.00	576,307.31	35,000.00	847,907.31	27,423,692.69
2	3/1/2019	27,423,692.69	231,730.20	581,897.49	34,279.62	847,907.31	26,841,795.20
3	9/1/2019	26,841,795.20	226,813.17	587,541.90	33,552.24	847,907.31	26,254,253.30
4	3/1/2020	26,254,253.30	221,848.44	593,241.05	32,817.82	847,907.31	25,661,012.25
5	9/1/2020	25,661,012.25	216,835.55	598,995.49	32,076.27	847,907.31	25,062,016.76
6	3/1/2021	25,062,016.76	211,774.04	604,805.75	31,327.52	847,907.31	24,457,211.01
7	9/1/2021	24,457,211.01	206,663.43	610,672.37	30,571.51	847,907.31	23,846,538.64
8	3/1/2022	23,846,538.64	201,503.25	616,595.89	29,808.17	847,907.31	23,229,942.75
9	9/1/2022	23,229,942.75	196,293.02	622,576.86	29,037.43	847,907.31	22,607,365.89
10	3/1/2023	22,607,365.89	191,032.24	628,615.86	28,259.21	847,907.31	21,978,750.03
11	9/1/2023	21,978,750.03	185,720.44	634,713.43	27,473.44	847,907.31	21,344,036.60
12	3/1/2024	21,344,036.60	180,357.11	640,870.15	26,680.05	847,907.31	20,703,166.45
13	9/1/2024	20,703,166.45	174,941.76	647,086.59	25,878.96	847,907.31	20,056,079.86
14	3/1/2025	20,056,079.86	169,473.87	653,363.34	25,070.10	847,907.31	19,402,716.52
15	9/1/2025	19,402,716.52	163,952.95	659,700.96	24,253.40	847,907.31	18,743,015.56
16	3/1/2026	18,743,015.56	158,378.48	666,100.06	23,428.77	847,907.31	18,076,915.50
17	9/1/2026	18,076,915.50	152,749.94	672,561.23	22,596.14	847,907.31	17,404,354.27
18	3/1/2027	17,404,354.27	147,066.79	679,085.08	21,755.44	847,907.31	16,725,269.19
19	9/1/2027	16,725,269.19	141,328.52	685,672.20	20,906.59	847,907.31	16,039,596.99
20	3/1/2028	16,039,596.99	135,534.59	692,323.22	20,049.50	847,907.31	15,347,273.77
21	9/1/2028	15,347,273.77	129,684.46	699,038.76	19,184.09	847,907.31	14,648,235.01
22	3/1/2029	14,648,235.01	123,777.59	705,819.43	18,310.29	847,907.31	13,942,415.58
23	9/1/2029	13,942,415.58	117,813.41	712,665.88	17,428.02	847,907.31	13,229,749.70
24	3/1/2030	13,229,749.70	111,791.38	719,578.74	16,537.19	847,907.31	12,510,170.96
25	9/1/2030	12,510,170.96	105,710.94	726,558.66	15,637.71	847,907.31	11,783,612.30
26	3/1/2031	11,783,612.30	99,571.52	733,606.27	14,729.52	847,907.31	11,050,006.03
27	9/1/2031	11,050,006.03	93,372.55	740,722.25	13,812.51	847,907.31	10,309,283.78
28	3/1/2032	10,309,283.78	87,113.45	747,907.26	12,886.60	847,907.31	9,561,376.52
29	9/1/2032	9,561,376.52	80,793.63	755,161.96	11,951.72	847,907.31	8,806,214.56
30	3/1/2033	8,806,214.56	74,412.51	762,487.03	11,007.77	847,907.31	8,043,727.53
31	9/1/2033	8,043,727.53	67,969.50	769,883.15	10,054.66	847,907.31	7,273,844.38
32	3/1/2034	7,273,844.38	61,463.99	777,351.01	9,092.31	847,907.31	6,496,493.37
33	9/1/2034	6,496,493.37	54,895.37	784,891.32	8,120.62	847,907.31	5,711,602.05
34	3/1/2035	5,711,602.05	48,263.04	792,504.77	7,139.50	847,907.31	4,919,097.28
35	9/1/2035	4,919,097.28	41,566.37	800,192.07	6,148.87	847,907.31	4,118,905.21
36	3/1/2036	4,118,905.21	34,804.75	807,953.93	5,148.63	847,907.31	3,310,951.28
37	9/1/2036	3,310,951.28	27,977.54	815,791.08	4,138.69	847,907.31	2,495,160.20
38	3/1/2037	2,495,160.20	21,084.10	823,704.26	3,118.95	847,907.31	1,671,455.94
39	9/1/2037	1,671,455.94	14,123.80	831,694.19	2,089.32	847,907.31	839,761.75
40	3/1/2038	839,761.75	7,095.99	839,761.75	1,049.57	847,907.31	0.00
Totals			5,153,883.68	28,000,000.00	762,408.72	33,916,292.40	

Prepared by DOA, OCFO

EXHIBIT C

CONDITIONS APPLICABLE TO CONSTRUCTION OF THE PROJECT

1. Municipality agrees to expeditiously initiate and complete the Project in accordance with the following schedule:
 - a. Advertising for bids within 30 days of authorization to advertise.
 - b. Bid opening no sooner than 30 days after advertisement for bids.
 - c. Contract award within 60 days of bid opening.
 - d. Issuance of notice to proceed within 30 days of contract award.
 - e. Initiation of operation within 720 days of notice to proceed or no later than March 1, 2019.
 - f. Finalization of construction within 750 days of notice to proceed.
 - g. Project Performance Certification 365 days following Initiation of Operation.

No change may be implemented by the Municipality, which will delay or accelerate this schedule without prior approval of KDHE. KDHE must be promptly notified of any proposed changes.

2. The Municipality must certify no later than May 1, 2017, that all easements and rights-of-way necessary to allow construction of the Project have been obtained (i.e., all real property has been acquired, bonafide options have been taken or formal condemnation proceedings have been initiated for necessary real property).

The Municipality must submit a "Certificate as to Title to Project Site" document date June 2009 stating the property necessary to allow construction of the project has been obtained. The Municipality must submit these prior to permission to award a construction contract.

3. The Municipality agrees that all bid solicitations will include the following statement in the "Advertisement for Bids" for this project:

Nondiscrimination in Employment

Bidders on this work will be required to comply with the President's Executive Order No. 11246 as amended. Requirements for bidders and contractors under this order are explained in the specifications.

4. The municipality must comply with and include the requirements of the Prohibition Statement below in all contracts and subcontracts made to private entities.

The Contractor, its employees, subcontractors and subcontractors' employees may not engage in severe forms of trafficking in persons during the period of time that the contract is in effect; procure a commercial sex act during the period of time that the contract is in effect; or use forced labor in the performance of the contract or subcontract.

5. a. The Municipality agrees that all bid solicitations will include the following statement in the "Information to Bidders" for this project.

"Bidders on this work, including subcontractors or vendors, will be required to comply with the Kansas Act Against Discrimination (K.S.A. 44-1001 et. seq.) and the Kansas Age Discrimination in Employment Act (K.S.A. 44-1111 et. seq.)."

Currently there is no reporting procedure associated with this requirement.

- b. The Municipality agrees to comply with the Kansas Act Against Discrimination, K.S.A. 44-1001, et. seq. and the Kansas Age Discrimination in Employment Act, K.S.A. 44-1111, et. seq. as provided by law and to include those provisions in every contract or purchase order so that they are binding upon such subcontractors or vendors.
6. The Municipality will obtain a signed Certificate of Non-Segregated Facilities from the prime contractor prior to the award of a construction contract if the contract exceeds \$10,000 and is not exempt from the provisions of the equal opportunity clause. The Municipality will assure that the prime contractor obtains a signed copy of Certificate of Non-Segregated Facilities from each subcontractor prior to the award of any subcontract exceeding \$10,000, which is not exempt from the provisions of the equal opportunity clause. The certificate signed by the prime contractor is to be kept on file with the Municipality; and certificates signed by subcontractors are to be kept on file with the prime contractor.
7. The Municipality agrees to include Section 202 of Executive Order 11246 in all contracts and subcontracts for all construction contracts exceeding \$10,000.00.
8. Wage Rate Requirements:

CWSRF: The recipient agrees to include in all agreements to provide assistance for the construction of treatment works carried out in whole or in part with such assistance made available by a State water pollution control revolving fund as authorized by title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.), or with such assistance made available under section 205(m) of that Act (33 U.S.C. 1285(m)), or both, a term and condition requiring compliance with the requirements of section 513 of that Act (33 U.S.C. 1372) in all procurement contracts and sub-grants, and require that loan recipients, procurement contractors and sub-grantees include such a term and condition in subcontracts and other lower tiered transactions. All contracts and subcontracts for the construction of treatment works carried out in whole or in part with assistance made available as stated herein shall insert in full in any contract in excess of \$2,000 the contract clauses as attached hereto entitled "Wage Rate Requirements Under The Clean Water Act, Section 513." This term and condition applies to all agreements to provide assistance under the authorities referenced herein, whether in the form of a loan, bond purchase, grant, or any other vehicle to provide financing for a project, where such agreements are executed on or after October 30, 2009.

Preamble

With respect to the Clean Water State Revolving Funds, EPA provides capitalization grants to each State which in turn provides sub grants or loans to eligible entities within the State. Typically, the sub recipients are municipal or other local governmental entities that manage the funds. For

these types of recipients, the provisions set forth under Roman numeral I, below, shall apply. Although EPA and the State remain responsible for ensuring sub recipients' compliance with the wage rate requirements set forth herein, those sub recipients shall have the primary responsibility to maintain payroll records as described in Section 3(ii)(A), below and for compliance as described in Section I-5.

-OR-

Occasionally, the sub recipient may be a private for profit or not for profit entity. For these types of recipients, the provisions set forth in Roman Numeral II, below, shall apply. Although EPA and the State remain responsible for ensuring sub recipients' compliance with the wage rate requirements set forth herein, those sub recipients shall have the primary responsibility to maintain payroll records as described in Section II-3(ii)(A), below and for compliance as described in Section II-5.

Requirements Under The Water Resources Reform and Development Act of 2014 (WRRDA) For Sub recipients That Are Governmental Entities:

The following terms and conditions specify how recipients will assist EPA in meeting its Davis-Bacon (DB) responsibilities when DB applies to EPA awards of financial assistance under the Water Resources Reform and Development Act of 2014 (WRRDA) - with respect to State recipients and sub recipients that are governmental entities. If a sub recipient has questions regarding when DB applies, obtaining the correct DB wage determinations, DB provisions, or compliance monitoring, it may contact the State recipient. If a State recipient needs guidance, the recipient may contact Robert Bukaty, Bukaty.Robert@epa.gov, 913-551-7846, EPA Region VII Grants Management Section, for guidance. The recipient or sub recipient may also obtain additional guidance from DOL's web site at <http://www.dol.gov/whd/>

Applicability of the Davis- Bacon (DB) prevailing wage requirements.

Under the Water Resources Reform and Development Act of 2014 (WRRDA) -, DB prevailing wage requirements apply to the construction, alteration, and repair of treatment works carried out in whole or in part with assistance made available by a State water pollution control revolving. If a sub recipient encounters a unique situation at a site that presents uncertainties regarding DB applicability, the sub recipient must discuss the situation with the recipient State before authorizing work on that site.

Obtaining Wage Determinations.

Sub recipients shall obtain the wage determination for the locality in which a covered activity subject to DB will take place prior to issuing requests for bids, proposals, quotes or other methods for soliciting contracts (solicitation) for activities subject to DB. These wage determinations shall be incorporated into solicitations and any subsequent contracts. Prime contracts must contain a provision requiring that subcontractors follow the wage determination incorporated into the prime contract.

While the solicitation remains open, the sub recipient shall monitor www.wdol.gov weekly to ensure that the wage determination contained in the solicitation remains current. The sub recipients shall amend the solicitation if DOL issues a modification more than 10 days prior to the closing date (i.e. bid opening) for the solicitation. If DOL modifies or supersedes the applicable

wage determination less than 10 days prior to the closing date, the sub recipients may request a finding from the State recipient that there is not a reasonable time to notify interested contractors of the modification of the wage determination. The State recipient will provide a report of its findings to the sub recipient.

If the sub recipient does not award the contract within 90 days of the closure of the solicitation, any modifications or supersedes DOL makes to the wage determination contained in the solicitation shall be effective unless the State recipient, at the request of the sub recipient, obtains an extension of the 90 day period from DOL pursuant to 29 CFR 1.6(c)(3)(iv). The sub recipient shall monitor www.wdol.gov on a weekly basis if it does not award the contract within 90 days of closure of the solicitation to ensure that wage determinations contained in the solicitation remain current.

If the sub recipient carries out activity subject to DB by issuing a task order, work assignment or similar instrument to an existing contractor (ordering instrument) rather than by publishing a solicitation, the sub recipient shall insert the appropriate DOL wage determination from www.wdol.gov into the ordering instrument.

Sub recipients shall review all subcontracts subject to DB entered into by prime contractors to verify that the prime contractor has required its subcontractors to include the applicable wage determinations.

As provided in 29 CFR 1.6(f), DOL may issue a revised wage determination applicable to a sub recipient's contract after the award of a contract or the issuance of an ordering instrument if DOL determines that the sub recipient has failed to incorporate a wage determination or has used a wage determination that clearly does not apply to the contract or ordering instrument. If this occurs, the sub recipient shall either terminate the contract or ordering instrument and issue a revised solicitation or ordering instrument or incorporate DOL's wage determination retroactive to the beginning of the contract or ordering instrument by change order. The sub recipient's contractor must be compensated for any increases in wages resulting from the use of DOL's revised wage determination.

Contract and Subcontract provisions.

The Recipient shall insure that the sub recipient(s) shall insert in full in any contract in excess of \$2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a treatment work under the CWSRF - financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in § 5.1 or -FY 2015 Water Resource Reform and Development Act, the following clauses:

Minimum wages.

(i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate

on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in § 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

Sub recipients may obtain wage determinations from the U.S. Department of Labor's web site, www.dol.gov.

(ii)(A) The sub recipient(s), on behalf of EPA, shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The State award official shall approve a request for an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

The work to be performed by the classification requested is not performed by a classification in the wage determination; and

The classification is utilized in the area by the construction industry; and

The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the sub recipient(s) agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), documentation of the action taken and the request, including the local wage determination shall be sent by the sub

recipient (s) to the State award official. The State award official will transmit the request, to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210 and to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification request within 30 days of receipt and so advise the State award official or will notify the State award official within the 30-day period that additional time is necessary.

In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the sub recipient(s) do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the award official shall refer the request and the local wage determination, including the views of all interested parties and the recommendation of the State award official, to the Administrator for determination. The request shall be sent to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt of the request and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii)(B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

Withholding. The sub recipient(s), shall upon written request of the EPA Award Official or an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the (Agency) may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

Payrolls and basic records.

Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to the sub recipient, that is, the entity that receives the sub-grant or loan from the State capitalization grant recipient. Such documentation shall be available on request of the State recipient or EPA. As to each payroll copy received, the sub recipient shall provide written confirmation in a form satisfactory to the State indicating whether or not the project is in compliance with the requirements of 29 CFR 5.5(a)(1) based on the most recent payroll copies for the specified week. The payrolls shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on the weekly payrolls. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the sub recipient(s) for transmission to the State or EPA if requested by EPA, the State, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sub recipient(s).

Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

That the payroll for the payroll period contains the information required to be provided under § 5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under § 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the State, EPA or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency or State may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

Apprentices and trainees

Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed

as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or sub contractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended and 29 CFR part 30.

Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the EPA determines may be appropriate, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and sub recipient(s), State, EPA, the U.S. Department of Labor, or the employees or their representatives.

Certification of eligibility.

By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

Contract Provision for Contracts in Excess of \$100,000.

Contract Work Hours and Safety Standards Act. The sub recipient shall insert the following clauses set forth in paragraphs (a)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by Item 3, above or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or

permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (a)(1) of this section the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (a)(1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (a)(1) of this section.

Withholding for unpaid wages and liquidated damages. The sub recipient, upon written request of the EPA Award Official or an authorized representative of the Department of Labor, shall withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.

Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (a)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (a)(1) through (4) of this section.

In addition to the clauses contained in Item 3, above, in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in 29 CFR 5.1, the Sub recipient shall insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Sub recipient shall insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

Compliance Verification

The sub recipient shall periodically interview a sufficient number of employees entitled to DB prevailing wages (covered employees) to verify that contractors or subcontractors are paying the appropriate wage rates. As provided in 29 CFR 5.6(a)(6), all interviews must be conducted in confidence. The sub recipient must use Standard Form 1445 (SF 1445) or equivalent documentation to memorialize the interviews. Copies of the SF 1445 are available from EPA on request.

The sub recipient shall establish and follow an interview schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. Sub recipients must conduct more frequent interviews if the initial interviews or other information indicated that there is a risk that the contractor or subcontractor is not complying with DB.

Sub recipients shall immediately conduct interviews in response to an alleged violation of the prevailing wage requirements. All interviews shall be conducted in confidence."

The sub recipient shall periodically conduct spot checks of a representative sample of weekly payroll data to verify that contractors or subcontractors are paying the appropriate wage rates. The sub recipient shall establish and follow a spot check schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, if practicable, the sub recipient should spot check payroll data within two weeks of each contractor or subcontractor's submission of its initial payroll data and two weeks prior to the completion date the contract or subcontract. Sub recipients must conduct more frequent spot checks if the initial spot check or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB. In addition, during the examinations the sub recipient shall verify evidence of fringe benefit plans and payments there under by contractors and subcontractors who claim credit for fringe benefit contributions.

The sub recipient shall periodically review contractors and subcontractor's use of apprentices and trainees to verify registration and certification with respect to apprenticeship and training programs approved by either the U.S Department of Labor or a state, as appropriate, and that contractors and subcontractors are not using disproportionate numbers of, laborers, trainees and apprentices. These reviews shall be conducted in accordance with the schedules for spot checks and interviews described in Item 5(b) and (c) above.

Sub recipients must immediately report potential violations of the DB prevailing wage requirements to the EPA DB contact listed above and to the appropriate DOL Wage and Hour District Office listed at <http://www.dol.gov/whd/america2.htm>.

Requirements under EPA FFY 2010 and Subsequent Appropriations Act For Subrecipients That Are Not Governmental Entities

Section II is not applicable to the Kansas Water Pollution Control Revolving Fund, and so is removed from this document.

9. The Municipality hereby agrees to the following requirements regarding Disadvantaged

Business Enterprise (DBE) procurement:

- a. If the loan amount is greater than \$250,000, adopt the MBE/WBE Fair Share Objective/Goals established between KDHE and EPA for construction of the project. These goals will be made part of the construction contract specifications.
- b. Make the good faith efforts to contact DBE firms set out in 40 CFR Section 33.301 whenever procuring construction services for the project.
- c. Comply with the administrative provisions found in 40 CFR Section 33.302.
- d. If the loan amount is greater than \$250,000, maintain a bidders list of contractors and subcontractors that have previously bid on municipality projects funded by KWPCRLF as required by 40 CFR Section 33.501(b).
- e. The Municipality agrees to submit to KDHE a completed EPA Form 5700-52A by April 15 and October 15, once the notice to proceed for construction has been issued, thru the semi-annual period in which construction has been completed.

10. The Municipality agrees that all bid solicitations will include the following statement:

"Bidders must fully comply with Subpart C of 40 CFR Part 32 entitled Responsibilities of Participants Regarding Transactions. Contractors, subcontractors, or suppliers that appear on the Excluded Parties List System at www.epls.gov are not eligible for award of any contracts funded by the Kansas Water Pollution Control Revolving Loan Fund."

Subpart C of 40 CFR Part 32 must be included as part of the contract documents and EPA Form 5700-49 must be included in all contracts, completed and returned with the bid form.

The Municipality acknowledges that doing business with any part appearing in the "List of Parties Excluded from Federal Procurement or Non Procurement Programs" may result in disallowance of federal funds under this Loan Agreement and may also result in suspension or debarment under this Part.

11. The Municipality agrees that all bid solicitations will include the Anti-Lobbying Certification form, which must be completed and returned with the bid form.
12. The owner or successful bidder must obtain, prior to construction, permit coverage from KDHE to discharge stormwater runoff associated with construction activity for most any project which disturbs one acre or more of soils. A Notice of Intent form (NOI) must be submitted to KDHE 60 days before the start of construction and a permit determination from KDHE must be made before construction can begin. The Kansas construction stormwater general permit, a Notice of Intent (application form), a frequently asked questions file, and supplemental materials are available online on the KDHE Stormwater Web Page at www.kdhe.state.ks.us/stormwater.
13. The Municipality shall follow applicable state procurement laws and regulations, and procedures established by the Secretary of KDHE as presented in Water Quality Policy Memorandum No.

10-1 dated May 3, 2010 - Final. KDHE approval is required prior to procurement.

14. In accordance with OMB Circular A-133, which implements the Single Audit Act, the municipality hereby agrees to obtain a single audit from an independent auditor if it expends \$750,000 or more in total Federal funds in any fiscal year, and the city will be notified by KDHE if an A-133 Single Audit is required. Please note this loan is provided, in part, with federal funds (CFDA 66.458).
The A-133 Single Audit requirements *WILL BE APPLICABLE* to this loan to Emporia.
15. The Municipality agrees to make prompt payment to its contractor(s) of sums due for construction and to retain only such amounts as may be justified by specific circumstances and provisions of this Loan Agreement or the construction contract.
16. The Municipality hereby assures that the engineering firm principally responsible for supervising construction and for providing engineering services during construction (engineer associated with the design build team) will continue its relationship with the Municipality for a period of up to one year after initiation of operation of the Project. During this period, the engineering firm shall direct the operation of the Project, train operating personnel and prepare curricula and training material for operating personnel. The following specific requirements apply:
 - a. The Municipality agrees the performance standards applicable to the Project are:
 - (1) All construction deficiencies have been resolved.
 - (2) The wastewater treatment facilities meet all effluent limitations and design treatment goals of the NPDES permit as issued to the city of Emporia.
 - b. One year after completion of construction and initiation of operation of the Project, the Municipality shall certify to KDHE whether or not such Project meets the design specifications and effluent limitations contained in subparagraph a. of this condition. Any statement of non-compliance must be accompanied by a corrective action report containing: an analysis of the cause of the Project's inability to meet performance standards; actions necessary to bring it into compliance, and a reasonably scheduled date for positive certification of the Project. Timely corrective action will be executed by the Municipality.
 - c. Municipality agrees to furnish KDHE with an annual report describing actions taken to date to achieve positive certification, planned future activities, the Project's status and potential for positive certifications.
17. A final plan of operation and draft operation and maintenance manual shall be submitted by the Municipality for approval by KDHE at or prior to 50 percent construction completion. The plan of operation must include, but is not limited to, an assessment of the employee skills necessary to carry out the operation and maintenance function and a training plan designed to provide employees with the necessary skills. Details on the skills assessment must be submitted along with the final plan of operation. Necessary training as indicated by the skills assessment must be provided in accordance with the approved training plan.
18. The rates and ordinances enacting the approved user charge system and sewer use

requirements as approved by KDHE shall be enacted prior to initiation of operation. The city must submit the draft ordinance and/or revisions to ordinances to KDHE for review and approval.

19. The municipality agrees to provide a Fiscal Sustainability Plan (FSP) document to KDHE, including an appropriate Asset Management Plan, prior to final closeout of the Loan Agreement project. The required scope of the FSP will be provided to the municipality by letter from KDHE.
20. None of the funds made available by this loan agreement shall be used for a project for the construction, alteration, maintenance, or repair of a wastewater collection system or wastewater treatment plant unless all of the iron and steel products used in the project are produced in the United States. The term "iron and steel products" means the following products made primarily of iron or steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and construction materials.
21. This Project is consistent with the Kansas Water Quality Management Plan, subject to the provisions of Section 208(d) and 208(e) of the Federal Water Pollution Control Act, as amended. Service by the Project will not be denied or conditioned on the basis of factors or issues unrelated to wastewater management.
22. The Loan Recipient must comply with Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title IX of the Education Amendments of 1972, the Age Discrimination Act of 1975, and a variety of program-specific statutes with nondiscrimination requirements. Other civil rights laws may impose additional requirements on the Loan Recipient. These laws include, but are not limited to, Title VII of the Civil Rights Act of 1964 (prohibiting race, color, national origin, religion, and sex discrimination in employment and in services provided by State and local governments, businesses, and non-profit agencies), and the Fair Housing Act (prohibiting race, color, national origin, age, family status, and disability discrimination in housing), as well as any other applicable civil rights laws.
23. The Loan Recipient must comply with the "Cross-Cutting Federal Authorities: A Handbook on Their Application in the Clean Water and Drinking Water State Revolving Fund Programs", dated October 2003 and found at <http://www.epa.gov/owm/cwfinance/cwsrf/enhance/DocFiles/Other%20Docs/Crosscutterhandbook.pdf>
24. The Municipality hereby agrees to implement measures to mitigate all known adverse environmental effects of the project. The Municipality hereby agrees to request and obtain intergovernmental environmental evaluations of the proposed rehabilitation wastewater stabilization lagoon and the Municipality agrees to implement measures to mitigate all known adverse environmental effects of the project. The following mitigate actions are required: (Subject to Environmental Clearance)
The Municipality must submit a final Facility Plan for the project with the seal of a Kansas-licensed Professional Engineer for KDHE review and approval.
The Municipality must submit the public meeting and public hearing summary/minutes, advertisement(s), and list of attendees to KDHE for use in preparing the FONSI.
The Municipality must solicit and submit Inter Governmental Review comments in accordance with the procedures established by the KWPCRF program, for use in preparing the FONSI.

25. If deemed necessary by Inter Governmental review, the Municipality shall obtain a Corps of Engineers Section 404 and/or Section 10 permit prior to awarding the construction contract.
26. The design of the upgraded wastewater treatment facilities will provide flood protection to the established 500 year flood plain elevation. And design cost or construction improvements as required to achieve 500 year flood level protection are allowable costs of the KWPCRF loan.

EXHIBIT D

USE OF LOAN PROCEEDS

The project will construction various upgrades to the wastewater treatment facilities, to improve effluent quality and reduce nutrients in the effluent discharge.

The loan proceeds will be utilized to pay the costs of:

1. **Construction:** All action construction costs of the improvements to the wastewater collection and treatment system and incidental work associated with construction.
2. **Engineering:** All actual costs of construction services including basic services, design, procurement, inspection, final plan of operation, user charge and sewer use ordinance development, one year project performance evaluation, and all items as included in the engineering contract for the project, including the Fiscal Sustainability Plan.
3. **Administrative:** All reasonable costs of legal and financial administrative support directly provided for the project, including financial audits.

Unallowable Costs: The costs of full time employees of the municipality and purchase of land and easements.

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EXHIBIT E

INSTRUCTIONS FOR REQUESTING DISBURSEMENTS

1. All payment requests must be filed on the Outlay Report and Request for Disbursement Form and represent the actual completion level of the project at the date the request is prepared.
2. All cost entries must be based upon allowable work in place, which is due and payable. This means that you may **not** request payment for:
 - a. Any work or services, which have not been explicitly approved by the KDHE in the Loan Agreement or subsequent amendments.
 - b. Any work performed under a change order unless written approval of the change order has been given by the State.
 - c. Any ineligible project costs.
 - d. Any retainage which you are withholding from the construction contractor, engineer, etc.
 - e. Expenditures relating to site acquisition, easements, rights-of way, EXCEPT: (1) additional work required by the Uniform Relocation Assistance and Real Property Acquisition Policies Act such as appraisal and certification services; (2) when the site itself is allowable in accordance with Federal SRF regulations and guidance; and (3) costs incurred in eminent domain proceedings.
 - f. Costs associated with the approval, preparation, issuance and sale of Bonds, and other costs incidental to normal operating overhead of a Municipality, whether performed by Municipal employees, the engineer, or the attorney.

It is essential that you understand the cost basis of the approved Loan amount. It is, therefore, necessary that you read the Loan Agreement (including all conditions) and its transmittal letter, any Loan amendments and Project correspondence, and that you maintain current and accurate files on all approved change orders. Failure to follow these procedures may result in your requesting and subsequently receiving overpayment of loan funds, which later may, in turn, result in substantial inconvenience to you and the Municipality. This could include repayment or crediting to KDHE the interest earned on overpaid funds, and any penalties that can result from this action.

EXHIBIT E - REQUEST FOR DISBURSEMENT FROM KDHE REVOLVING LOAN PROGRAMS			
INDICATE WHICH LOAN PROGRAM THIS REQUEST IS FOR:		KDHE PROJECT NUMBER (REFER TO LOAN AGREEMENT)	
KANSAS WATER POLLUTION CONTROL REVOLVING FUND _____		KWPCRF PROJECT # C20	
KANSAS PUBLIC WATER SUPPLY LOAN FUND _____		KPWSLF PROJECT #	
IS THIS THE FINAL DISBURSEMENT REQUEST FOR THIS LOAN? YES _____ NO _____	RECIPIENT INFORMATION		
NAME :			
ADDRESS or PO box (include City, State, Zip) :			
The undersigned hereby requests that the following amounts be disbursed for the following Project Costs as defined in the loan agreement:			
Classification	Invoice amounts (invoices must be attached)	Invoiced from (list payee(s))	Description
a. Administrative expense (loan admin services, publication fees, attorney fees, etc.)			
b. Engineering services expense			
c. Land, easements (Not allowable under KWPCRF)			
d. Construction Contract Expense			
e. Equipment (by separate KDHE approved contract or procedure)			
f. Miscellaneous cost (not categorized above)			
g. Total Invoices Submitted (sum of lines a thru f)			
h. Deductions for other sources of funding used (from grants or cash on hand)			
i. Total Disbursement Requested from KDHE* (Line g minus line h)			
<p>CERTIFICATION: I hereby state and certify that: (i) the amounts requested, are or were necessary and appropriate in connection with the purchase, construction and installation of the Project, have been properly incurred and are a proper disbursement of the proceeds of the Loan and that an inspection has been performed and all work is in accordance with the terms of the Loan; have been paid or are justly due as stated above; and have not been the basis of any previous requisition from the proceeds of the Loan; (ii) all representations made in the Agreement remain true as of the date of this request; and (iii) no adverse developments affecting the financial condition of the Recipient or its ability to complete the Project or to repay the Loan have occurred.</p>			
RECIPIENT NAME:			
Signature of Authorized Certifying Official			
Typed or Printed Name and Title			
Date Signed	Telephone (Area Code, number & ext.)	Email	

Revised 10/2010

*Total Approved by KDHE will be shown on separate sheet

EXHIBIT F

FORM OF MUNICIPALITY ORDINANCE

EXCERPT OF MINUTES OF A MEETING
OF THE GOVERNING BODY OF
THE CITY OF EMPORIA, KANSAS
HELD ON [ORDINANCE DATE]

The Governing Body of the City met in [regular/special] session at the usual meeting place in the City, at [meeting time], the following members being present and participating, to-wit:

Absent:

The Mayor declared that a quorum was present and called the meeting to order.

(Other Proceedings)

Thereupon, there was presented an Ordinance entitled:

AN ORDINANCE AUTHORIZING THE EXECUTION OF A LOAN AGREEMENT BETWEEN EMPORIA, KANSAS AND THE STATE OF KANSAS, ACTING BY AND THROUGH THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT FOR THE PURPOSE OF OBTAINING A LOAN FROM THE KANSAS WATER POLLUTION CONTROL REVOLVING FUND FOR THE PURPOSE OF FINANCING A WASTEWATER TREATMENT PROJECT; ESTABLISHING A DEDICATED SOURCE OF REVENUE FOR REPAYMENT OF SUCH LOAN; AUTHORIZING AND APPROVING CERTAIN DOCUMENTS IN CONNECTION THEREWITH; AND AUTHORIZING CERTAIN OTHER ACTIONS IN CONNECTION WITH THE LOAN AGREEMENT.

Thereupon, [Council member] _____ moved that said Ordinance be passed. The motion was seconded by [Council member] _____. Said Ordinance was duly read and considered, and upon being put, the motion for the passage of said Ordinance was carried by the vote of the Governing Body, the vote being as follows:

Yes: _____

No: _____

Thereupon, the Mayor declared said Ordinance duly passed and the Ordinance was then duly numbered Ordinance No. _____ and was signed and approved by the Mayor and attested by the Clerk. The Clerk was directed to publish the Ordinance one time in the official newspaper of the City.

(Other Proceedings)

On motion duly made, seconded and carried, the meeting thereupon adjourned.

(SEAL)

Clerk

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(Published in [Official City Newspaper] on [publication date])

ORDINANCE NO. _____

AN ORDINANCE AUTHORIZING THE EXECUTION OF A LOAN AGREEMENT BETWEEN EMPORIA, KANSAS AND THE STATE OF KANSAS, ACTING BY AND THROUGH THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT FOR THE PURPOSE OF OBTAINING A LOAN FROM THE KANSAS WATER POLLUTION CONTROL REVOLVING FUND FOR THE PURPOSE OF FINANCING A WASTEWATER TREATMENT PROJECT; ESTABLISHING A DEDICATED SOURCE OF REVENUE FOR REPAYMENT OF SUCH LOAN; AUTHORIZING AND APPROVING CERTAIN DOCUMENTS IN CONNECTION THEREWITH; AND AUTHORIZING CERTAIN OTHER ACTIONS IN CONNECTION WITH THE LOAN AGREEMENT.

WHEREAS, the Federal Water Quality Act of 1987 (the "Federal Act") established revolving fund program for public wastewater treatment systems to assist in financing the costs of infrastructure needed to achieve or maintain compliance with the Federal Act and to protect the public health and authorized the Environmental Protection Agency (the "EPA") to administer a revolving loan program operated by the individual states; and

WHEREAS, to fund the state revolving fund program, the EPA will make annual capitalization grants to the states, on the condition that each state provide a state match for such state's revolving fund; and

WHEREAS, by passage of the Kansas Water Pollution Control Revolving Fund Act, K.S.A. 65-3321 through 65-3329, inclusive (the "Loan Act"), the State of Kansas (the "State") has established the Kansas Water Pollution Control Revolving Fund (the "Revolving Fund") for purposes of the Federal Act; and

WHEREAS, under the Loan Act, the Secretary of the Kansas Department of Health and Environment ("KDHE") is given the responsibility for administration and management of the Revolving Fund; and

WHEREAS, the Kansas Development Finance Authority (the "Authority") and KDHE have entered into a Pledge Agreement (the "Pledge Agreement") pursuant to which KDHE agrees to enter into Loan Agreements with Municipalities for public wastewater treatment projects (the "Projects") and to pledge the Loan Repayments (as defined in the Pledge Agreement) received pursuant to such Loan Agreements to the Authority; and

WHEREAS, the Authority is authorized under K.S.A. 74-8905(a) and the Loan Act to issue revenue bonds (the "Bonds") for the purpose of providing funds to implement the State's requirements under the Federal Act and to loan the same, together with available funds from the EPA capitalization grants, to Municipalities within the State for the payment of Project Costs (as said terms are defined in the Loan Act); and

WHEREAS, Emporia, Kansas (the "Municipality") is a municipality as said term is defined in the Loan Act which operates a wastewater collection and treatment system (the "System"); and

WHEREAS, the System is a public Wastewater Treatment Works, as said term is defined in the Loan Act; and

WHEREAS, the Municipality has, pursuant to the Loan Act, submitted an Application to KDHE to obtain a loan from the Revolving Fund to finance the costs of improvements to its System consisting of the following:

The project will construction various upgrades to the wastewater treatment facilities, to improve effluent quality and reduce nutrients in the effluent discharge (the "Project"); and

WHEREAS, the Municipality has taken all steps necessary and has complied with the provisions of the Loan Act and the provisions of K.A.R. 28-16-110 to 28-16-138 (the "Regulations") applicable thereto necessary to qualify for the loan; and

WHEREAS, KDHE has informed the Municipality that it has been approved for a loan in amount of not to exceed Twenty Eight million dollars [\$28,000,000] (the "Loan") in order to finance the Project; and

WHEREAS, the governing body of the Municipality hereby finds and determines that it is necessary and desirable to accept the Loan and to enter into a loan agreement and certain other documents relating thereto, and to take certain actions required in order to implement the Loan Agreement.

THEREFORE, BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF EMPORIA, KANSAS:

Section 1. Authorization of Loan Agreement. The Municipality is hereby authorized to accept the Loan and to enter into a certain Loan Agreement, with an effective date of December 23, 2016, with the State of Kansas acting by and through the Kansas Department of Health and Environment (the "Loan Agreement") to finance the Project Costs (as defined in the Loan Agreement). The Mayor and Clerk are hereby authorized to execute the Loan Agreement in substantially the form presented to the governing body this date, with such changes or modifications thereto as may be approved by the Mayor and the City Attorney, the Mayor's execution of the Loan Agreement being conclusive evidence of such approval.

Section 2. Establishment of Dedicated Source of Revenue for Repayment of Loan. Pursuant to the Loan Act, the Municipality hereby establishes a dedicated source of revenue for repayment of the Loan. In accordance therewith, the Municipality shall impose and collect such rates, fees and charges for the use and services furnished by or through the System, including all improvements and additions thereto hereafter constructed or acquired by the Municipality as will provide System Revenues or levy ad valorem taxes without limitation as to rate or amount upon all the taxable tangible property, real or personal, within the territorial limits of the Municipality to produce amounts which are sufficient to (a) pay the cost of the operation and maintenance of the System, (b) pay the principal of and interest on the Loan as and when the same become due, and (c) pay all other amounts due at any time under the Loan Agreement; provided, however, no lien or other security interest is granted by the Municipality to KDHE on the System Revenues under this Agreement. In the

event that the System Revenues are insufficient to meet the obligations under the Loan and the Loan Agreement, the Municipality shall levy ad valorem taxes without limitation as to rate or amount upon all the taxable tangible property, real or personal, within the territorial limits of the Municipality to produce the amounts necessary for the prompt payment of the obligations under the Loan and Loan Agreement.

In accordance with the Loan Act, the obligations under the Loan and the Loan Agreement shall not be included within any limitation on the bonded indebtedness of the Municipality.

Section 3. Further Authority. The Mayor, Clerk and other City officials are hereby further authorized and directed to execute any and all documents and take such actions as they may deem necessary or advisable in order to carry out and perform the purposes of the Ordinance, and to make alterations, changes or additions in the foregoing agreements, statements, instruments and other documents herein approved, authorized and confirmed which they may approve, and the execution or taking of such action shall be conclusive evidence of such necessity or advisability.

Section 4. Governing Law. The Ordinance and the Loan Agreement shall be governed exclusively by and construed in accordance with the applicable laws of the State of Kansas.

Section 5. Effective Date. This Ordinance shall take effect and be in full force from and after its passage by the governing body of the City and publication in the official City newspaper.

PASSED by the governing body of the City on [Ordinance Date] and [signed][and **APPROVED**] by the Mayor.

(SEAL)

Mayor

ATTEST:

Clerk

[APPROVED AS TO FORM ONLY.]

[City Attorney]

EXHIBIT G

FORM OF OPINION OF MUNICIPALITY'S COUNSEL

[Date]

Kansas Development Finance Authority
Topeka, Kansas

The Kansas Department of Health and
Environment, acting on behalf of
The State of Kansas
Topeka, Kansas

Re: Loan Agreement effective as of December 23, 2016, between the Kansas Department of Health and Environment ("KDHE"), acting on behalf of the State of Kansas (the "State"), and Emporia, Kansas (the "Municipality")

I have acted as counsel to the Municipality in connection with the authorization, execution and delivery of the above referenced Loan Agreement (the "Loan Agreement"). In my capacity as counsel to the Municipality, I have examined original or certified copies of minutes, ordinances of the Municipality and other documents relating to the authorization of the Project, the authorization, execution and delivery of the Loan Agreement, and the establishment of a Dedicated Source of Revenue (as defined in the Loan Agreement) for repayment of the Loan evidenced by the Loan Agreement. Capitalized terms used herein and not otherwise defined herein shall have the meanings assigned thereto in the Loan Agreement.

In this connection, I have examined the following:

- (a) an executed or certified copy of the Loan Agreement;
- (b) proceedings adopted or taken by the Municipality to authorize and approve the Project to be constructed with the proceeds of the Loan evidenced by the Loan Agreement;
- (c) Ordinance No. ____ of the Municipality (the "Ordinance") adopted on [Ordinance Date], and other proceedings of the Municipality taken and adopted in connection with the authorization, execution and delivery of the Loan Agreement, and the establishment of a Dedicated Source of Revenue for repayment of the Loan evidenced by the Loan Agreement; and

(d) such other proceedings, documents and instruments as I have deemed necessary or appropriate to the rendering of the opinions expressed herein.

In this connection, I have reviewed such documents, and have made such investigations of law, as deemed relevant and necessary as the basis for the opinions hereinafter expressed.

Based upon the foregoing, it is my opinion, as of the date hereof, that:

1. The Municipality is a municipal corporation duly created, organized and existing under the laws of the State.
2. The Municipality operates a public Wastewater Treatment Works, as said term is defined in the Loan Act.
3. The Project has been duly authorized by the Municipality.
4. The Municipality has all requisite legal power and authority to, and has been duly authorized under the terms and provisions of the Ordinance to, execute and deliver, and perform its obligations under, the Loan Agreement.
5. The Loan Agreement has been duly authorized, executed and delivered by the Municipality and constitutes a valid and binding agreement of the Municipality enforceable in accordance with its terms, subject as to enforcement of remedies to any applicable bankruptcy, reorganization, insolvency, moratorium or other similar laws affecting creditors' rights heretofore or hereafter enacted, and subject further to the exercise of judicial discretion in accordance with general principles of equity. In rendering this opinion I have assumed due authorization, execution and delivery of the Loan Agreement by the State, acting by and through KDHE.
6. The Municipality has duly authorized the Dedicated Source of Revenue for repayment of the Loan to be made pursuant to the Loan Agreement.
7. To the best of my knowledge, the execution and delivery of the Loan Agreement by the Municipality will not conflict with or result in a breach of any of the terms of, or constitute a default under, any ordinance, indenture, mortgage, deed of trust, lease or other agreement or instrument to which the Municipality is a party or by which it or any of its property is bound or any of the rules or regulations applicable to the Municipality or its property or of any court or other governmental body.

Very truly yours,

EXHIBIT H

MUNICIPALITY'S NOTICE ADDRESS

Mayor and City Council
City Hall
522 Mechanic Street
P O Box 928
Emporia, KS 67801

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2
4



Commission Action Report

Award 2026 Hazardous Sidewalk Program

Title: Award 2026 Hazardous Sidewalk Program, Project No. HZ2601

Agenda Date: March 4, 2026

Presented By: James Ubert, City Engineer

Background:

At 2:00 pm, Tuesday, February 23, 2026, the City Engineer's Office publicly opened bids for the 2026 Hazardous Sidewalk Program. The bids received are used for setting unit prices for each individual project line item. Bid totals were achieved by multiplying these unit prices with our initial estimated quantities from the list of site work projected for the 2026 Hazardous Sidewalk program. The following are the totals for the bids received and the Engineer's Estimate.

CONTRACTOR	BASE BID
S.R. Coffman Construction	\$96,792.50
Burlington Construction	\$98,225.00
Engineer's Estimate	\$97,600.00

Discussion:

Two (2) bids were received and the Bid Tabulation is attached.

Financial considerations:

The 2026 Hazardous Sidewalk Program is budgeted at \$150,000.00, paid from Multi-Year Fund. Locations and quantities will be added throughout the year as property owners sign up for participation in the program. The program also allows the homeowner the option to hire their own bonded contractor to replace their sidewalk at these set unit prices. The program participation is 25% residential property owner/75% City and 50% commercial property owner/50% City, beginning 2025.

Recommended action:

Staff recommends awarding the contract to S.R. Coffman Construction.

Attachments:

Bid tabulation.

**CITY OF EMPORIA, KS
 BID TABULATION
 FOR 2026 HAZARDOUS SIDEWALK PROJECT, PROJECT NO. HZ2601**

Bid Date and Time:
 2:00 pm on 02/24/2026
 at City Engineering

Quantity (Base Bid)	Units	Description	S.R. COFFMAN CONSTRUCTION		BURLINGTON CONSTRUCTION				ENGINEER'S ESTIMATE	
			Unit	Total	Unit	Total	Unit	Total	Unit	Total
140	S.F.	4" SIDEWALK (0-100 SF)	\$20.00	\$2,800.00	\$19.00	\$2,660.00			\$21.00	\$2,940.00
2,000	S.F.	4" SIDEWALK (101-250 SF)	\$11.00	\$22,000.00	\$11.00	\$22,000.00			\$10.50	\$21,000.00
3,500	S.F.	4" SIDEWALK (251+ SF)	\$9.50	\$33,250.00	\$10.00	\$35,000.00			\$9.50	\$33,250.00
500	S.Y.	6" SIDEWALK	\$12.25	\$6,125.00	\$12.00	\$6,000.00			\$13.25	\$6,625.00
150	S.F.	6" REINF. SIDEWALK	\$12.75	\$1,912.50	\$13.50	\$2,025.00			\$14.00	\$2,100.00
80	Hr.	MISC. SITE WORK	\$70.00	\$5,600.00	\$70.00	\$5,600.00			\$72.50	\$5,800.00
120	L.F.	CURB & GUTTER R&R	\$71.00	\$8,520.00	\$73.50	\$8,820.00			\$75.00	\$9,000.00
40	S.Y.	HANDICAP RAMP (WARNING PANEL)	\$355.00	\$14,200.00	\$350.00	\$14,000.00			\$365.00	\$14,600.00
5	S.Y.	HANDICAP RAMP (NO PANEL)	\$285.00	\$1,425.00	\$280.00	\$1,400.00			\$295.00	\$1,475.00
60	L.F.	SAW CUTTING	\$16.00	\$960.00	\$12.00	\$720.00			\$13.50	\$810.00
TOTAL AMOUNT OF BASE BID:				\$96,792.50		\$98,225.00				\$97,600.00



RECEIVED
FEB 23 2026

BY:

February 18, 2026

Dear Ms. Smith,

We want to take a moment to inform you of an upcoming adjustment to Sparklight's residential high-speed internet rates.

We understand that staying connected is essential — whether for work, school, entertainment or keeping in touch with loved ones. That's why Sparklight continues to invest in its network to deliver a seamless online experience to meet the evolving connectivity needs of our customers.

To support growing demand and advancing technology, Sparklight has made significant network enhancements, including expanding capacity and reliability improvements. The company also continues to introduce innovative solutions such as intelligent Wi-Fi powered by eero, which provides whole-home coverage, enhanced security features and seamless connectivity across customer devices.

While we work hard to minimize price adjustments, periodic updates are necessary to ensure we can continue delivering the speed, reliability and innovation customers rely on — all supported by local teams who live and work in the communities we serve.

Effective March 30, the monthly rate for Sparklight residential high-speed internet service will increase by \$5 per month.

Customers who enroll in paperless billing and Auto Pay using a debit card or checking or savings account will receive a **\$10 monthly credit**, which will fully offset this rate adjustment. Customers already enrolled in paperless billing and Auto Pay with an eligible payment method will see no increase to their monthly bill.

Customers currently on a promotional rate are excluded from our high-speed internet rate adjustment during the term of their promotion and will receive an increased promotional credit of \$5 per month to offset the internet rate adjustment until the promotion ends. Customers on community-based pricing are also excluded from this rate adjustment.

As always, we encourage customers to contact Sparklight to discuss available options and ensure they are on a plan that best fits their usage and budgetary needs. We remain committed to transparency, customer choice and continued investment in the communities we serve.

Please feel free to contact us if you have any questions or would like additional information. We appreciate our ongoing partnership and look forward to continuing to serve your community.

Sincerely,
Bill Mason
Director, Regional Operations
573-368-1101
bill.mason@sparklight.biz

Commission Meeting

11:00 a.m.

February 18, 2026

The Governing Body of the City of Emporia, Kansas, met in Regular Session, Wednesday, February 18, 2026, with Mayor Smith presiding and Commissioners Duncan, Harter, Ogle and Steinkuhler present. Also present were City Manager Cocking, Deputy City Manager Detter, Assistant City Manager Wash, City Clerk Sull and City Attorney Montgomery.

Mayor Smith read a proclamation declaring the month of February as “Career and Technical Education (CTE) Month” by the Association for Career and Technical Education and supported by Flint Hills Technical College. The CTE programming offers students the opportunity to gain the academic, technical and employability skills necessary for career readiness. Leaders from business and industry nationwide report increasing challenges related to addressing the skills gap and connecting qualified professionals with careers in critical and growing CTE-related fields, such as advanced manufacturing, cybersecurity, energy, healthcare, information technology and transportation. CTE programs with FHTC prepare students for rewarding careers by offering programs of study that lead to industry-recognized credentials. She urged all citizens in this community to become familiar with the services and benefits offered by Flint Hills Technical College and to support and participate in these CTE programs to enhance their individual skills and productivity.

Mayor Smith then presented the proclamation.

**CITY COMMISSION
(Public Comment)**

This is the time for the public to make comments.

The public is invited to make comments at this time. Please limit comments to two (2) minutes each. Please state your name and address prior to making comments. No comments were made at this time.

**ECONOMIC DEVELOPMENT
(Gazette Building Development, LLC)
(CDBG Commercial Rehabilitation Project)
(Grant No. 23-CR-004 – Commercial Rehabilitation Project)
(Public Hearing)**

Deputy City Manager Detter was recognized and addressed the Governing Body. He stated the Department of Commerce Small Cities CDBG program requires a public hearing on the close out of projects receiving CDBG funding. The Gazette Building at 517 Merchant Street has completed the CDBG portion of the project. The proposed scope of work consisted of sprinkler system, roofing, ADA restrooms, service lines and fire/domestic, fire alarm, clean and repair masonry wall, ADA elevator and shaft, repoint/rebuild brick masonry, remove/replace windows, and miscellaneous appurtenances related to constructions activities. The project received \$248,000 in CDBG Funds with \$261,901 local match funds from the owner of the building at 517 Merchant Street. The City of Emporia had no contributed funds to the project. Staff recommend conducting a public hearing on the close out of CDBG Commercial Rehabilitation project at 517 Merchant Street. The hearing will allow for public comment on the project.

Mayor Smith then declared the public hearing open.

As no one in attendance wished to address the Governing Body, Mayor Smith then declared the public hearing closed.

**CITY COMMISSION
(Board Appointment)**

It was moved by Commissioner Ogle, seconded by Mayor Smith, that Brian Potter be appointed to the Flint Hills Technical Board of Trustees to fill an unexpired term ending June 30, 2028. The vote follows: Commissioner Ogle, aye; Mayor Smith, aye; Commissioner Duncan, aye; Commissioner Harter, aye; and Commissioner Steinkuhler, aye.

ENGINEERING
(U.S. Department of Transportation)
(Fiscal Year 2023 Safe Streets and Roads for All Grant Program)
(Agreement with Federal Highway Administration)

Jim Ubert, City Engineer, was recognized and addressed the Governing Body. He stated the Infrastructure Investment and Jobs Act (IIJA) established the Safe Streets and Road for All (SS4A) competitive grant program with \$5 billion in appropriated funds from 2022 to 2026. The City of Emporia submitted the SS4A application and was approved during FY2023 for \$300,000; FHWA share of \$240,000; KDOT share of \$45,000; and City of Emporia share of \$15,000. In the summer of 2024, the City Engineering Department was funded \$45,000 by KDOT. There is an agreement in place with KDOT for \$45,000 reimbursement. In the fall of 2025, City Engineering Department was notified by FHWA Topeka staff about the FHWA SS4A agreement. The FHWA SS4A agreement is to fund a Transportation Safety Study throughout the City of Emporia. Staff recommend approval of the FHWA SS4A Project Agreement in the amount of \$300,000 with the cost shares as indicated and authorized the mayor to sign the agreement.

Commissioner Harter made a motion to approve the FHWA SS4A Project Agreement in the amount of \$300,000 with the cost shares as indicated above and authorize the City Manager to sign the agreement. Commissioner Steinkuhler seconded the motion. The vote follows: Commissioner Harter, aye; Commissioner Steinkuhler, aye; Commissioner Duncan, aye; Commissioner Ogle, aye; and Mayor Smith, aye.

CITY COMMISSION
(Intent to Issue General Obligation Bonds – Series 2026)
(Street Sweeper)
(Resolution Number 3788)

Brian Silcott, Public Works Director, was recognized and addressed the Governing Body. The 2025 adopted CIP Budget includes funds for the replacement purchase of the 2014 Street Sweeper. That purchase was deferred to coincide with the Series 2026 general obligation bond issuance that is planned for this year. The 2014 sweeper is experiencing increased downtime and maintenance costs due to its age. The average useful life of street sweepers is 7 to 10 years, and they have a 5-year depreciation schedule. Currently, the city has two Elgin Whirlwind model street sweepers to maintain

more than 175 miles of paved streets in the city. The scheduled replacement purchase is an Elgin Whirlwind, the same model as the 2014 unit that will be replaced. Staff recommend that the 2014 unit be used as a spare sweeper when needed. The estimated cost of the street sweeper is \$400,000. This proposed resolution authorizes the issuance of general obligation bonds for public improvements providing for the payment of the costs of the street sweeper. Staff recommend approval of Resolution Number 3788 authorizing the use of general obligation bonds to finance the acquisition of an Elgin Whirlwind street sweeper.

Following further discussion, Commissioner Duncan made a motion to approve Resolution Number 3788 authorizing the use of general obligation bonds to finance the acquisition of an Elgin Whirlwind street sweeper. Commissioner Harter seconded the motion. The vote follows: Commissioner Duncan, aye; Commissioner Harter, aye; Commissioner Ogle, aye; Commissioner Steinkuhler, aye; and Mayor Smith, aye.

**CITY COMMISSION
 CITY MANAGER’S REPORT
 (Financials & Building Permits)**

This is the time for the City Manager to make comments and reports to the public. **The following is general information for the month of January 2026 for the community:**

1. Monthly Local Retail Sales Tax Receipts Update

	2025	2026	Increase of \$26,093.82 for the month, and Overall increase of 4.78% from year 2024.
	\$ 545,853.98	\$ 571,947.80	
YTD	\$ 545,853.98	\$ 571,947.80	

2. City Share from County Tax

	2025	2026	Increase of \$26,281.68 for the month, and Overall increase of 8.71% from year 2024.
	\$ 275,567.25	\$ 301,848.93	
YTD	\$ 275,567.25	\$ 301,848.93	

Building Permits issued from 1/1/2026 to 1/31/2026 for new construction, remodeling/repairs and demolition.

Total number of building permits issued through Code Services:	18
Total valuations associated with those building permits:	\$ 519,336.74
Total number of dollars collected for Building Permit Fees:	\$ 2,095.00

Construct – Single-family dwellings	0
Demo – Single-family dwellings	1
Flint Hills Mall CID for January 2026	\$ 16,487.05
YTD	\$ 16,487.05
Pavilions CID for January 2026	\$ 19,030.10
CID #2	\$ 19,030.10
YTD	\$ 38,060.20
Fairview Hotel CID for January 2026	\$ 6,948.09
YTD	\$ 6,948.09
West Plaza CID for January 2026	\$ 6,509.73
YTD	\$ 6,509.73

Consent Agenda

It was moved by Commissioner Harter seconded by Commissioner Steinkuhler that the Consent Agenda listed below be ratified as a whole:

- a. Commission Minutes of the Regular Meeting held on February 4, 2026.
- b. Ordinance Number 26-02 Establishing a Common Consumption Area.

AN ORDINANCE ESTABLISHING A COMMON CONSUMPTION AREA AND AUTHORIZING THE POSSESSION AND CONSUMPTION OF ALCOHOLIC LIQUOR AND CEREAL MALT BEVERAGE WITHIN THE COMMON CONSUMPTION AREA BOUNDARIES, AMENDING SECTION 4-5 OF THE CODE OF THE CITY OF EMPORIA, KANSAS, to which the City Clerk assigned Ordinance Number 26-02, was presented to the Governing Body for their consideration.

The vote follows: Commissioner Harter, aye; Commissioner Steinkuhler, aye; Commissioner Duncan, aye; Commissioner Ogle, aye; and Mayor Smith, aye.

CITY COMMISSION (City Manager’s Report)

This is an opportunity for the City Manager to present information to the public that may not be reported in other news accounts or City activities or to highlight accomplishments of the organization.

At the time this Agenda was prepared, the following items were in the works:

TENTATIVE AGENDA FOR MARCH 4, 2026, MEETING.

- Authorize Resolution for General Obligation Bonds Series 2026.
- **Study Session:**
 - Discuss Downtown TEAP Study.
 - Discuss Evergy Franchise Agreement.
 - Discuss Water Treatment Plant Master Plan.

**CITY COMMISSION
(Governing Body Comment)**

This is the time for the Mayor and City Commissioners to make comments and reports to the public. No comments were made at this time.

EXECUTIVE SESSION

Commissioner Harter made a motion to recess into Executive Session for 25 minutes, inviting pertinent city staff to discuss confidential data of a third party relating to economic development. The justification for the executive session is provided by K.S.A. 75-4319(b)(4) to protect financial affairs and trade secrets of a third party. The open meeting will resume in this room at approximately 11:45 a.m. Commissioner Ogle seconded the motion. The vote follows: Commissioner Harter, aye; Commissioner Ogle, aye; Commissioner Duncan, aye; Commissioner Steinkuhler, aye; and Mayor Smith, aye.

Upon reconvening the meeting in Regular Session at 11:45 a.m., this same date, in the City Commission Meeting Room, Mayor Smith stated they had discussed confidential data of a third party relating to economic development and no action was taken.

Mayor Smith made a motion to recess the meeting until 12:00 p.m. at the Evora Wheeler Conference Room. Commissioner Harter seconded the motion. The vote follows: Mayor Smith, aye; Commissioner Harter, aye; Commissioner Duncan, aye; Commissioner Ogle, aye; and Commissioner Steinkuhler, aye.

**CITY/COUNTY
JOINT MEETING
EXECUTIVE SESSION**

Commissioner Ogle made a motion to recess into Executive Session for 25 minutes, inviting pertinent city and county staff to discuss confidential data of a third party relating to economic development. The justification for the executive session is provided by K.S.A. 75-4319(b)(4) to protect financial affairs and trade secrets of a third party. The open meeting will resume in this room at approximately 1:15 p.m. Commissioner Duncan seconded the motion. The vote follows: Commissioner Ogle, aye; Commissioner Duncan, aye; Commissioner Harter, aye; Commissioner Steinkuhler, aye; and Mayor Smith, aye.

Upon reconvening the meeting in the City/County Joint Meeting at 1:15 p.m., this same date, in the Evora Wheeler Conference Room, Commissioner Harter made a motion to continue the executive session discussion for the reason stated previously with all the same pertinent city and county staff and resuming the open meeting at approximately 1:30 p.m. Commissioner Steinkuhler seconded the motion. The vote follows: Commissioner Harter, aye; Commissioner Steinkuhler, aye; Commissioner Duncan, aye; Commissioner Ogle, aye; and Mayor Smith, aye.

Upon reconvening the meeting in the City/County Joint Meeting at 1:30 p.m., this same date, in the Evora Wheeler Conference Room, Commissioner Duncan made a motion to continue the executive session discussion for the reason stated previously with all the same pertinent city and county staff and resuming the open meeting at approximately 1:45 p.m. Commissioner Steinkuhler seconded the motion. The vote follows: Commissioner Duncan, aye; Commissioner Steinkuhler, aye; Commissioner Harter, aye; Commissioner Ogle, aye; and Mayor Smith, aye.

Upon reconvening the meeting in the City/County Joint Meeting at 1:45 p.m., this same date, in the Evora Wheeler Conference Room, Mayor Smith stated they had discussed confidential information of a third party relating to economic development and no action was taken.

Commissioner Ogle then made a motion to adjourn for a special gathering to tour the new Fire Station. Mayor Smith seconded the motion. The vote follows: Commissioner Ogle, aye; Mayor Smith, aye; Commissioner Duncan, aye; Commissioner Harter, aye; and Commissioner Steinkuhler, aye.

Becky Smith, Mayor

ATTEST:

Kerry Sull, City Clerk



Commission Action Report

Informational Items

Title: Informational Items
Agenda Date: March 4, 2026
Presented By: Trey Cocking, City Manager

Background:

This is an opportunity for the City Manager to present information to the public that may not be reported in other news accounts or City activities or to highlight the organization's accomplishments.

Discussion:

At the time this Agenda was prepared, the following items were in the works for the tentative Agendas of the upcoming meetings on Wednesday, March 18, 2026.

Commission Meeting :

- Proclamation Recognizing Arts in Medicine Week March 22-28 in Emporia
- Public Hearing for Cedarbrook Meadows RHID
- Award to Finance Department GFOA
- Adopt Bond Resolution & Ordinance for General Obligation Bonds, Series 2026

Study Session:

To: City Commissioners
From: Janet Harrouff
Date: March 4, 2026
RE: 2025 Year end summary

2025 Highlights - Revenue across all funds was \$102,716,000 and expenses were \$106,045,000. Total salary and wages paid were \$25,270,000 \$1,132,000 over budget. Due to higher interest rates the City received \$1,654,125 on idle funds during 2025. This is \$624,000 higher than the budget. The reserve level for the General and Solid Waste funds are above policy.

General Fund: The General Fund ended 2025 with a lower unencumbered balance than 2024 by \$379,000. Revenue was over budget by \$866,000 and expenses were under budget by \$555,000.

Revenue was \$866,000 higher than the budget.

- Sales tax was \$294,000 higher,
- Franchise taxes were \$6,000 lower,
- Ambulance fees were \$70,000 lower,
- Golf fees were \$282,000 higher,
- Airport fuel sales were \$12,000 higher,
- Investment interest was \$477,000 higher,
- Administration Fees were \$263,000 higher,

Expenses were \$555,000 lower than the budget when the excess carryover is not taken into consideration. Some highlights were:

- Personnel Services were \$779,000 higher,
- Travel & Training was \$8,000 lower,
- Software was \$59,000 lower,
- Equipment Maintenance was \$149,000 lower,
- Vehicle Maintenance was \$16,000 higher,
- Airport fuel was \$128,000 lower,
- Capital Outlay was \$35,000 lower,
- Inter department transfers were \$144,000 lower
- Contractual Services were \$22,000 lower.

Multi Year Fund: A total of \$2,700,000 was spent on numerous projects within the city limits. \$1,800,000 was spent on streets and sidewalks; \$451,000 on building improvements and \$106,000 on zoo exhibit improvements. Sales tax was \$45,000 higher than the original budget. The ending cash balance is \$3,051,446 which will be carried over to 2026 for the completion of 2025 projects.

Library Fund: The revenue received was \$66,344 higher than 2024. The library was paid all available funds.

Convention & Tourism Fund: Transient guest tax collections were \$4,753 lower in 2025 compared to 2024 and were \$22,000 lower than budget. \$80,000 was spent on Disc Golf course improvements during the year. The ending unencumbered cash balance is \$852,734.

Industrial Fund: Revenue was \$376 higher than budget. There were no expenses. The unencumbered ending cash balance was \$28,153.

Economic Sales Tax Fund: Revenue was \$85,000 higher due to return of RDA money and higher interest. The ending unencumbered cash balance is \$900,476.

Special Alcohol Fund: Liquor Tax collections were \$2,550 higher than budget. The fund has an ending unencumbered cash balance of \$108,353.

Special Park Fund: Liquor Tax collections were \$2,550 higher than budget. Two mowers for the Golf Course were purchased. The ending unencumbered cash balance is \$74,447.

Special Street Fund: The gas tax was \$9,000 lower than the budget. Expenses were \$32,000 higher than the budget. The unencumbered cash balance is \$46,830.

Drug Forfeitures Fund: The ending unencumbered cash balance was \$60,619.

Bond & Interest Fund: Revenue was \$216,000 higher than the amended budget due to higher interest rates. The ending unencumbered cash balance was \$5,581,482. \$855,000 was paid on the principal balance of the bonds. The current outstanding GO bond balance is \$16,890,000.

Water Fund: Water sales were \$254,000 lower than budget. Penalties and service charges were \$27,000 higher than the budget. Expenses were \$409,000 higher than budget. The water fund ended the year with an unencumbered cash balance of \$496,701. The water fund has \$33,266,607 in outstanding debt.

Wastewater Fund: Wastewater charges were \$203,000 higher than budget. Expenses were \$36,000 lower than the budget, maintenance & repair was \$42,000 lower; chemicals were \$69,000 lower; debt was \$180,000 higher; capital was \$398,000 lower; utilities were \$225,000 higher; contractual services were \$222,000 higher. The fund has an unencumbered cash balance of \$1,134,465, which is \$493,000 higher than 2024. The current outstanding debt balance is \$30,445,595.

Solid Waste Fund: The revenue was \$116,000 lower than budget and expenses were \$1,000,000 less than budget. Maintenance & Repair was \$75,000 lower and capital outlay was \$829,000 lower. This fund has an unencumbered cash balance of \$1,572,802.

GENERAL FUND

as of December 31, 2025

GENERAL FUND

	Preceding Year 2024 (Actual)	2025 Budget	2024 Jan -Dec Actual	2025 Jan -Dec Actual	Change between 24 & 25
Beginning Cash Balance	6,450,183	5,489,073	6,450,183	6,741,570	
REVENUE					
Ad Valorem Property Tax	6,401,026	7,141,464	6,401,026	7,321,134	14.37%
Sales Tax	9,789,887	9,960,982	9,789,887	10,084,810	3.01%
Franchise Tax	2,819,267	2,776,900	2,819,267	2,812,655	-0.23%
Other Taxes	747,810	696,594	747,810	614,101	-17.88%
Intergovernmental Taxes	424,887	399,838	424,887	391,198	-7.93%
Licenses & Permits	294,976	264,350	294,976	237,010	-19.65%
Charges for Services	2,411,599	2,420,816	2,411,599	2,714,587	12.56%
Fines & Fees	525,589	495,400	525,589	653,255	24.29%
Use of Property and Money	914,263	185,596	102,935	189,407	84.01%
Interest Receivable		550,000	811,328	334,217	-58.81%
Reimbursements	226,524	5,100	226,524	9,349	-95.87%
Administrative Transfers	2,731,921	2,953,560	2,731,921	2,995,436	9.65%
Misc Revenue		41,500	0	34,026	#DIV/0!
Contributions			0	25,700	#DIV/0!
Operating Revenues	240	0	240	0	0.00%
Nonoperating Revenues	225,753	100,000	225,753	441,364	95.51%
TOTAL RECEIPTS	27,513,743	27,992,100	27,513,742	28,858,249	4.89%
EXPENDITURES					
Personnel Services	17,949,291	18,052,533	17,949,291	18,728,367	4.34%
Vacancy Rate		0	0		0.00%
Maintenance & Repair	968,713	1,153,800	968,713	620,264	-35.97%
Commodities	1,631,449	2,134,335	1,631,449	1,890,769	15.90%
Other Charges	354,999	910,645	354,999	706,755	99.09%
Capital Outlay	225,163	201,500	225,163	189,348	-15.91%
Transfer to Economic Development	925,000	925,000	925,000	925,000	0.00%
Transfer to Multi Year Fund	3,358,119	3,416,507	3,358,119	3,462,388	3.10%
Transfer to Project accounts	(1,774)	0	(1,773)	8,460	0.00%
Transfer to Equipment Reserve	0	572,200		706,558	0.00%
Utilities	550,047	635,050	550,047	543,567	-1.18%
Communications	107,898	145,250	107,898	105,081	-2.61%
Training and Travel	182,158	239,200	182,158	190,598	4.63%
Jail Expenses	62,200	87,500	62,200	56,400	-9.32%
Other Contractual	888,344	1,205,316	888,344	979,357	10.25%
Outstanding PO's		0	0	10,991	
TOTAL EXPENDITURES	27,201,608	29,678,836	27,201,609	29,123,903	7.07%
Revenue less expenses	312,135	(1,686,736)	312,133	(265,654)	
Cash Basis Adjustments/Non-appropri	(20,748)	0	(20,748)	(113,637)	
Ending Cash Balance	6,741,570	3,802,337	6,741,568	6,362,278	
Base for Reserve calculation	22,695,100	24,563,629	22,695,100	23,832,149	
15% Reserve	3,404,265	3,684,544	3,404,265	3,574,822	
Amount over 15% Reserve	3,337,305	117,793	3,337,303	2,787,456	
Percentage	29.70%	15.48%	29.70%	26.70%	

GENERAL FUND

as of December 31, 2025

	2025	2024	2025	Change
	Budget	Jan -Dec Actual	Jan -Dec Actual	between 24 & 25
EXPENDITURES				
Administration	-	287,241.55	287,241.55	-
Commission/Manager/Clerk	5,310,627.00	1,626,261.66	1,290,178.70	(336,082.96)
Accounting/HR	546,811.00	445,293.64	532,247.22	86,953.58
IT	549,437.00	408,063.15	465,951.42	57,888.27
Communication	20,100.00	-	72,743.63	72,743.63
Police	5,982,680.00	5,515,994.97	6,327,185.15	811,190.18
Animal Control	286,834.00	249,416.97	291,832.20	42,415.23
Fire	3,589,287.00	3,330,886.16	3,562,293.61	231,407.45
EMS	4,176,286.00	3,678,642.78	3,764,501.97	85,859.19
Municipal Court	659,309.00	497,451.88	643,771.09	146,319.21
Engineering	755,403.00	595,362.72	861,211.12	265,848.40
Street - Snow Removal	75,000.00	26,774.67	76,727.02	49,952.35
Golf Course Maintenance	584,155.00	575,711.78	580,661.53	4,949.75
Golf Course Shop	528,024.00	503,738.10	564,923.55	61,185.45
Park	1,356,066.00	1,218,034.19	1,252,365.43	34,331.24
Disc Golf	226,735.00	123,491.62	27,224.73	(96,266.89)
Aquatic Center	243,300.00	184,784.60	196,366.47	11,581.87
Zoo	938,587.00	848,251.67	814,871.21	(33,380.46)
Civic Auditorium	908,451.00	783,079.52	817,974.42	34,894.90
Civic/Library	86,417.00	155,312.53	131,041.94	(24,270.59)
Civic/Grounds Maintenance	139,727.00	68,372.80	96,089.29	27,716.49
Civic/ Concessions	90,952.00	79,516.13	88,825.22	9,309.09
Building & Neighborhood Development	998,619.00	868,123.87	952,463.51	84,339.64
Shop	92,616.00	(17,260.99)	(28,346.16)	(11,085.17)
Street Lighting	349,020.00	317,999.56	318,412.39	412.83
Appropriations	91,500.00	83,428.48	85,655.44	2,226.96
Airport	897,333.00	765,899.21	742,659.36	(23,239.85)
Parking Facility	11,600.00	9,739.20	17,245.81	7,506.61
Sales Tax Transfer	4,341,507.00	4,241,345.99	4,382,387.77	141,041.78
TOTAL EXPENDITURES	33,836,383.00	27,470,958.41	29,216,706.59	1,745,748.18

City of Emporia, Kansas

Multi Year Fund

as of December 31, 2025

	Preceding Year 2024 (Actual)	2025 Original Budget	2024 Jan -Dec Actual	2025 Jan -Dec Actual	Change between 24 & 25
Beginning Cash Balance	2,995,997.41	3,060,010.61	2,995,997.41	2,723,727.31	
REVENUE					
Sales Tax	3,358,119.39	3,416,507.00	3,358,119.39	3,462,387.81	3.10%
Reimbursement from state	473,211.16		473,211.16		
Interest	191,881.54	130,000.00	191,881.54	125,803.28	-34.44%
Total Revenue	4,023,212.09	3,546,507.00	4,023,212.09	3,588,191.09	-10.81%
EXPENSES					
Unspent expenses				(80,559.23)	
Maintenance & Repair		250,000.00	116,081.30	77,759.17	-33.01%
Other Charges			35,100.97	45,988.50	
Capital	2,492,228.31	3,427,800.00	671,347.22	585,893.75	-12.73%
Transfer Out	200,000.00	-	200,000.00	524,198.78	162.10%
Communications			-	-	#DIV/0!
Contractual Services	1,603,253.88	2,295,130.00	3,272,952.70	1,465,372.42	-55.23%
Outstanding PO's				641,819.11	
Total Expenses	4,295,482.19	5,972,930.00	4,295,482.19	3,260,472.50	#DIV/0!
Ending Cash Balance	2,723,727.31	633,587.61	2,723,727.31	3,051,445.90	270,125.90

Insurance Reserve

as of December 31, 2025

	Preceding Year 2024 (Actual)	2025 Original Budget	2024 Jan -Dec Actual	2025 Jan -Dec Actual	Change between 24 & 25
Beginning Cash Balance	\$663,358	\$0	\$663,358	\$699,713	
REVENUE					
Transfer from General	\$0	\$0	\$0	\$0	
Transfer from Int Improvem	\$0			\$0	
Insurance payment	\$0			\$0	
Interest	\$36,355	\$0	\$36,355	\$24,203	-33.43%
TOTAL RECEIPTS	\$36,355	\$0	\$36,355	\$24,203	-33.43%
EXPENDITURES					
Maintenance & Repair	\$0	\$0			
Misc Projects	\$0	\$0			
TOTAL EXPENDITURES	\$0	\$0	\$0	\$0	
Ending Cash Balance	\$699,713	\$0	\$699,713	\$723,916	

Vacant Property Program

as of December 31, 2025

	Preceding Year 2024 (Actual)	2025 Original Budget	2024 Jan -Dec Actual	2025 Jan -Dec Actual	Change between 24 & 25
Beginning Cash Balance	\$90,362	\$0	\$90,362	\$7,580	
REVENUE					
Transfer from ARPA funds	\$0	\$0	\$0	\$0	
Interest	\$2,358	\$0	\$2,358	\$0	-100.00%
TOTAL RECEIPTS	\$2,358	\$0	\$2,358	\$0	-100.00%
EXPENDITURES					
Maintenance & Repair	\$0	\$0	\$0	\$21	0.00%
Other Contractual Services	\$85,140	\$0	\$85,140	\$0	-100.00%
TOTAL EXPENDITURES	\$85,140	\$0	\$85,140	\$21	-99.98%
Ending Cash Balance	\$7,580	\$0	\$7,580	\$7,560	

City of Emporia, Kansas

Library Fund

as of December 31, 2025

	Preceding Year 2024 (Actual)	2025 Original Budget	2024 Jan -Dec Actual	2025 Jan -Dec Actual	Change between 24 & 25
Beginning Cash Balance	\$0	\$0	\$0	\$78	
REVENUE					
Ad Valorem Property Tax	\$1,086,316	\$1,104,165	\$1,086,316	\$1,168,931	7.61%
Other Taxes	\$115,497	\$97,578	\$115,497	\$99,227	-14.09%
TOTAL RECEIPTS	<u>\$1,201,813</u>	<u>\$1,201,743</u>	<u>\$1,201,813</u>	<u>\$1,268,157</u>	5.52%
EXPENDITURES					
Insurance Refund		\$0			
Misc Projects		\$0			
Appropriation	\$1,201,735	\$1,248,955	\$1,201,735	\$1,268,237	-2.73%
TOTAL EXPENDITURES	<u>\$1,201,735</u>	<u>\$1,248,955</u>	<u>\$1,201,735</u>	<u>\$1,268,237</u>	
Ending Cash Balance	\$78	(\$47,212)	\$78	(\$1)	

Transient Guest Tax

as of December 31, 2025

	Preceding Year 2024 (Actual)	2025 Budget	2024 Jan -Dec Actual	2025 Jan -Dec Actual	Change between 24 & 25
Beginning Cash Balance	\$999,063	\$588,887	\$999,063	\$671,185	
REVENUE					
Transient Guest Tax	\$932,626	\$950,000	\$932,626	\$927,873	-0.51%
Interest on Investment	\$24,211	\$10,000	\$24,211	\$25,023	3.35%
Fence rental	\$2,369	\$0	\$2,369	\$0	
Miscellaneous	\$14,432		\$14,432	\$14,006	
Accounts Receivable - fence rental	\$8,540		\$8,540	\$0	
TOTAL RECEIPTS	\$982,178	\$960,000	\$982,179	\$966,903	-1.56%
EXPENDITURES					
CVB Appropriation	\$462,000	\$480,000	\$462,000	\$480,000	3.90%
Trusler Sports Complex		\$0			
City cost associated with events	\$40,000	\$40,000	\$40,000	\$40,000	
Civic Auditorium improvements	\$50,000	\$50,000	\$50,000	\$50,000	0.00%
Red Rock's Appropriation	\$7,500	\$10,000	\$7,500	\$10,000	33.33%
ESU Welch Stadium	\$400,000	\$0	\$400,000		
Disc Golf Course Maintenance & Employee	\$100,000	\$100,000	\$100,000	\$100,000	0.00%
Emporia Main Street	\$95,000	\$95,000	\$95,000	\$95,000	0.00%
Emporia Arts Council Support	\$30,000	\$30,000	\$30,000	\$60,000	100.00%
Emporia Granda	\$30,000	\$30,000	\$30,000		-100.00%
Symphony in the Flint Hills		\$0			
Unbound Bike Event	\$15,000	\$20,000	\$15,000	\$20,000	
DDO	\$20,000	\$50,000	\$20,000	\$50,000	150.00%
PDGA Professional Disc Golf World	\$20,000	\$20,000	\$20,000	\$20,000	0.00%
Immaginarium		\$45,000			
National Teachers Hall of Fame		\$10,000	\$0	\$10,000	
Free for Kansas - Music event	\$20,000	\$20,000	\$20,000	\$20,000	
Dynamic Discs - course improvements	\$17,900		\$17,900	\$79,906	346.40%
Hispanics of Today and Tommorrow	\$0	\$20,000	\$0	\$20,000	
Marketing money (Mainstreet & Visit Emporia)		\$120,000			
Miscellaneous	\$2,656	\$0	\$2,656	\$448	-83.13%
Special Projects		\$0	\$0		
Outstanding PO's	\$0			\$0	
TOTAL EXPENDITURES	\$1,310,056	\$1,140,000	\$1,310,056	\$1,055,354	-19.44%
Ending Cash Balance	\$671,185	\$408,887	\$671,186	\$582,734	
Transient Guest Tax Receipts					
	2022	2023	2024	2025	2026
1ST QUARTER-JANUARY	\$184,682.75	\$217,964.96	\$208,253.00	\$229,900.15	\$289,257.29
2ND QUARTER-APRIL	\$143,987.80	\$170,824.51	\$163,048.74	\$154,751.85	
3RD QUARTER-JULY	\$223,905.58	\$232,566.63	\$298,395.94	\$298,953.58	
4TH QUARTER-OCTOBER	\$219,288.14	\$230,393.63	\$262,929.27	\$244,267.67	
TOTAL	\$771,864.27	\$851,749.73	\$932,626.95	\$927,873.25	\$289,257.29

City of Emporia, Kansas

Industrial Fund

as of December 31, 2025

	Preceding Year 2024 (Actual)	2025 Budget	2024 Jan -Dec Actual	2025 Jan -Dec Actual	Change between 24 & 25
Beginning Cash Balance	23,447	24,265	23,447	25,977	
REVENUE					
Ad Valorem Property Tax	1,060	1,000	1,060	1,146	8.08%
Other Taxes	136		136	97	-28.86%
Interest on Investment	1,334	800	1,334	934	-30.03%
TOTAL RECEIPTS	<u>2,530</u>	<u>1,800</u>	<u>2,530</u>	<u>2,176</u>	<u>-14.00%</u>
EXPENDITURES					
Travel Expense & Miscellaneous	0	1,185	0		0
Other charges	0				0
Contractual Services	0	0			0
Special Projects and Reserve Fund	0	24,976			0
TOTAL EXPENDITURES	<u>0</u>	<u>26,161</u>	<u>0</u>	<u>0</u>	<u>0</u>
Ending Cash Balance	25,977	(96)	25,977	28,153	

Economic Sales Tax

as of December 31, 2025

	Preceding Year 2024 (Actual)	2025 Budget	2024 Jan -Dec Actual	2025 Jan -Dec Actual	Change between 24 & 25
Beginning Cash Balance	\$1,319,820	\$989,728	\$1,319,820	\$1,045,887	
Revenue:					
Sales Tax Receipts	\$925,000	\$925,000	\$925,000	\$925,000	0.00%
Interest Income	\$31,551	\$20,000	\$31,551	\$25,821	-18.16%
Money for Land Purchases	\$195,906	\$0	\$195,906	\$0	
RDA returned money				\$79,182	0.00%
Total Revenue	\$1,152,457	\$945,000	\$1,152,457	\$1,030,003	-10.63%
Expense:					
Appropriation to the RDA	\$358,184	\$386,192	\$358,184	\$386,192	7.82%
Emporia Enterprises	\$35,000	\$0	\$35,000	\$0	
Main Street	\$45,000	\$45,000	\$45,000	\$45,000	0.00%
Land Purchase Bond Pmt	\$85,963	\$86,000	\$85,963	\$85,963	0.00%
Transfer to B&I water proj	\$350,000	\$350,000	\$350,000	\$350,000	0.00%
Dynamic Brewing Compar	\$500,000		\$500,000	\$0	-100.00%
VisionFirst Advisors	\$59,826		\$59,826	\$24,288	-59.40%
Miscellaneous	-\$7,596		-\$7,596	\$4,441	-158.47%
Transfer to Krestsinger Project				\$279,530	
Special Projects	\$13	\$967,535	\$13		
Total Expenses	\$1,426,390	\$1,834,727	\$1,426,390	\$1,175,414	-17.60%
Ending Cash Balance	\$1,045,887	\$100,001	\$1,045,887	\$900,476	

Special Alcohol Fund

as of December 31, 2025

	Preceding Year 2024 (Actual)	2025 Budget	2024 Jan -Dec Actual	2025 Jan -Dec Actual	Change between 24 & 25
Beginning Cash Balance	120,433	116,893	120,433	122,643	
REVENUE					
Private Club Liquor Tax	108,123	104,660	108,123	101,301	-6.31%
Interest on Investment	6,287	3,000	6,287	3,809	-39.42%
TOTAL RECEIPTS	114,410	107,660	114,410	105,110	-8.13%
EXPENDITURES					
Appropriations	112,200	144,400	112,200	119,400	6.42%
Special Projects		0	0	0	
TOTAL EXPENDITURES	112,200	144,400	112,200	119,400	6.42%
Ending Cash Balance	122,643	80,153	122,643	108,353	

Appropriations	Receive in				
	2021	Receive in 2022	Receive in 2023	Receive in 2024	Receive in 2025
Cross Winds	\$15,000.00	\$15,000.00	\$15,000.00	\$20,000.00	\$105,000.00
Corner House	\$48,750.00	\$65,000.00	\$75,000.00	\$85,000.00	\$0.00
Emporia State University	\$6,750.00	\$6,750.00	\$7,200.00	\$7,200.00	\$7,200.00
Flint Hills Tech (Mental Hea	\$0.00				\$7,200.00
Crosswinds Building Match					25,000.00
Total	\$70,500.00	\$86,750.00	\$97,200.00	\$112,200.00	\$144,400.00

Receipts	2021	2022	2023	2024	2025
1ST QUARTER - MARCH	\$17,214.78	\$23,976.09	\$25,545.76	\$26,804.33	\$26,397.00
2ND QUARTER - JUNE	\$18,634.04	\$22,129.19	\$26,129.12	\$26,489.58	\$24,503.17
3RD QUARTER - SEPTEMBER	\$25,844.73	\$28,544.72	\$31,037.27	\$29,035.42	\$29,099.85
4TH QUARTER - DECEMBER	\$24,664.21	\$25,393.46	\$27,455.87	\$25,793.55	\$21,301.00
TOTAL	\$86,357.76	\$100,043.46	\$110,168.02	\$108,122.88	\$101,301.02

City of Emporia, Kansas

Special Park Fund

as of December 31, 2025

	Preceding Year 2024 (Actual)	2025 Budget	2024 Jan -Dec Actual	2025 Jan -Dec Actual	Change between 24 & 25
Beginning Cash Balance	\$115,908	\$103,068	\$115,908	\$124,327	
REVENUE					
Private Club Liquor Tax	\$108,123	\$104,660	\$108,123	\$101,301	-6.31%
Interest on Investment	\$8,719	\$4,000	\$8,719	\$5,867	-32.71%
TOTAL RECEIPTS	\$116,842	\$108,660	\$116,842	\$107,169	-8.28%
EXPENDITURES					
Capital Outlay	\$93,423	\$135,250	\$93,423	\$142,049	52.05%
Municipal Band Allocation	\$15,000	\$15,000	\$15,000	\$15,000	0.00%
Miscellaneous					
Commodities	\$0	\$0		\$0	
Contractual Services	\$0	\$0	\$0	\$0	
Other Charges					
Transfer to Project Account	\$0			\$0	
Special Projects	\$0	\$61,478	\$0		
TOTAL EXPENDITURES	\$108,423	\$211,728	\$108,423	\$157,049	44.85%
Ending Cash Balance	\$124,327	\$0	\$124,327	\$74,447	

Receipts	2021	2022	2023	2024	2025
1ST QUARTER - MARCH	\$17,214.77	\$23,976.10	\$25,545.75	\$26,804.32	\$26,397.00
2ND QUARTER - JUNE	\$18,634.04	\$22,129.19	\$26,129.11	\$26,489.57	\$24,503.17
3RD QUARTER - SEPTEMBER	\$25,844.73	\$28,544.72	\$31,037.26	\$29,035.43	\$29,099.85
4TH QUARTER - DECEMBER	\$24,664.03	\$25,393.46	\$27,455.86	\$25,793.55	\$21,301.00
TOTAL	\$86,357.57	\$100,043.47	\$110,167.98	\$108,122.87	\$101,301.02

Capital Items	Budget Amount	Purchase Price
Golf Course	\$43,000.00	Tees & Banks Reel Mower (2003)
Golf Course	\$52,500.00	Tees & Banks Reel Mower (2004)
	<u>95,500.00</u>	

City of Emporia, Kansas

Special Street Fund

as of December 31, 2025

	Preceding Year 2024 (Actual)	2025 Budget	2024 Jan -Dec Actual	2025 Jan -Dec Actual	Change between 24 & 25
Beginning Cash Balance	179,135	113,211	179,135	188,562	
REVENUE					
Gasoline Tax	733,844	745,383	733,844	736,362	0.34%
Damages	20,438	5,000	20,438	17,596	-13.91%
Interest on Investment	15,927	10,000	15,927	7,657	-51.92%
Transfer of Funds	102,420	100,000	102,420	102,467	0.05%
Sale of Salvage	0			0	
Miscellaneous	125	0	125	0	
TOTAL RECEIPTS	872,754	860,383	872,754	864,082	-0.99%
EXPENDITURES					
Personnel Services	632,443	634,288	632,443	613,233	-3.04%
Vacancy		(12,147)			
Maintenance & Repair	87,417	131,870	87,417	115,107	31.68%
Commodities	108,214	154,350	108,214	118,280	9.30%
Other Charges	20,827	(41,712)	20,827	53,806	158.34%
Capital Outlay	0	0		0	
Transfer of Funds	0	25,000	0	33,109	
Utilities	9,225	5,750	9,225	4,284	-53.56%
Communications	2,420	2,700	2,420	3,320	37.15%
Training & Travel	6,216	8,000	6,216	14,484	133.02%
Contractual Services	24,585	41,100	24,585	41,870	70.31%
Special Projects	0	24,394	0	0	
Outstanding PO's				12,728	
Audit Adjustments	(28,021)		(28,021)	(4,406)	
TOTAL EXPENDITURES	863,327	973,593	863,326	1,005,814	16.50%
Net Change in Cash	9,427	(113,210)	9,428	(141,732)	
Ending Cash Balance	188,562	1	188,563	46,830	
Receipts					
	2021	2022	2023	2024	2025
1st Quarter - Jan Payment	\$161,594.64	\$167,557.74	\$167,412.68	\$159,680.00	\$180,485.00
2nd Quarter - April Payment	\$149,245.64	\$157,106.42	\$149,529.56	\$151,744.49	\$129,635.50
Extra Payment- June	\$54,671.53				0
3rd Quarter - July Payment	\$172,643.49	\$166,060.14	\$166,505.96	\$174,865.61	\$171,627.10
4th Quarter - Oct Payment	\$174,419.30	\$165,112.70	\$164,909.80	\$166,786.70	\$173,983.16
Total	\$712,574.60	\$655,837.00	\$648,358.00	\$653,076.80	\$655,730.76

Capital Item **Budget Amount** **Purchase Price**

City of Emporia, Kansas

Drug Forfeiture Fund

as of December 31, 2025

	Preceding Year 2024 (Actual)	2025 Budget	2024 Jan -Dec Actual	2025 Jan -Dec Actual	Change between 24 & 25
Beginning Cash Balance	\$35,885	\$40,045	\$35,885	\$65,741	
REVENUE					
Receipts from Drug Forfeitures	\$40,393	\$5,000	\$40,393	-\$2,110	-105.22%
Interest on Investment	\$2,710	\$2,000	\$2,710	\$2,280	-15.87%
Miscellaneous					
TOTAL RECEIPTS	\$43,103	\$7,000	\$43,103	\$170	-99.61%
EXPENDITURES					
Commodities	\$11,268	\$5,000	\$11,268	\$1,218	-89.19%
Capital Outlay		\$0		\$0	
Communications	\$330	\$0	\$330	\$0	-100.00%
Other Charges	\$1,649		\$1,649	\$2,172	
Transfer of funds					
Other Contractual	\$0	\$0		\$1,901	
Travel & Training					
Maintenance & Repair	\$0	\$0	\$0	\$0	
Outstanding PO's				\$0	
Special Projects		\$42,045	\$0		
TOTAL EXPENDITURES	\$13,247	\$47,045	\$13,247	\$5,292	-60.06%
Ending Cash Balance	\$65,741	\$0	\$65,741	\$60,619	

City of Emporia, Kansas

Storm Water

as of December 31, 2025

	Preceding Year 2024 (Actual)	2025 Budget	2024 Jan -Dec Actual	2025 Jan -Dec Actual	Change between 24 & 25
Beginning Cash Balance	\$243,446	\$0	\$243,446	\$139,005	
REVENUE					
Transfer from Multi Year	\$100,000	\$0	\$100,000	\$7,734	-92.27%
Interest on Investment	\$13,609	\$0	\$13,609	\$150,000	1002.21%
Miscellaneous					
TOTAL RECEIPTS	\$113,609	\$0	\$113,609	\$157,734	38.84%
EXPENDITURES					
Commodities	\$0	\$0	\$0	\$0	
Capital Outlay	\$7,184	\$0	\$7,184	\$0	-100.00%
Communications	\$702	\$0	\$702	\$0	-100.00%
Other Charges	\$0			\$0	
Transfer of funds	\$0			\$0	
Other Contractual	\$72,258	\$0	\$72,258	\$100,808	39.51%
Travel & Training					
Maintenance & Repair	\$137,906	\$0	\$137,906	\$28,524	-79.32%
Outstanding PO's				\$0	
Special Projects		\$0	\$0		
TOTAL EXPENDITURES	\$218,050	\$0	\$218,050	\$129,333	-40.69%
Ending Cash Balance	\$139,005	\$0	\$139,005	\$167,406	

City of Emporia, Kansas

Land Bank

as of December 31, 2025

	Preceding Year 2024 (Actual)	2025 Budget	2024 Jan -Dec Actual	2025 Jan -Dec Actual	Change between 24 & 25
Beginning Cash Balance	\$127,414	\$0	\$127,414	\$133,963	
REVENUE					
Transfer from Multi Year	\$0	\$0	\$0	\$0	
Interest on Investment	\$6,967	\$0	\$6,967	\$4,331	-37.83%
Sale of Property	\$0			\$0	
TOTAL RECEIPTS	\$6,967	\$0	\$6,967	\$4,331	-37.83%
EXPENDITURES					
Commodities	\$0	\$0	\$0	\$0	
Capital Outlay		\$0	\$0	\$658	
Communications	\$0	\$0	\$0	\$40	
Other Charges	\$418	\$0	\$418	\$23,476	5510.03%
Purchase of Property	\$0	\$0	\$0		
Communications	\$0	\$0	\$0	\$0	
Other Contractual Services		\$0	\$0	\$0	
Maintenance & Repair	\$0	\$0	\$0	\$0	
Outstanding PO's	\$0			\$0	
Special Projects		\$0	\$0		
TOTAL EXPENDITURES	\$418	\$0	\$418	\$24,174	
Ending Cash Balance	\$133,963	\$0	\$133,963	\$114,121	

City of Emporia, Kansas

Bond & Interest Fund

as of December 31, 2025

	Preceding Year 2024 (Actual)	2025 Budget	2024 Jan -Dec Actual	2025 Jan -Dec Actual	Change between 24 & 25
Beginning Cash Balance	\$2,358,480	\$3,765,846	\$2,358,480	\$3,958,724	\$0
REVENUE					
Ad Valorem Property Tax	\$2,064,333	\$2,061,111	\$2,064,333	\$2,108,140	102.12%
Other Taxes	\$298,751	\$245,922	\$298,751	\$228,031	76.33%
Interest on Investment	\$202,643	\$100,000	\$202,643	\$191,374	94.44%
Recreation Center - Fitness Room	\$51,360	\$49,440	\$51,360	\$49,440	96.26%
Industrial Land Payment - Ind Sales Tax	\$85,963	\$0	\$85,963	\$95,650	111.27%
Sale of Bonds	\$0	\$0	\$0	\$12,210,000	
RHID Krestinger Tax Payment	\$44	\$0	\$44	\$2	
RHID Mehtroplois Tax Payment	\$0	\$0	\$0		
Miscellaneous	\$0	\$0		\$221	
Transfer of Funds from Project Accounts	\$0	\$0	\$0	\$0	
TOTAL RECEIPTS	\$2,703,094	\$2,456,473	\$2,703,094	\$14,882,858	550.59%
EXPENDITURES					
Bond Payment	\$1,102,850	\$1,124,100	\$1,102,850	\$1,050,100	95.22%
Transfer of funds	\$0			\$12,210,000	
Misc projects		\$5,098,219	\$0		
TOTAL EXPENDITURES	\$1,102,850	\$6,222,319	\$1,102,850	\$13,260,100	
Ending Cash Balance	\$3,958,724	\$0	\$3,958,724	\$5,581,482	

Equipment Reserve Fund

as of December 31, 2025

	Preceding Year 2024 (Actual)	2025 Budget	2024 Jan -Dec Actual	2025 Jan -Dec Actual	Change between 24 & 25
Beginning Cash Balance	\$579,091	\$0	\$579,091	\$249,176	
REVENUE					
Transfer from other funds	\$0			\$739,667	(739,667)
Interest on Investment	\$31,505		\$31,505	\$13,633	-56.73%
Sale of Vehicles	\$203,380		\$203,380	\$31,600	-84.46%
TOTAL RECEIPTS	\$234,885	\$0	\$234,885	\$784,900	234.16%
EXPENDITURES					
Leasing Payment	\$133,261		\$564,800	\$757,141	34.05%
Capital Outlay	\$431,539		\$0	\$0	
Special Projects					
TOTAL EXPENDITURES	\$564,800	\$0	\$564,800	\$757,141	
Ending Cash Balance	\$249,176	\$0	\$249,176	\$276,934	

City of Emporia, Kansas
Water Fund

as of December 31, 2025

	Preceding Year 2024 (Actual)	2025 Budget	2024 Jan -Dec Actual	2025 Jan -Dec Actual	Change between 24 & 25
BEGINNING CASH	830,592	357,845	830,592	10,000	
REVENUE					
Sale of Water	9,286,308	9,873,500	9,286,308	9,569,050	3.04%
Service Charge	83,539	100,000	83,539	91,121	9.08%
Penalties	102,425	92,000	102,425	122,732	19.83%
Sale of Salvage	0	0	0		
Reimbursed Expense	57,451	20,000	57,451	0	-100.00%
Interest on Investment	42,986	40,000	42,986	28,160	-34.49%
Sale of Bonds	0	0	0	0	
Trf from Industrial Fund	350,000	350,000	350,000	350,000	0.00%
Trf from Project fund	0	0	0	4,321,335	
Non Operating Revenue	5,240,370	0	5,240,370	0	
Miscellaneous	0	2,100	0	22,665	#DIV/0!
TOTAL RECEIPTS	15,163,079	10,477,600	15,163,079	14,505,063	-4.34%
EXPENDITURES					
Personnel Services	1,387,665	1,502,807	1,387,665	1,463,421	5.46%
Vacancy		(28,910)	0		
Maintenance & Repair	1,381,379	1,110,400	1,381,379	866,438	-37.28%
Commodities	2,047,987	1,769,350	2,047,987	2,299,182	12.27%
Other Charges	644,539	340,260	321,710	256,352	-20.32%
Industrial Discount		320,000	322,829	202,719	-37.21%
Capital Outlay	373,685	415,000	373,685	117,955	
Debt Payment	1,825,075	1,635,939	1,825,075	1,834,690	0.53%
Stock	120,609	5,000	120,609	0	-100.00%
Transfer to Project Account	5,240,370	0	5,240,370	3,688,238	-29.62%
Utilities	630,971	712,100	630,971	531,651	-15.74%
Communications	24,833	44,700	24,833	26,416	6.37%
Travel & Training	19,330	22,500	19,330	26,267	35.88%
Contractual Services	1,222,028	1,329,450	1,222,028	1,155,267	-5.46%
Administrative Fee 16%	1,105,842	1,405,680	1,105,842	1,405,680	27.11%
Excess Carryover		0	0		
Change in Liabilities	(40,644)	0	(40,644)	124,730	
Outstanding PO's			0	19,356	
TOTAL EXPENDITURES	15,983,671	10,584,276	15,983,671	14,018,362	-12.30%
NET CHANGE IN CASH	(820,592)	(106,676)	(820,592)	486,701	-159.31%
ENDING CASH BALANCE	10,000	251,169	10,000	496,701	
Principal Bond Payments	(1,415,000)	(1,370,000)	(1,415,000)	(1,370,000)	
Depreciation	1,456,758	1,550,000	129,166	0	
Capitalized Assets	(3,879,788)	(995,000)	0	0	
Liabilities					
ADJUSTMENTS	(3,838,030)	(815,000)	(1,285,834)	(1,370,000)	
Base for reserve calculation	10,369,616	10,169,276	10,369,616	10,212,170	
20% reserve amount	2,073,923	2,033,855	2,073,923	2,042,434	
Amount over 20% reserve	(2,063,923)	(1,782,686)	(2,063,923)	(1,545,733)	
Percent	0.10%	2.47%	0.10%	4.86%	

Wastewater Fund

as of December 31, 2025

	Preceding Year 2024 (Actual)	2025 Budget	2024 Jan -Dec Actual	2025 Jan -Dec Actual	Change between 24 & 25
BEGINNING CASH	1,029,532	726,707	1,029,532	640,981	
REVENUE					
Sales/Charges	6,600,709	7,040,000	6,600,709	7,243,938	9.74%
Extra Strength Surcharge	163,428	155,000	163,428	255,582	56.39%
Interest on Investment	45,923	30,000	45,923	51,689	12.56%
New System taps	2,000	5,000	2,000	3,400	70.00%
Loss on sales of assets	0			0	
Grant money	0	0	0	0	
Sale of Bonds	0	0	0	0	
Non Operating Revenue	135,920		135,920	0	
Miscellaneous	6,808	1,000	6,808	16,460	141.78%
TOTAL RECEIPTS	<u>6,954,788</u>	<u>7,231,000</u>	<u>6,954,788</u>	<u>7,571,069</u>	<u>8.86%</u>
EXPENDITURES					
Personnel Services	1,425,385	1,310,671	1,425,385	1,473,620	3.38%
Vacancy	0	(23,100)	0	0	
Maintenance & Repair	420,819	489,100	420,819	531,105	26.21%
Commodities	534,367	374,750	534,367	387,750	-27.44%
Other Charges	165,841	187,785	165,841	118,217	-28.72%
Capital Outlay	117,523	405,000	117,523	6,300	-94.64%
Debt Payment	2,983,764	2,800,484	2,983,764	2,979,931	-0.13%
Transfer to Project fund	135,920	79,100	135,920	0	-100.00%
Utilities	749,512	599,500	749,512	824,756	10.04%
Communications	22,855	29,600	22,855	23,260	1.77%
Travel & Training	9,652	11,500	9,652	16,280	68.68%
Contractual Services	344,176	239,550	344,176	462,360	34.34%
Administrative Fee flat	610,000	610,000	610,000	610,000	0.00%
Excess Carryover		0	0		
Change in Liabilities	(176,476)	0	(176,476)	(380,733)	
Outstanding PO's				24,740	
TOTAL EXPENDITURES	<u>7,343,338</u>	<u>7,113,940</u>	<u>7,343,338</u>	<u>7,077,585</u>	<u>-3.62%</u>
NET CHANGE IN CASH	(388,551)	117,060	(388,550)	493,484	
ENDING CASH BALANCE	640,981	843,767	640,982	1,134,465	
Depreciation	2,096,619	2,125,205	177,099	0	
Principal Bond Payments	(2,285,730)	(2,211,279)	(2,285,730)	(2,211,279)	
Capitalized Assets	(3,169,496)	(405,000)	0	0	
Change in Liabilities		0			
ADJUSTMENTS	<u>(3,358,607)</u>	<u>(491,074)</u>	<u>(2,108,631)</u>	<u>(2,211,279)</u>	
Base for reserve calculation	7,089,895	6,708,940	7,089,895	7,071,285	
20% Cash Reserve amount	1,417,979	1,341,788	1,417,979	1,414,257	
Amount over 20% Cash Reserve	(776,998)	(498,021)	(776,997)	(279,792)	
Percentage	9.04%	12.58%	9.04%	16.04%	

Solid Waste Fund

as of December 31, 2025

	Preceding Year 2024 (Actual)	2025 Budget	2024 Jan -Dec Actual	2025 Jan -Dec Actual	Change between 24 & 25
BEGINNING CASH	3,388,241	2,347,675	3,388,241	2,528,037	
REVENUE					
Refuse Collection Fees	3,047,423	3,300,000	3,047,423	3,315,313	8.79%
Loss on Sale of Assets	0	0	0	0	
Interest on Investments	156,375	120,000	156,375	74,105	-52.61%
Trf from Health Ins - Premiums		0	0		
Resale of Recyclables	144,698	90,000	144,698	102,845	-28.92%
Box Container Fees	1,869,277	2,013,000	1,869,277	1,919,089	2.66%
Landfill Fees	578,017	597,500	578,017	574,261	-0.65%
Transfers	0	0	0	16,387	
Miscellaneous	15,845	5,500	15,845	7,812	-50.69%
TOTAL RECEIPTS	5,811,636	6,126,000	5,811,636	6,009,812	3.41%
EXPENDITURES					
Personnel Services	2,496,197	2,636,900	2,496,197	2,670,130	6.97%
Vacancy		(51,039)			
Maintenance & Repair	257,114	390,500	257,114	315,294	22.63%
Commodities	399,765	447,100	399,765	445,883	11.54%
Other Charges	395,271	248,730	255,210	189,458	-25.76%
Industrial Discount		130,000	140,061	140,820	0.54%
Capital Outlay	320,359	1,150,000	320,359	320,359	
Transfer to Equipment Reserve	0	0	0	0	
Utilities	52,096	74,000	52,096	57,645	10.65%
Communications	38,036	54,300	38,036	37,477	-1.47%
Transfer to project		0			
Travel & Training	6,051	11,600	6,051	6,395	5.68%
Contractual Services	1,759,615	1,879,000	1,759,615	1,926,987	9.51%
Administrative Fee 16%	975,905	924,880	975,905	924,880	-5.23%
Excess Carryover	0	577,705	0	0	
Change in Liabilities	(28,569)	0	(28,569)	(463,109)	
Outstanding PO's		0	0	392,829	
TOTAL EXPENDITURES	6,671,840	8,473,676	6,671,839	6,965,047	4.39%
NET CHANGE IN CASH	(860,204)	(2,347,676)	(860,203)	(955,235)	
ENDING CASH BALANCE	2,528,037	(1)	2,528,038	1,572,802	
ADJUSTMENTS					
Principal Payments	0	0	0	0	
Depreciation	394,298	455,000	37,082	0	
Capitalized Assets	(459,572)	(655,000)	0	0	
Change in Liabilities		0			
ADJUSTMENTS	(65,274)	(200,000)	37,082	0	
Base for reserve calculation	6,351,481	7,323,676	6,351,480	6,644,687	
20% cash reserve amount	1,270,296	1,464,735	1,270,296	1,328,937	
Amount over 20% Cash Reserve	1,257,740	(1,464,736)	1,257,742	243,864	
Percentage	39.80%	0.00%	39.80%	23.67%	

CITY OF EMPORIA
ACTUAL COMPARED TO BUDGET
as of December 31, 2025
EXPENSES FOR GENERAL FUND DEPARTMENTS

	2025 AMENDED BUDGET	2025 W ENCUMBRANCES	DIFFERENCE B/W ACTUAL & BUDGET	PERCENTAGE RECEIVED/ USED	General Fund Shared Revenue	Shared Budget	Actual Shared Budget	Department Net
						23,232,396	23,755,843	
GENERAL FUND ADMINISTRATION	4,000,000.00	287,241.55	3,712,758	7%	13.65%	3,170,500	3,241,934	2,954,693
COMMISSION/MANAGER/CLERK	1,310,571.00	1,269,439.22	41,132	97%	4.47%	1,038,791	1,062,196	(207,243)
FINANCE/HUMAN RESOURCES	546,811.00	526,510.88	20,300	96%	1.87%	433,416	443,181	(83,330)
INFORMATION SYSTEMS	549,437.00	463,308.20	86,129	84%	1.87%	435,497	445,310	(17,999)
COMMUNICATION	20,100.00	73,491.08	(53,391)	366%	0.07%	15,932	16,291	(57,200)
POLICE PROTECTION	5,982,680.00	6,252,028.09	(269,348)	105%	20.41%	4,742,022	4,848,864	(1,403,165)
ANIMAL CONTROL	286,834.00	290,313.72	(3,480)	101%	0.98%	227,352	232,474	(57,839)
FIRE PROTECTION	3,589,287.00	3,522,787.43	66,500	98%	12.25%	2,844,959	2,909,058	(613,729)
AMBULANCE SERVICE	4,176,286.00	3,668,223.69	508,062	88%	14.25%	3,310,229	3,384,811	(283,413)
COURT SERVICES	659,309.00	829,621.40	(170,312)	126%	2.25%	522,585	534,359	(295,262)
ENGINEERING	755,403.00	849,727.42	(94,324)	112%	2.58%	598,751	612,242	(237,486)
STREET	0.00	0.00	0	0%	0.00%	0	0	0
SNOW REMOVAL	75,000.00	76,727.02	(1,727)	102%	0.26%	59,447	60,786	60,786
GOLF COURSE MAINTENANCE	584,155.00	576,875.60	7,279	99%	1.99%	463,016	473,448	396,721
GOLF SHOP	528,024.00	561,956.11	(33,932)	106%	1.80%	418,525	427,955	(148,921)
PARK	1,356,066.00	1,240,284.25	115,782	91%	4.63%	1,074,852	1,099,069	537,113
DISC GOLF	226,735.00	27,224.73	199,510	12%	0.77%	179,716	183,765	(1,056,519)
AQUATIC CENTER	243,300.00	196,366.47	46,934	81%	0.83%	192,846	197,191	(1,043,094)
ZOO	938,587.00	807,468.53	131,118	86%	3.20%	743,948	760,709	733,485
CIVIC BUILDING OPERATIONS	908,451.00	811,517.64	96,933	89%	3.10%	720,061	736,285	539,918
LIBRARY MAINTENANCE	86,417.00	128,311.34	(41,894)	148%	0.29%	68,496	70,040	(737,429)
GROUND MAINTENANCE	139,727.00	95,534.09	44,193	68%	0.48%	0	113,246	(698,271)
CONCESSION STAND	90,952.00	87,866.45	3,086	97%	0.31%	72,091	73,715	(54,596)
CODE SERVICES	998,619.00	942,698.72	55,920	94%	3.41%	791,530	809,364	(133,334)
SHOP MAINTENANCE	92,616.00	-30,233.24	122,849	-33%	0.32%	73,410	75,064	(20,470)
STREET LIGHTING	349,020.00	318,412.39	30,608	91%	1.19%	276,642	282,875	195,009
MISC APPROPRIATIONS	91,500.00	85,655.44	5,845	94%	0.31%	72,525	74,159	104,392
AIRPORT	897,333.00	738,683.87	158,649	82%	3.06%	711,249	727,274	641,618
PARKING FACILITY	11,600.00	17,245.81	(5,646)	149%	0.04%	9,194	9,402	(729,282)
TRANSERS	4,341,507.00	4,382,387.77	(40,881)	101%	14.81%	3,441,187	3,518,720	3,501,474
CONTINGENCY	-356,397.00	0	(356,397)	0%	-1.22%	(282,489)	(288,854)	(4,671,242)
EXCESS CARRYOVER	0	0	0	0%				
GENERAL FUND	33,479,930	29,097,676	4,382,254	28	1	26,426,278	27,134,932	

29,310,704

CITY OF EMPORIA
 ACTUAL COMPARED TO BUDGET
 as of December 31, 2025
 EXPENSES FOR WATER FUND DEPARTMENTS

	2025 AMENDED BUDGET	2025 ACTUAL WITH ENCUMBRANCES	DIFFERENCE B/W ACTUAL & BUDGET	PERCENTAGE RECEIVED/ USED
DEBT	3,247,190	1,581,284	1,665,906	49%
ADMINISTRATION	195,939	464,690.27	(268,751)	237%
WATER SERVICE	641,196	523,469.07	117,727	82%
WATER MAINTENANCE	2,179,180	-2,590,938.79	4,770,119	-119%
WATER PLANT	6,116,943	6,141,162.50	(24,220)	100%
WATER STOCK	5,000	0.00	5,000	0%
	<u>12,385,448</u>	<u>6,119,667</u>	<u>6,265,781</u>	<u>3</u>

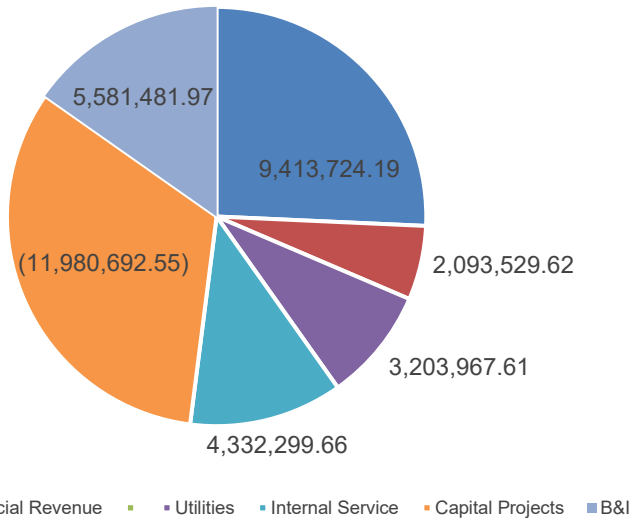
CITY OF EMPORIA
 ACTUAL COMPARED TO BUDGET
 as of December 31, 2025
 EXPENSES FOR WASTEWATER FUND DEPARTMENTS

	2025 AMENDED BUDGET	2025 W ENCUMBRANCES	DIFFERENCE B/W ACTUAL & BUDGET	PERCENTAGE RECEIVED/ USED
DEBT	3,096,175	768,652	2,327,523	25%
ADMINISTRATION	822,715	800,210	22,505	97%
WASTEWATER SERVICE	212,398	203,673	8,725	96%
SEWER MAINTENANCE	2,122,741	1,711,532	411,209	81%
SEWER PLANT	3,828,885	3,578,205	250,680	93%
	<u>10,082,914</u>	<u>7,062,271</u>	<u>3,020,643</u>	<u>70%</u>

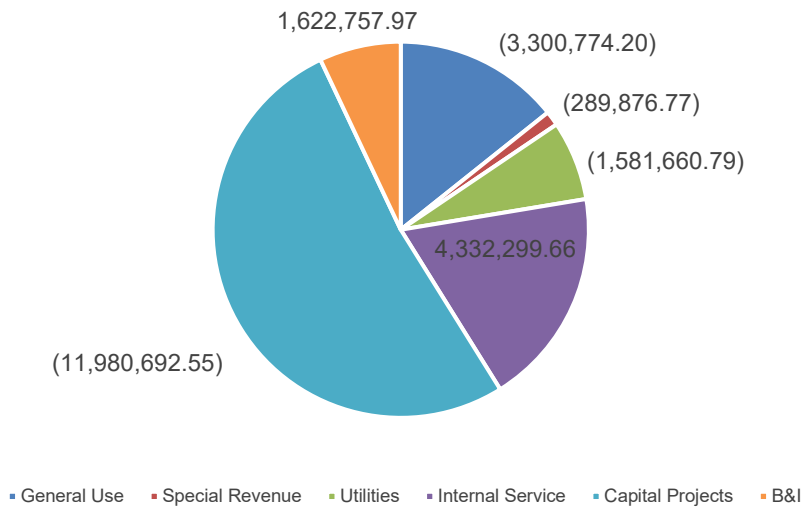
CITY OF EMPORIA
 ACTUAL COMPARED TO BUDGET
 as of December 31, 2025
 EXPENSES FOR SOLID WASTE FUND DEPARTMENTS

	2025 AMENDED BUDGET	2025 W ENCUMBRANCES	DIFFERENCE B/W ACTUAL & BUDGET	PERCENTAGE RECEIVED/ USED
ADMINISTRATION	1,738,158	1,253,581	399,598	72%
COLLECTIONS	3,782,145	3,081,122	797,978	81%
TRANSFER STATION	2,643,661	2,010,022	535,461	76%
RECYCLING CENTER	<u>754,712</u>	<u>811,357</u>	<u>221,275</u>	<u>108%</u>
	<u>8,918,676</u>	<u>7,156,082</u>	<u>1,954,312</u>	<u>3</u>

Unencumbered Cash



Available Funds



City of Emporia
Unencumbered Cash Report
as of December 31, 2025

	Amount	YTD Budget	Difference	Unencumbered Cash		
101 General Fund	6,362,278.29	6,741,568.39	(379,290.10)	General Use	9,413,724.19	74.45%
102 Multi Year Fund	3,051,445.90	5,972,930.00	(2,921,484.10)	Special Revenue	2,093,529.62	16.56%
103 Insurance Reserve	723,915.85	699,713.00	24,202.85			
104 Vacant Property Program	7,559.50	-	7,559.50	Utilities	3,203,967.61	25.34%
201 Library Fund	(1.35)	77.55	(78.90)	Internal Service	4,332,299.66	34.26%
203 Transient Guest Tax Fund	582,733.74	671,185.92	(88,452.18)	Capital Projects	(11,980,692.55)	-94.75%
204 Industrial Fund	28,153.18	25,977.41	2,175.77	B&I	5,581,481.97	44.14%
205 Economic Sales Tax Fund	900,475.77	1,045,886.96	(145,411.19)		12,644,310.50	
206 Special Alcohol Fund	108,353.01	122,643.00	(14,289.99)			
207 Special Park & Recreation Fund	74,446.65	124,326.78	(49,880.13)	Budget		
208 Special Street Fund	46,829.69	188,562.50	(141,732.81)	General Use	(3,300,774.20)	
209 Drug Money Forfeitures Fund	60,619.04	65,740.90	(5,121.86)	Special Revenue	(289,876.77)	
210 Storm Water Fund	167,405.92	139,005.37	28,400.55	Utilities	(1,581,660.79)	
218 Emergency Shelter Grant Fund	(2,512.27)		(2,512.27)	Internal Service	4,332,299.66	
224 Fire Public Education	7,843.77		7,843.77	Capital Projects	(11,980,692.55)	
225 Police Grants Fund	(1,414.58)		(1,414.58)	B&I	1,622,757.97	
251 Emporia Homeowner Repair	(18,103.36)		(18,103.36)			
252 2014 Housing Rehab	15,795.08		15,795.08			
254 2020 CDBG Rehab Grant	1,173.19		1,173.19			
260 Land Bank	114,120.22		114,120.22			
301 Bond and Interest Fund	5,581,481.97	3,958,724.00	1,622,757.97			
305 Equipment Reserve Fund	276,935.01	249,176.33	27,758.68			
401 Coronavirus Recovery Grant	-		-			
406 Internal Improvement Fund	2,651,489.04		2,651,489.04			
407 Rec Center Projects	-		-			
409 Water Treatment Plant Improvement	54,700.11		54,700.11			
413 Water Main Improvements	(12,856,290.04)		(12,856,290.04)			
415 Civic Auditorium Project Fund	215,940.68		215,940.68			
423 Airport Improvements Fund	(314,029.61)		(314,029.61)			
428 Park Improvements Fund	10,209.86		10,209.86			
441 Paving Projects Fund	(6,277,928.87)		(6,277,928.87)			
442 Construction Projects Fund	658,852.67		658,852.67			
444 Waste water Improvement	3,876,363.61		3,876,363.61			
501 Water Utility Fund	496,700.69	10,000.47	(1,545,733.21)			
502 Sewer Fund	1,134,465.05	640,981.60	(279,792.01)			
503 Solid Waste Fund	1,572,801.87	2,528,037.61	243,864.44			
601 Worker's Comp Fund	2,176,348.19		2,176,348.19			
602 Health Care Fund	2,155,951.47		2,155,951.47			
708 Fire Insurance Proceeds	7,611.92		7,611.92			
	13,652,720.86					

Title: Downtown Emporia Signal T.E.A.P. Study recommendations
JTSC Agenda Date: February 23, 2026
Presented By: Jim Ubert, City Engineer

Downtown Emporia Signal T.E.A.P. Study:

This study was conducted to evaluate the appropriateness, effectiveness, and future viability of traffic signal control at 13 intersections and one unsignalized intersection within and adjacent to the Emporia Central Business District (CBD). The study was initiated by the City in and funded by the Kansas Department of Transportation (KDOT) through the Traffic Engineering Assistance Program (T.E.A.P.). BG Consultants is providing the traffic study to KDOT and the City.

Results:

- 1.) Intersections that do NOT meet Traffic Signal Warrants:
 - a.) 18th Ave & Merchant St., 8th Ave & Commercial St, 7th Ave & Merchant St, 7th Ave & Commercial St, 6th Ave & Congress St, 6th Ave & Constitution St, 6th Ave & Mechanic St, 5th Ave & Commercial St, & 4th Ave & Commercial St. (SEE MAP).
- 2.) Intersections that do meet Traffic Signal Warrants:
 - a.) 12th Ave & Merchant St, 12th Ave & Commercial St, 6th Ave & Rural St, 6th Ave & Merchant St, 6th Ave & Commercial St.

City Engineering Recommendations (with Joint Traffic Safety Committee approval):

1. Geometric Improvements shall be considered when other roadway improvement projects are approved for the intersections at 6th & Rural and 18th & Merchant locations and adequate funding is available.
 - a.) City staff to prepare concept drawings for the addition of left-turn lanes on Rural Street at 6th Ave.
 - b.) Shelve the 18th Avenue & Merchant Street right-turn lane plans prepared by staff.
2. Maintain existing stop control at 18th & Merchant: Due to the change in plan and location of the proposed Recreation Center project and the T.E.A.P. study findings, it is staff's recommendation to remove this intersection from consideration for future traffic signal installation.
3. Remove the existing traffic signal systems and implement STOP control measures as per the T.E.A.P. study findings at the following locations:
 - a.) 6th Avenue & Constitution Street
 - b.) Merchant Street & 7th Avenue
4. Remove the existing Pedestrian signal systems and implement Crosswalk countermeasures as per the T.E.A.P. study findings at the following locations:
 - a.) 4th Avenue & Commercial Street
 - b.) 5th Avenue & Commercial Street
 - c.) 7th Avenue & Commercial Street
5. Retain and Upgrade existing traffic signals that met multiple MUTCD warrants as per the T.E.A.P. study findings at the following locations:
 - a.) 6th Avenue & Commercial Street
 - b.) 12th Avenue & Commercial Street
 - c.) 6th Avenue & Rural Street
 - d.) 6th Avenue & Merchant Street
 - e.) 12th Avenue & Merchant Street
6. Retain and Upgrade existing traffic signal as per the T.E.A.P. study recommendation at the following location:
 - a.) 6th Avenue & Mechanic Street
7. Retain and Upgrade the existing traffic signals as recommended by City staff at the following locations:
 - a.) 8th Avenue & Commercial Street (event vehicular and pedestrian traffic at Granada)

- b.) 6th Avenue & Congress Street (Congress St lines up with a RR underpass)
- 8. Modify existing stop control configuration at the following locations:
 - a.) 4th Avenue & Congress Street (Two-way east and west stop condition)
 - b.) 5th Avenue & Congress Street (Two-way east and west stop condition)

As a summary, City Engineering is recommending removal of 5 of the 8 traffic signals above that do not meet warrants.

Attachments:

1. City Engineering/G.I.S. T.E.A.P. study findings map
2. City Engineering/G.I.S. staff recommendations map
3. Google Street View pictures of the 4th & Congress intersection and 5th & Congress intersection.

(Some minor wording edits were made to this Memo after the February 23, 2026 JTSC Meeting based upon conversations within that meeting).

4th Avenue & Commercial Street was revised after the February 23, 2026 Joint Traffic Safety Committee Meeting from 7.) Retain and Upgrade the existing traffic signals as recommended by City staff to 4.) Remove the existing Pedestrian signal systems and implement Crosswalk countermeasures as per the T.E.A.P. study findings.

Title: Downtown Emporia Signal T.E.A.P. Study recommendations

JTSC Agenda Date: February 23, 2026

Presented By: Jim Ubert, City Engineer

Downtown Emporia Signal T.E.A.P. Study:

This study was conducted to evaluate the appropriateness, effectiveness, and future viability of traffic signal control at 13 intersections and one unsignalized intersection within and adjacent to the Emporia Central Business District (CBD). The study was initiated by the City in and funded by the Kansas Department of Transportation (KDOT) through the Traffic Engineering Assistance Program (T.E.A.P.). BG Consultants is providing the traffic study to KDOT and the City.

Results:

- 1.) Intersections that do NOT meet Traffic Signal Warrants:
 - a.) 18th Ave & Merchant St., 8th Ave & Commercial St, 7th Ave & Merchant St, 7th Ave & Commercial St, 6th Ave & Congress St, 6th Ave & Constitution St, 6th Ave & Mechanic St, 5th Ave & Commercial St, & 4th Ave & Commercial St. (SEE MAP).
- 2.) Intersections that do meet Traffic Signal Warrants:
 - a.) 12th Ave & Merchant St, 12th Ave & Commercial St, 6th Ave & Rural St, 6th Ave & Merchant St, 6th Ave & Commercial St.

City Engineering Recommendations (with Joint Traffic Safety Committee approval):

1. Geometric Improvements shall be considered when other roadway improvement projects are approved for the intersections at 6th & Rural and 18th & Merchant locations and adequate funding is available.
 - a.) City staff to prepare concept drawings for the addition of left-turn lanes on Rural Street at 6th Ave.
 - b.) Shelve the 18th Avenue & Merchant Street right-turn lane plans prepared by staff.
2. Maintain existing stop control at 18th & Merchant: Due to the change in plan and location of the proposed Recreation Center project and the T.E.A.P. study findings, it is staff's recommendation to remove this intersection from consideration for future traffic signal installation.
3. Remove the existing traffic signal systems and implement Stop control measures as per the T.E.A.P. study findings at the following locations:
 - a.) 6th Avenue & Constitution Street
 - b.) Merchant Street & 7th Avenue
4. Remove the existing Pedestrian signal systems and implement Crosswalk countermeasures as per the T.E.A.P. study findings at the following locations:
 - a.) 5th Avenue & Commercial Street
 - b.) 7th Avenue & Commercial Street
5. Retain and Upgrade existing traffic signals that met multiple MUTCD warrants as per the T.E.A.P. study findings at the following locations:
 - a.) 6th Avenue & Commercial Street
 - b.) 12th Avenue & Commercial Street
 - c.) 6th Avenue & Rural Street
 - d.) 6th Avenue & Merchant Street
 - e.) 12th Avenue & Merchant Street
6. Retain and Upgrade existing traffic signal as per the T.E.A.P. study recommendation at the following location:
 - a.) 6th Avenue & Mechanic Street
7. Retain and Upgrade the existing traffic signals as recommended by City staff at the following locations:
 - a.) 4th Avenue & Commercial Street
 - b.) 8th Avenue & Commercial Street

- c.) 6th Avenue & Congress Street
- 8. Modify existing stop control configuration at the following locations:
 - a.) 4th Avenue & Congress Street (Two-way east and west stop condition)
 - b.) 5th Avenue & Congress Street (Two-way east and west stop condition)

As a summary, City Engineering is recommending removal of 4 of the 8 traffic signals above that do not meet warrants.

Attachments:

- 1. City Engineering/G.I.S. T.E.A.P. study findings map
- 2. City Engineering/G.I.S. staff recommendations map
- 3. Google Street View pictures of the 4th & Congress intersection and 5th & Congress intersection.

(Some minor edits were made to this Memo after the February 23, 2026 JTSC Meeting based upon conversations within that meeting).

Downtown Emporia Signal TEAP Study

Client: Kansas Department of Transportation
JANUARY 2026

Prepared by: BG Consultants, Inc.
KDOT Project Number: 106 C-4855-25
BG Project Number: 25-1160
Diane Rosebaugh, PE

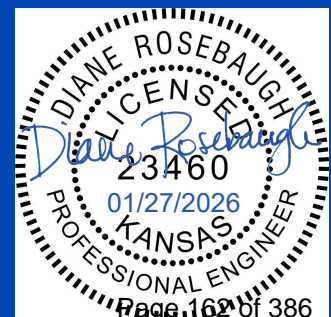


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KDOT TEAP Study

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1 EXECUTIVE SUMMARY

The Emporia Downtown Signal TEAP Study was conducted to evaluate the appropriateness, effectiveness, and future viability of traffic signal control at 13 intersections and one unsignalized intersection within and adjacent to Emporia’s Central Business District (CBD). The study was initiated by the City of Emporia in coordination with the Kansas Department of Transportation (KDOT) through the Traffic Engineering Assistance Program (TEAP).

Study Objectives

- Assess crash history and safety performance.
- Evaluate traffic volumes and intersection capacity.
- Evaluate signal warrant compliance per current MUTCD guidelines.
- Review existing signal equipment and operational conditions.
- Recommend improvements or alternative traffic control strategies.

Key Findings

- **Signal Warrant Evaluation:** Five intersections within the study area met at least one of the MUTCD signal warrants and are recommended for continued signalization:
 - 6th Avenue (US-50) & Commercial Street (K-99)
 - 12th Avenue (K-99) & Commercial Street (K-99)
 - 6th Avenue (US-50) & Rural Street
 - 6th Avenue (US-50) & Merchant Street
 - 12th Avenue (K-99) & Merchant Street (K-99)

In addition, the signal at 6th Avenue & Mechanic Street is recommended to be retained based on engineering judgment due to operational efficiency and safety considerations, despite not meeting warrant criteria.

- **Crash Rates:** All intersections had crash rates below the statewide average for similar intersections. However, recurring crash types (angle and rear-end) were noted at several locations, particularly along 6th Avenue (US-50).
- **Signal Equipment:** All intersections were found to have aging signal controllers (mostly M50), malfunction management units (MMUs) older than 12 years, and lacked battery backup or functional emergency preemption. Several signals are operating in flash mode due to long-standing equipment failures.
- **Operational Performance:** Most intersections operate at Level of Service (LOS) A or B under both existing and alternative control scenarios. This suggests that signal removal at non-warranted locations may not significantly degrade traffic operations.
- **18th Avenue & Merchant Street:** This unsignalized intersection did not meet any MUTCD signal warrants. Capacity analysis under existing two-way stop control showed acceptable performance (LOS A overall) but eastbound delays could be improved with the addition of an eastbound right-turn lane. Crash data was not requested due to low traffic volumes and lack of safety concerns. A future scenario was also evaluated to account for anticipated traffic from a proposed recreation center east of the intersection. While overall operations remain acceptable, delays on the eastbound and westbound approaches are projected to increase, particularly during the PM peak.

KDOT TEAP Study

Recommendations

- **Retain and Upgrade Signals** at warranted intersections:
 - Replace controllers and MMUs
 - Install battery backup and vehicle detection systems
 - Restore and/or establish functioning emergency preemption
 - Update signal head type and placement for current day MUTCD-compliance
- **Remove Signals and Implement Stop Control** at non-warranted intersections:
 - Convert to two-way stop control
 - Monitor performance and enhance pedestrian safety
- **Geometric Improvements:**
 - Add dedicated northbound and southbound left-turn lanes at 6th Avenue & Rural Street
 - Add an eastbound dedicated right-turn lane at 18th Avenue & Merchant Street

Cost Summary

- Full signal replacements (4 intersections): \$1,750,000
- Signal removals and stop control conversions (7 intersections): \$315,000 - \$2,275,000
- Geometric improvements at 6th Ave. & Rural St. and at 18th Ave. & Merchant St: \$730,000
- **Total Estimated Cost: \$2,820,000 - \$4,770,000**

This study provides a data-driven framework for prioritizing intersection improvements, optimizing traffic control strategies, and enhancing safety throughout Emporia's downtown corridor.

2 INTRODUCTION

2.1 STUDY PURPOSE AND SCOPE

The City of Emporia, in coordination with the Kansas Department of Transportation (KDOT), requested assistance through the Traffic Engineering Assistance Program (TEAP) to evaluate the appropriateness and effectiveness of traffic signal control at key intersections throughout the community. This study encompasses a comprehensive review of thirteen (13) existing signalized intersections and an evaluation of one additional unsignalized intersection to evaluate the appropriateness and adequacy of traffic signal control.

The primary objective of this study is to provide the City with an objective, data-driven assessment of current traffic signal inventory, operations, safety performance, and potential alternatives for improvement. The scope of work includes:

- **Crash History Review:** Analysis of historical crash data to identify safety trends and recurring issues.
- **Traffic Volume Data Collection:** Collection and analysis of 24-hour traffic counts.
- **Intersection Capacity Analysis:** Intersection capacity analysis for both the a.m. and p.m. peak hours.
- **Traffic Signal Evaluation:** Review of existing signal equipment, timing plans, and coordination with adjacent signals.
- **Signal Warrant Analysis:** Evaluation of each intersection against applicable signal warrants outlined in the Manual on Uniform Traffic Control Devices (MUTCD).
- **Alternatives for Improvements:** Identification and evaluation of potential improvements, including signal upgrades, timing adjustments, or alternative traffic control strategies.
- **Pedestrian Safety Considerations:** In locations where existing pedestrian signals may no longer be warranted, this study also considers alternative crosswalk countermeasures as outlined in KDOT’s *Crosswalk Guide & Guide to Crosswalk Countermeasures*. These treatments—such as high-visibility markings, curb extensions, pedestrian refuge islands, or pedestrian-activated beacons—are intended to maintain or enhance pedestrian safety in the absence of signal control. These options will be discussed in greater detail later in the report, particularly in relation to proposed changes along Commercial Street.

This study will assist the City of Emporia in prioritizing future traffic control and safety improvements in consideration with MUTCD guidance and KDOT standards.

Reference to Crosswalk Countermeasures:

In support of potential pedestrian signal removals along Commercial Street, this study references KDOT’s *Crosswalk Guide & Guide to Crosswalk Countermeasures* to identify appropriate alternative treatments. Figure 1, shown below, presents Table 3 from the guide, which summarizes recommended crosswalk countermeasures based on roadway speed, traffic volume, and number of lanes. This matrix serves as a reference for evaluating pedestrian safety enhancements at unsignalized crossings and will be used later in the report to guide recommendations.

KDOT TEAP Study

Roadway Configuration	Posted Speed Limit and AADT								
	Vehicle AADT <9,000			Vehicle AADT 9,000–15,000			Vehicle AADT >15,000		
	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph
2 lanes (1 lane in each direction)	① 2 4 5 6	① 5 6 7 9	① 5 6 7 9	① 4 5 6 7 9	① 5 6 7 9	① 5 6 7 9	① 4 5 6 7 9	① 5 6 7 9	① 5 6 9
3 lanes with raised median (1 lane in each direction)	① 2 3 4 5	① ③ 5 7 9	① ③ 5 7 9	① ③ 4 5 7 9	① ③ 5 7 9	① ③ 5 7 9	① ③ 4 5 7 9	① ③ 5 7 9	① ③ 5 9
3 lanes w/o raised median (1 lane in each direction with a two-way left-turn lane)	① 2 3 4 5 6 7 9	① ③ 5 6 7 9	① ③ 5 6 9	① ③ 4 5 6 7 9	① ③ 5 6 7 9	① ③ 5 6 9	① ③ 4 5 6 7 9	① ③ 5 6 9	① ③ 5 6 9
4+ lanes with raised median (2 or more lanes in each direction)	① ③ 5 7 8 9	① ③ 5 7 8 9	① ③ 5 8 9	① ③ 5 7 8 9	① ③ 5 7 8 9	① ③ 5 8 9	① ③ 5 7 8 9	① ③ 5 8 9	① ③ 5 8 9
4+ lanes w/o raised median (2 or more lanes in each direction)	① ③ 5 6 7 8 9	① ③ 5 6 7 8 9	① ③ 5 6 8 9	① ③ 5 6 7 8 9	① ③ 5 6 7 8 9	① ③ 5 6 8 9	① ③ 5 6 7 8 9	① ③ 5 6 8 9	① ③ 5 6 8 9

Given the set of conditions in a cell,

Signifies that the countermeasure is a candidate treatment at a marked uncontrolled crossing location.

● Signifies that the countermeasure should always be considered, but not mandated or required, based upon engineering judgment at a marked uncontrolled crossing location.

○ Signifies that crosswalk visibility enhancements should always occur in conjunction with other identified countermeasures.*

The absence of a number signifies that the countermeasure is generally not an appropriate treatment, but exceptions may be considered following engineering judgment.

1 High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs
2 Raised crosswalk
3 Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line
4 In-Street Pedestrian Crossing sign
5 Curb extension
6 Pedestrian refuge island
7 Rectangular Rapid-Flashing Beacon (RRFB)**
8 Road Diet
9 Pedestrian Hybrid Beacon (PHB)**

Figure 1: KDOT’s Guide to Crosswalk Countermeasures (Table 3 from guide)

Figure 2: Intersection Locations illustrates the locations of the intersections included in this study. The intersections evaluated are as follows:

- 4th Avenue & Commercial Street (K-99)
- 5th Avenue & Commercial Street (K-99)
- 6th Avenue (US-50) & Commercial Street (K-99)
- 7th Avenue & Commercial Street (K-99)
- 8th Avenue & Commercial Street (K-99)
- 12th Avenue (K-99) & Commercial Street (K-99)
- 6th Avenue (US-50) & Rural Street
- 6th Avenue (US-50) & Congress Street
- 6th Avenue (US-50) & Constitution Street
- 6th Avenue (US-50) & Merchant Street
- 6th Avenue (US-50) & Mechanic Street
- 7th Avenue & Merchant Street
- 12th Avenue (K-99) & Merchant Street (K-99)
- 18th Avenue & Merchant Street (K-99)

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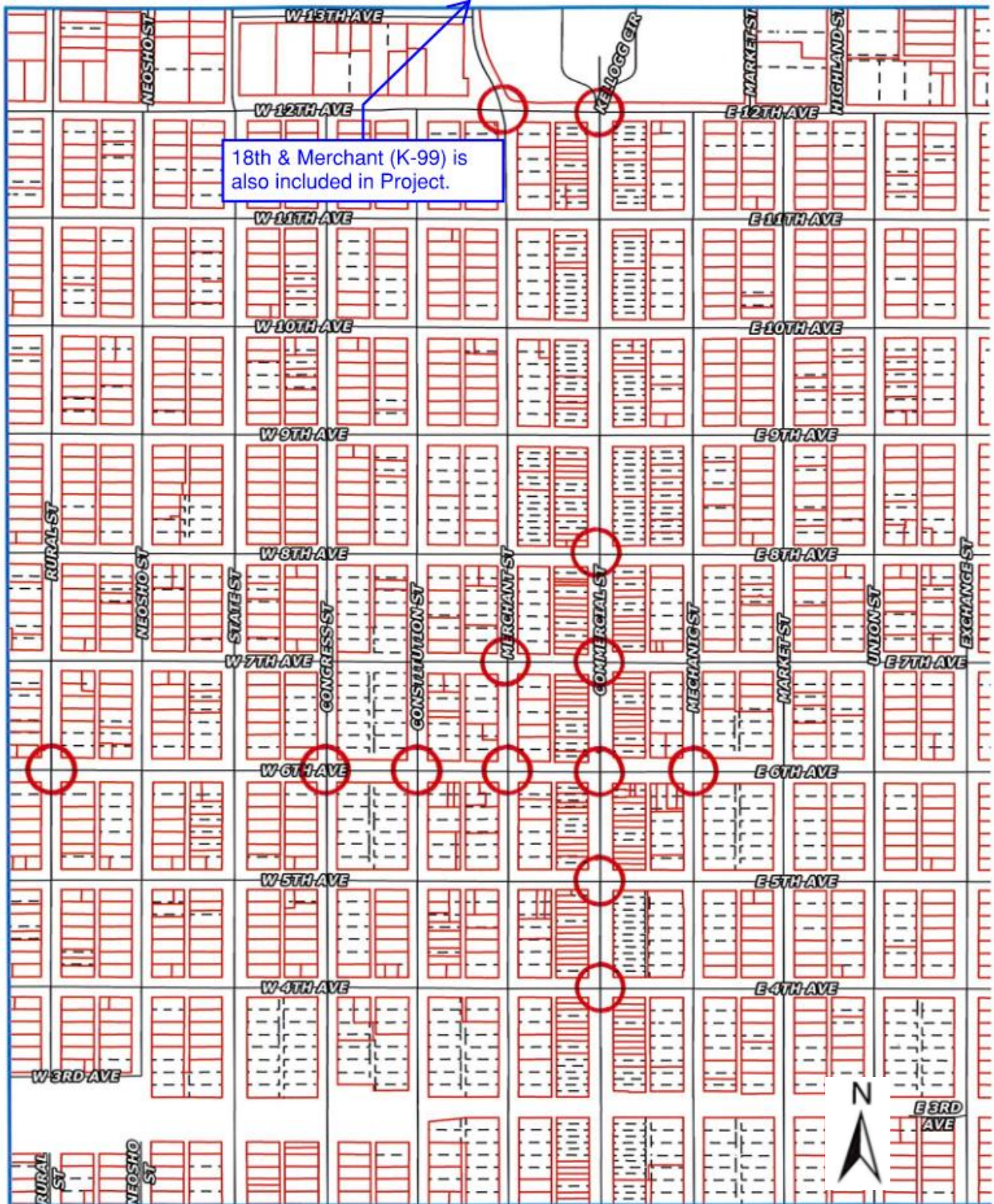


Figure 2: Intersection Locations

2.2 METHODOLOGY

This study employed a multi-faceted approach to evaluate traffic signal operations, intersection performance, and safety conditions at selected locations throughout the City of Emporia. The methodology included data collection, field review, operational analysis, and signal warrant evaluation, all conducted in accordance with industry standards and guidance from the Manual on Uniform Traffic Control Devices (MUTCD), 11th Edition and the Highway Capacity Manual (HCM), 7th Edition (2022).

2.2.1 Signal Inventory Review

The City of Emporia provided a signal inventory report prepared by Gades Sales Co., Inc., dated October 11, 2022. This report included a review of 24 signalized intersections, documenting the type and condition of traffic signal controllers, Malfunction Management Units (MMUs), and the presence of battery backup systems. A field review of signal equipment was also performed. The equipment inventory and field review identified:

- Controllers that are outdated or nearing end-of-life.
- MMUs older than 12 years, which may not meet current reliability standards.
- Signals that are not functioning properly due to external damage (e.g., lightning strike).
- Recommendations for equipment upgrades and maintenance needs.

This inventory served as a baseline for evaluating the existing signal equipment.

2.2.2 Traffic Data Collection

Traffic volume data was collected by Quality Counts, LLC over a three-day period from March 11–13, 2025 and from May 6-8, 2025. Counts included:

- 24-hour vehicle volumes.
- Turning movement counts during peak periods.
- Pedestrian and bicycle activity (where applicable).

This data was used to estimate intersection traffic demand, evaluate signal warrants, and perform capacity analysis.

2.2.3 Field Observations

On July 30, 2025, BG Consultants staff (Diane Rosebaugh and Jason Hoskinson) conducted a site visit with City of Emporia staff to observe existing conditions at each signalized intersection. General observations were documented, including:

- Physical condition of signal equipment.
- Visibility and placement of signal heads.
- Pedestrian accommodations and accessibility.
- Photos of existing infrastructure.

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Input from City staff was also recorded to provide context on operational concerns and maintenance history.

2.2.4 Operational Analysis

Traffic operations were analyzed using methodologies outlined in the Highway Capacity Manual (HCM 2022). The HCM provides standardized procedures for evaluating roadway and intersection performance based on measurable criteria such as speed, delay, and density. Operational quality is expressed in terms of Level of Service (LOS), ranging from LOS A (free-flow conditions) to LOS F (high congestion and delay).

LOS A through D are generally considered acceptable in urban environments. LOS E represents the upper limit of acceptable operations, while LOS F indicates failure conditions. Table 1 summarizes the LOS criteria used in this study for various intersection types.

Table 1: LOS Criteria for Interrupted Flow

Level of Service	Signalized Intersection (Avg. Control Delay sec/veh)	Unsignalized Intersection (Avg. Control Delay sec/veh)
A	0-10	0-10
B	> 10-20	> 10-15
C	> 20-25	> 15-25
D	> 35-55	> 25-35
E	> 55-80	> 35-50
F	> 80	> 50

2.2.5 Crash Data Analysis

Crash history for each intersection was obtained through an open records request submitted under the Kansas Open Records Act (KORA). The request covered a 5-year period between June 2020 and June 2025 and included:

- Total number of crashes.
- Crash types (e.g., angle, rear-end, pedestrian).
- Severity levels.
- Contributing factors (e.g., failure to yield, signal violation).

2.2.5.1 Crash Rates

The observed intersection crash rate (CR_{int}) serves as a performance metric to assess and identify intersections with a potentially elevated crash risk. This observed rate is compared to the critical crash rate (CCR_{int}), which represents the threshold above which crash activity is considered statistically significant when compared to statewide averages.

The Crash Index (CI) is calculated as the ratio of the observed rate to the critical rate:

- A Crash Index > 1.00 indicates a potential safety concern
- A Crash Index < 1.00 suggests the crash rate is within expected limits for similar intersections

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Observed Crash Rate (CR_{int}) for Intersections:

$$CR_{int} = \frac{C \times 10^6}{AADT \times N \times 365}$$

Where:

- CR_{int} = Crash rate, crashes per million entering vehicles (c/mev)
- C = Total number of crashes within the intersection
- $AADT$ = Annual Average Daily Traffic (vehicles per day)
- N = Number of years of data included

Critical Crash Rate (CCR_{int}) for Intersections:

$$CCR_{int} = r + p \times \sqrt{\frac{r}{mev}} + \frac{1}{(2 \times mev)}$$

Where:

- CCR_{int} = Critical Crash Rate, crashes per million entering vehicles (c/mev)
- r = Statewide average crash rate
 - Rural: 0.5 c/mev
 - Urban: 1.0 c/mev
- p = Safety factor (1.96, corresponding to a 97.5% confidence level)
- mev = Million entering vehicles, calculated as:

$$mev = \frac{AADT \times N \times 365}{10^6}$$

- $AADT$ = Annual Average Daily Traffic in vehicles per day
- N = Number of years of data included

Crash Index (C.I.):

$$C.I. = \frac{CR_{int}}{CCR_{int}}$$

2.2.6 Signal Warrant Evaluation

Each intersection was evaluated against applicable traffic signal warrants as defined in the MUTCD, including:

- Warrant 1: Eight-Hour Vehicular Volume
- Warrant 2: Four-Hour Vehicular Volume
- Warrant 3: Peak Hour
- Warrant 4: Pedestrian Volume
- Warrant 5: School Crossing
- Warrant 6: Coordinated Signal System

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- Warrant 7: Crash Experience
- Warrant 8: Roadway Network
- Warrant 9: Intersection Near a Grade Crossing

Warrant worksheets were completed using collected traffic data and crash history to determine whether existing signals remain justified or if new signals are warranted.

3 INTERSECTION ANALYSIS: 4TH AVENUE & COMMERCIAL STREET

Intersection Overview

The intersection of 4th Avenue & Commercial Street (K-99) is a four-legged signalized intersection located within Emporia’s Central Business District (CBD). Commercial Street also functions as Kansas Highway 99 (K-99) at this location. The posted speed limit is 20 mph. On-street parking is present on all four approaches adjacent to the driving lanes. Marked crosswalks are located on all four approaches.

- **Northbound/Southbound Approaches (Commercial Street):** Each approach includes one dedicated left-turn lane (~ 100 ft) and one shared lane for through and right-turn movements.
- **Eastbound/Westbound Approaches (4th Avenue):** Each approach includes a single lane serving left, through, and right-turn movements.

Pictures of the existing intersection, signal, and/or signal cabinet can be found in **Appendix A: Site Photos**.

Crash History

The following table summarizes crash history at this location:

Table 2: Crash Summary (4th Ave & Commercial St)

Crash Type	Count	Severity (PDO/Injury/Fatal)	Notes
Angle	1	1 / 0 / 0	
Rear-end	1	1 / 0 / 0	
Pedestrian/Bike	0	0 / 0 / 0	
Other	1	1 / 0 / 0	
TOTAL	3	3 / 0 / 0	

Crash Metrics:

- $CR_{int} = 0.348$ c/mev (below the statewide average)
- $CCR_{int} = 1.726$ c/mev
- $C.I. = 0.20$

Crash data within the study period indicates a total of three reported crashes at the intersection of 4th Avenue & Commercial Street. One angle and one rear-end crash were reported, with all incidents resulting in property damage only. No pedestrian or bicycle crashes were recorded. Notably, several additional crashes occurred south of the intersection, where backing out of on-street parking into oncoming traffic was identified as a common contributing factor. These crashes were excluded from the summary, as they occurred outside the defined limits of the intersection.

Crash rate analysis yielded a Crash Rate (CR_{int}) of 0.348 crashes per million entering vehicles, which is below the Critical Crash Rate (CCR_{int}) of 1.726 crashes per million entering vehicles. The resulting Crash Index (CI) of 0.20 indicates that the crash frequency at this location is well within expected limits for similar intersections and does not suggest an unusually high crash rate.

The crash diagram for this intersection can be found in **Appendix B: Crash Diagrams**.

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Signal Warrant Evaluation

The intersection was evaluated against the nine signal warrants outlined in the MUTCD. See the results in Table 3: Warrant Criteria (4th Ave & Commercial St):

Table 3: Warrant Criteria (4th Ave & Commercial St)

Warrant	Met?	Notes
Warrant 1 – Eight-Hour Vehicular Volume	No	Volumes below threshold
Warrant 2 – Four-Hour Vehicular Volume	No	Volumes below threshold
Warrant 3 – Peak Hour	N/A	No nearby facility with concentrated traffic
Warrant 4 – Pedestrian Volume	No	Volumes below threshold
Warrant 5 – School Crossing	N/A	Not near a school
Warrant 6 – Coordinated Signal System	No	Signals are spaced less than 1,000 feet apart
Warrant 7 – Crash Experience	No	Crash data below thresholds
Warrant 8 – Road Network	No	Criteria not satisfied
Warrant 9 – Near Railroad Crossing	N/A	Not within proximity to railroad tracks
All-way Stop Warrants	No	Volume criteria not satisfied

The signal at this intersection did not meet the criteria for any applicable MUTCD signal or all-way stop warrants. As a result, the capacity analysis included evaluation of an alternative, two-way stop control configuration.

Peak Hours

Using the 24-hour traffic volumes collected, the following peak hours were observed:

- AM Peak Hour: 10:30am-11:30am (283 total vehicles)
- PM Peak Hour: 5:00pm-6:00pm (432 total vehicles)

Capacity Analysis

Intersection performance was evaluated using Synchro 12 and HCM 7th Edition methodology. Due to software constraints, the posted speed limit of 20 mph was modeled as 25 mph. Since volume-based signal warrants were not met, the intersection was also evaluated under a two-way stop control scenario to assess operational feasibility.

Table 4: Intersection Capacity Analysis (4th Ave & Commercial St)

			4 th Avenue		Commercial Street		Intersection
			EB	WB	NB	SB	
AM PEAK	Existing Traffic Signal	Delay (s/veh)	8.8	8.6	9.4	9.6	9.2
		LOS	A	A	A	A	A
	Alternative 2 (2-Way Stop)	Delay (s/veh)	11.0	10.0	Free	Free	3.6
		LOS	B	B	Free	Free	A
PM PEAK	Existing Traffic Signal	Delay (s/veh)	9.0	8.8	9.8	3.7	7.4
		LOS	A	A	A	A	A
	Alternative 2 (2-Way Stop)	Delay (s/veh)	12.5	11.3	Free	Free	4.2
		LOS	B	B	Free	Free	A

Under existing signalized conditions, the intersection operates at Level of Service (LOS) A during both AM and PM peak periods, with overall delays well below thresholds for concern. The two-way stop alternative results in slightly higher delays on the minor street approaches (4th Avenue), but still maintains LOS A overall, with free-flow conditions on the major street (Commercial Street).

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Should the City choose to remove the signal, the intersection capacity analysis suggests that a two-way stop control could be an operationally viable alternative, given that the existing signal does not meet MUTCD warrant criteria. The alternative maintains acceptable levels of service and delay, comparable to the existing signalized condition.

The traffic analysis worksheet for this intersection can be found in **Appendix C: Traffic Analysis Worksheets**.

Signal Equipment and Operations

Based on the Gades Sales Co. inventory and field observations, the following equipment conditions were noted:

- Controller: M50 – outdated, software unsupported by Yunex
- MMU: SSM-6LE – older than 12 years
- Vehicle and/or Pedestrian Detection: None present
- Battery Backup: None installed
- Special Equipment: None
- Installation Date: 1990

Summary of Findings

The evaluation of the intersection at 4th Avenue & Commercial Street indicates:

- The crash rate is within expected limits and below the statewide average for similar intersections.
- The signal does not meet any of the current MUTCD signal warrants.
- Existing signal equipment is outdated and unsupported.
- LOS under the evaluated control scenarios (signalized and two-way stop) is excellent (LOS A).
- The existing signals over Commercial Street lack sufficient mast arm length and the appropriate number of signal heads required for the number of lanes based on current MUTCD standards.

Recommendations

- If signal is retained:
 - Replace the existing signal controller cabinet with a new cabinet and modern equipment supported by manufacturers. Consider either (1) adding a vehicle detection system and/or (2) implementing a corridor signal coordination project to enhance signal performance and traffic flow.
 - Add battery backup for reliability.
 - Replace existing undersized signal poles to ensure the appropriate mast arm lengths to provide the required number of signal heads for each lane group, improving visibility and compliance.
 - Add accessible pedestrian signal features to the traffic signal system.
- If signal is removed:
 - Implement 2-way stop control measures along 4th Avenue and monitor performance.
 - Evaluate pedestrian safety enhancements.

4 INTERSECTION ANALYSIS: 5TH AVENUE & COMMERCIAL STREET

Intersection Overview

The intersection of 5th Avenue & Commercial Street (K-99) is a four-legged intersection located within Emporia’s CBD. Commercial Street also functions as Kansas Highway 99 (K-99) at this location. This traffic signal operates with the sole purpose of serving pedestrian crossings of Commercial Street. The posted speed limit is 20 mph. On-street parking is present on all four approaches adjacent to the driving lanes. Marked crosswalks are located on the east and west legs for northbound and southbound pedestrian movement, while a single east-west crosswalk bisects the center of the intersection.

- **Northbound/Southbound Approaches (Commercial Street):** The northbound and southbound approaches include a single, pedestrian activated signal that controls a shared lane for through and right-turn movements. Left turns are prohibited.
- **Eastbound/Westbound Approaches (5th Avenue):** Each approach includes a single approach lane supporting right-turn movements only. Through and left-turn movements are prohibited.

Pictures of the existing intersection, signal, and/or signal cabinet can be found in **Appendix A: Site Photos**.

Crash History

The following table summarizes crash history at this location:

Table 5: Crash Summary (5th Ave & Commercial St)

Crash Type	Count	Severity (PDO/Injury/Fatal)	Notes
Angle	1	1 / 0 / 0	
Rear-end	2	2 / 0 / 0	
Pedestrian/Bike	0	0 / 0 / 0	
Other	0	0 / 0 / 0	
TOTAL	3	3 / 0 / 0	

Crash Metrics:

- $CR_{int} = 0.405$ c/mev (below the statewide average)
- $CCR_{int} = 1.787$ c/mev
- $C.I. = 0.23$

Crash data within the study period indicates a total of three reported crashes at the intersection of 5th Avenue & Commercial Street. One angle and two rear-end crashes were reported, with all incidents resulting in property damage only. No pedestrian or bicycle crashes were recorded.

Crash rate analysis yielded a Crash Rate (CR_{int}) of 0.405 crashes per million entering vehicles, which is below the Critical Crash Rate (CCR_{int}) of 1.787 crashes per million entering vehicles. The resulting Crash Index (CI) of 0.23 indicates that the crash frequency at this location is well within expected limits for similar intersections and does not suggest an unusually high crash rate.

The crash diagram for this intersection can be found in **Appendix B: Crash Diagrams**.

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Signal Warrant Evaluation

The intersection was evaluated against the nine signal warrants outlined in the MUTCD. See the results in Table 6: Warrant Criteria (5th Ave & Commercial St):

Table 6: Warrant Criteria (5th Ave & Commercial St)

Warrant	Met?	Notes
Warrant 1 – Eight-Hour Vehicular Volume	No	Volumes below threshold
Warrant 2 – Four-Hour Vehicular Volume	No	Volumes below threshold
Warrant 3 – Peak Hour	N/A	No nearby facility with concentrated traffic
Warrant 4 – Pedestrian Volume	No	Volumes below threshold
Warrant 5 – School Crossing	N/A	Not near a school
Warrant 6 – Coordinated Signal System	N/A	Signals are spaced less than 1,000 ft. apart
Warrant 7 – Crash Experience	No	Crash data below thresholds
Warrant 8 – Road Network	No	Criteria not satisfied
Warrant 9 – Near Railroad Crossing	N/A	Not near a railroad

The signal at this intersection did not meet the criteria for any applicable MUTCD signal warrants. As a result, the capacity analysis included evaluation of an alternative, two-way stop control configuration.

Peak Hours

Using the 24-hour traffic volumes collected, the following peak hours were observed:

- AM Peak Hour: 10:30am-11:30am (263 total vehicles)
- PM Peak Hour: 2:45pm-3:45pm (379 total vehicles)

Capacity Analysis

Intersection performance was evaluated using Synchro 12 and HCM 7th Edition methodology under a two-way stop control condition since the signal only functions as a pedestrian signal.

Table 7: Intersection Capacity Analysis (5th Ave & Commercial St)

		5 th Avenue		Commercial Street		Intersection
		EB	WB	NB	SB	
AM Peak: Alternative (2-Way Stop)	Delay (s/veh)	9.0	8.9	Free	Free	1.2
	LOS	A	A	Free	Free	A
PM Peak: Alternative (2-Way Stop)	Delay (s/veh)	9.1	9.4	Free	Free	0.9
	LOS	A	A	Free	Free	A

Under the two-way stop alternative, higher delays are noted on the minor street approaches (5th Avenue), but the intersection still maintains LOS A overall, with free-flow conditions on the major street (Commercial Street).

Should the City choose to remove the signal, the intersection capacity analysis suggests that the two-way stop control could be an operationally viable alternative, given that the existing signal does not meet MUTCD warrant criteria.

KDOT has issued a Guide for Crosswalk Countermeasures. Should the existing signal be removed and a two-way stop installed, the guide recommends the following pedestrian crosswalk countermeasures on Commercial Street, based on the ADT and posted speed limit:

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- High-visibility crosswalk markings, parking restrictions on crosswalk approaches, adequate nighttime lighting levels, and crossing warning signs (preferred option)
- Raised crosswalk
- In-Street Pedestrian Crossing sign
- Pedestrian refuge island
- Curb extensions

The traffic analysis worksheet for this intersection can be found in **Appendix C: Traffic Analysis Worksheets**.

Signal Equipment and Operations

Based on the Gades Sales Co. inventory and field observations, the following equipment conditions were noted:

- Controller: EPAC300 – outdated, software unsupported by Yunex
- MMU: NSM-3 – older than 12 years
- Vehicle and/or Pedestrian Detection: Pedestrian activation via push-button
- Battery Backup: None installed
- Special Equipment: None
- Installation Date: 1999

Summary of Findings

The evaluation of the intersection at 5th Avenue & Commercial Street indicates:

- The crash rate is within expected limits and below the statewide average for similar intersections.
- The signal does not meet any of the current MUTCD signal warrants.
- Existing signal equipment is outdated and unsupported.
- LOS under the two-way stop control scenario is excellent (LOS A).

Recommendations

- Remove the existing signal and implement 2-way stop control measures along 5th Avenue and monitor performance. Maintain existing right-in-right-out on the east bound and west bound approaches. Existing crosswalk locations to remain.
- Remove existing Do Not Enter signs located on the back of the existing stop signs and relocate on their own posts.
- Evaluate pedestrian safety enhancements, and consider installing appropriate countermeasures as recommended by FHWA.

5 INTERSECTION ANALYSIS: 6TH AVENUE & COMMERCIAL STREET

Intersection Overview

The intersection of 6th Avenue (US-50) & Commercial Street (K-99) is a four-legged signalized intersection located within Emporia’s Central Business District (CBD). 6th Avenue functions as US Highway 50 (US-50) and Commercial Street functions as Kansas Highway 99 (K-99) at this location. The posted speed limit is 30 mph on 6th Avenue and 20 mph on Commercial Street. On-street parking is present on all four approaches adjacent to the driving lanes.

- **Northbound/Southbound Approaches (Commercial Street):** Each approach includes a dedicated left-turn lane (~ 150 ft) and a shared lane for through and right-turn movements.
- **Eastbound/Westbound Approaches (6th Avenue):** Each approach includes a dedicated left-turn lane (~ 100 ft) and two through lanes, with the outside lane serving both through and right-turn movements.

Pictures of the existing intersection, signal, and/or signal cabinet can be found in **Appendix A: Site Photos**.

Crash History

The following table summarizes crash history at this location:

Table 8: Crash Summary (6th Ave & Commercial St)

Crash Type	Count	Severity (PDO/Injury/Fatal)	Notes
Angle	6	4 / 2 / 0	
Rear-end	6	5 / 1 / 0	
Pedestrian/Bike	3	0 / 3 / 0	
Other	4	3 / 1 / 0	
TOTAL	19	12 / 7 / 0	

Crash Metrics:

- $CR_{int} = 0.783$ c/mev (below the statewide average)
- $CCR_{int} = 1.419$ c/mev
- $C.I. = 0.55$

Crash data within the study period indicates a total of nineteen reported crashes at the intersection of 6th Avenue & Commercial Street. Six angle and six rear-end crashes were reported, resulting in seven injuries and twelve property damage only incidents. Additionally, three pedestrian or bicycle crashes were recorded, all resulting in injury.

Notably, over 50% of the crashes occurred on the west leg of 6th Avenue, including four of the six rear-end crashes and all three pedestrian/bike crashes.

Crash rate analysis yielded a Crash Rate (CR_{int}) of 0.783 crashes per million entering vehicles, which is below the Critical Crash Rate (CCR_{int}) of 1.419 crashes per million entering vehicles. The resulting Crash Index (CI) of 0.55 indicates that the crash frequency at this location is well within expected limits for similar intersections and does not suggest an unusually high crash rate.

The crash diagram for this intersection can be found in **Appendix B: Crash Diagrams**.

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Signal Warrant Evaluation

The intersection was evaluated against the nine signal warrants outlined in the Manual on Uniform Traffic Control Devices (MUTCD). See the results in Table 9: Warrant Criteria (6th Ave & Commercial St):

Table 9: Warrant Criteria (6th Ave & Commercial St)

Warrant	Met?	Notes
Warrant 1 – Eight-Hour Vehicular Volume	No	Volumes below threshold
Warrant 2 – Four-Hour Vehicular Volume	No	Volumes below threshold
Warrant 3 – Peak Hour	N/A	No nearby facility with concentrated traffic
Warrant 4 – Pedestrian Volume	No	Pedestrian volumes below threshold
Warrant 5 – School Crossing	N/A	Not applicable
Warrant 6 – Coordinated Signal System	N/A	Signals are spaced less than 1,000 ft. apart
Warrant 7 – Crash Experience	No	Crash data below thresholds
Warrant 8 – Road Network	Yes	Criteria met
Warrant 9 – Near Railroad Crossing	N/A	Not near a railroad

The signal at this intersection only met the criteria for Warrant 8 – Road Network. Given that this location serves traffic volumes exceeding 13,000 vehicles per day and functions as the intersection of two major highway routes (US-50 and K-99), maintaining a signal at this location is recommended.

Peak Hours

Using the 24-hour traffic volumes collected, the following peak hours were observed:

- AM Peak Hour: 10:30am-11:30am (831 total vehicles)
- PM Peak Hour: 4:15pm-5:15pm (1,168 total vehicles)

Capacity Analysis

Intersection performance was evaluated using Synchro 12 and HCM 7th Edition methodology. Due to software constraints, the posted speed limit of 20 mph along Commercial Street was modeled as 25 mph.

Table 10: Intersection Capacity Analysis (6th Ave & Commercial St)

		6 th Avenue		Commercial Street		Intersection
		EB	WB	NB	SB	
Existing Traffic Signal (AM Peak)	Delay (s/veh)	8.3	8.6	12.1	7.4	8.9
	LOS	A	A	B	A	A
Existing Traffic Signal (PM Peak)	Delay (s/veh)	9.2	9.9	12.6	7.4	9.8
	LOS	A	A	B	A	A

Under existing signalized conditions, the intersection operates at Level of Service (LOS) A during both AM and PM peak periods. While the northbound approach experiences slightly higher delays (LOS B), overall intersection performance remains well within acceptable thresholds.

The traffic analysis worksheet for this intersection can be found in **Appendix C: Traffic Analysis Worksheets**.

Signal Equipment and Operations

Based on the Gades Sales Co. inventory and field observations, the following equipment conditions were noted:

- Controller: M50 – outdated, software unsupported by Yunex

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- MMU: MMU2-16LE – older than 12 years
- Vehicle and/or Pedestrian Detection: None. System operates on fixed time/cycle.
- Battery Backup: None installed
- Special Equipment: Emergency preemption (reported by City as non-functional)
- Installation Date: 2005

Summary of Findings

The evaluation of the intersection at 6th Avenue & Commercial Street indicates:

- The crash rate is within expected limits and below the statewide average for similar intersections.
- The signal meets current MUTCD Warrant 8 – Road Network.
- The existing signal equipment is outdated and unsupported.
- LOS under all evaluated conditions is excellent (LOS A) for all movements, except the northbound movement, which operates at LOS B – still considered acceptable.
- The existing signal on Commercial Street lacks the appropriate number of signal heads required for the number of lanes based on current MUTCD standards.

Recommendations

- Replace the existing signal controller cabinet with a new cabinet and modern equipment supported by manufacturers. Upgrade the emergency preemption equipment to restore functionality.
- Update the quantity and placement of signal heads over Commercial Street to ensure the appropriate number of signal heads are provided for each lane group, improving visibility and compliance.
- Consider either (1) adding a vehicle detection system and/or (2) implementing a corridor signal coordination project to enhance signal performance and traffic flow.
- Add battery backup for improved reliability.
- Consider adding retroreflective backplates to signal heads to improve visibility.
- Add accessible pedestrian signal features to the traffic signal system.
- Consider enhancing pedestrian markings with high-visibility crosswalks.

6 INTERSECTION ANALYSIS: 7TH AVENUE & COMMERCIAL STREET

Intersection Overview

The intersection of 7th Avenue & Commercial Street (K-99) is a four-legged signalized intersection located within Emporia’s Central Business District (CBD). Commercial Street also functions as Kansas Highway 99 (K-99) at this location. This traffic signal operates with the sole purpose of serving pedestrian crossings of Commercial Street. The posted speed limit is 20 mph, and on-street parking is present on all four approaches adjacent to the driving lanes. Marked crosswalks are located on the east and west legs for northbound and southbound pedestrian movement, while a single east-west crosswalk bisects the center of the intersection.

- **Northbound/Southbound Approaches (Commercial Street):** Each approach includes a shared lane for through and right-turn movements, controlled by a pedestrian-activated signal. Left turns are prohibited.
- **Eastbound/Westbound Approaches (7th Avenue):** Each approach includes a single lane supporting right-turn movements only. Through and left-turn movements are prohibited.

Pictures of the existing intersection, signal, and/or signal cabinet can be found in **Appendix A: Site Photos**.

Crash History

The following table summarizes crash history at this location:

Table 11: Crash Summary (7th Ave & Commercial St)

Crash Type	Count	Severity (PDO/Injury/Fatal)	Notes
Angle	0	0 / 0 / 0	
Rear-end	1	1 / 0 / 0	
Pedestrian/Bike	0	0 / 0 / 0	
Other	1	1 / 0 / 0	
TOTAL	2	2 / 0 / 0	

Crash Metrics:

- $CR_{int} = 0.268$ c/mev (below the statewide average)
- $CCR_{int} = 1.784$ c/mev
- $C.I. = 0.15$

Crash data within the study period indicates a total of two reported crashes at the intersection of 7th Avenue & Commercial Street. One rear-end crash was reported resulting in property damage only. No pedestrian or bicycle crashes were recorded.

Crash rate analysis yielded a Crash Rate (CR_{int}) of 0.268 crashes per million entering vehicles, which is below the Critical Crash Rate (CCR_{int}) of 1.784 crashes per million entering vehicles. The resulting Crash Index (CI) of 0.15 indicates that the crash frequency at this location is well within expected limits for similar intersections and does not suggest an unusually high crash rate.

The crash diagram for this intersection can be found in **Appendix B: Crash Diagrams**.

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Signal Warrant Evaluation

The intersection was evaluated against the nine signal warrants outlined in the Manual on Uniform Traffic Control Devices (MUTCD). See the results in Table 12: Warrant Criteria (7th Ave & Commercial St):

Table 12: Warrant Criteria (7th Ave & Commercial St)

Warrant	Met?	Notes
Warrant 1 – Eight-Hour Vehicular Volume	No	Volumes below threshold
Warrant 2 – Four-Hour Vehicular Volume	No	Volumes below threshold
Warrant 3 – Peak Hour	N/A	No nearby facility with concentrated traffic
Warrant 4 – Pedestrian Volume	No	Volumes below threshold
Warrant 5 – School Crossing	N/A	Not near a school
Warrant 6 – Coordinated Signal System	N/A	Signals are spaced less than 1,000 ft. apart
Warrant 7 – Crash Experience	No	Crash data below thresholds
Warrant 8 – Road Network	No	Criteria not satisfied
Warrant 9 – Near Railroad Crossing	N/A	Not near a railroad

The signal at this intersection did not meet the criteria for any applicable MUTCD signal warrants. As a result, the capacity analysis included evaluation of an alternative, two-way stop control configuration.

Peak Hours

Using the 24-hour traffic volumes collected, the following peak hours were observed:

- AM Peak Hour: 10:30am-11:30am (266 total vehicles)
- PM Peak Hour: 5:00pm-6:00pm (349 total vehicles)

Capacity Analysis

Intersection performance was evaluated using Synchro 12 and HCM 7th Edition methodology under a two-way stop control condition since the signal only functions as a pedestrian signal.

Table 13: Intersection Capacity Analysis (7th Ave & Commercial St)

		7 th Avenue		Commercial Street		Intersection
		EB	WB	NB	SB	
AM Peak: Alternative (2-Way Stop)	Delay (s/veh)	8.96	8.95	Free	Free	0.7
	LOS	A	A	Free	Free	A
PM Peak: Alternative (2-Way Stop)	Delay (s/veh)	9.29	9.1	Free	Free	1.0
	LOS	A	A	Free	Free	A

Under the two-way stop alternative, higher delays are noted on the minor street approaches (7th Avenue), but the intersection still maintains LOS A overall, with free-flow conditions on the major street (Commercial Street).

Should the City choose to remove the signal, the intersection capacity analysis suggests that the two-way stop control could be an operationally viable alternative, given that the existing signal does not meet MUTCD warrant criteria.

KDOT has issued a Guide for Crosswalk Countermeasures. Should the existing signal be removed and a two-way stop installed, the guide recommends the following pedestrian crosswalk countermeasures on Commercial Street, based on the ADT and posted speed limit:

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- High-visibility crosswalk markings, parking restrictions on crosswalk approaches, adequate nighttime lighting levels, and crossing warning signs (preferred option)
- Raised crosswalk
- In-Street Pedestrian Crossing sign
- Pedestrian refuge island

The traffic analysis worksheet for this intersection can be found in **Appendix C: Traffic Analysis Worksheets**.

Signal Equipment and Operations

Based on the Gades Sales Co. inventory and field observations, this signal is controlled by the cabinet at 7th Avenue & Merchant Street. The signal functions for pedestrian crossings of Commercial Street. Pedestrian detection exists in the form of pedestrian activation of the signal system via push-button. See Intersection Analysis: Merchant Street & 7th Avenue for equipment information.

Summary of Findings

The evaluation of the intersection at 7th Avenue & Commercial Street indicates:

- The crash rate is within expected limits and below the statewide average for similar intersections.
- The signal does not meet any of the current MUTCD signal warrants.
- Existing signal equipment is outdated and unsupported.
- LOS under the two-way stop control scenario is excellent (LOS A).

Recommendations

- Remove the existing signal and implement 2-way stop control measures along 7th Avenue and monitor performance. Maintain existing right-in-right-out on the east bound and west bound approaches. Existing crosswalk locations to remain.
- Remove existing Do Not Enter signs located on the back of the existing stop signs and relocate on their own posts.
- Evaluate pedestrian safety enhancements, and consider installing appropriate countermeasures as recommended by FHWA.

7 INTERSECTION ANALYSIS: 8TH AVENUE & COMMERCIAL STREET

Intersection Overview

The intersection of 8th Avenue & Commercial Street (K-99) is a four-legged signalized intersection located within Emporia’s Central Business District (CBD). Commercial Street also functions as Kansas Highway 99 (K-99) at this location. The posted speed limit is 20 mph. On-street parking is present on all four approaches adjacent to the driving lanes. Marked crosswalks are located on all four approaches.

- **Northbound/Southbound Approaches (Commercial Street):** Each approach includes one dedicated left-turn lane (~100 ft) and one shared lane for through and right-turn movements.
- **Eastbound/Westbound Approaches (8th Avenue):** Each approach includes a single lane serving left, through, and right-turn movements.

Pictures of the existing intersection, signal, and/or signal cabinet can be found in **Appendix A: Site Photos**.

Crash History

The following table summarizes crash history at this location:

Table 14: Crash Summary (8th Ave & Commercial St)

Crash Type	Count	Severity (PDO/Injury/Fatal)	Notes
Angle	0	0 / 0 / 0	
Rear-end	1	1 / 0 / 0	
Pedestrian/Bike	0	0 / 0 / 0	
Other	1	1 / 0 / 0	
TOTAL	2	2 / 0 / 0	

Crash Metrics:

- $CR_{int} = 0.217$ c/mev (below the statewide average)
- $CCR_{int} = 1.700$ c/mev
- $C.I. = 0.13$

Crash data within the study period indicates a total of three reported crashes at the intersection of 8th Avenue & Commercial Street. One rear-end crash was reported, resulting in property damage only. No pedestrian or bicycle crashes were recorded.

Crash rate analysis yielded a Crash Rate (CR_{int}) of 0.217 crashes per million entering vehicles, which is below the Critical Crash Rate (CCR_{int}) of 1.700 crashes per million entering vehicles. The resulting Crash Index (CI) of 0.13 indicates that the crash frequency at this location is well within expected limits for similar intersections and does not suggest an unusually high crash rate.

The crash diagram for this intersection can be found in **Appendix B: Crash Diagrams**.

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Signal Warrant Evaluation

The intersection was evaluated against the nine signal warrants outlined in the Manual on Uniform Traffic Control Devices (MUTCD). See the results in Table 15: Warrant Criteria (8th Ave & Commercial St):

Table 15: Warrant Criteria (8th Ave & Commercial St)

Warrant	Met?	Notes
Warrant 1 – Eight-Hour Vehicular Volume	No	Volumes below threshold
Warrant 2 – Four-Hour Vehicular Volume	No	Volumes below threshold
Warrant 3 – Peak Hour	N/A	No nearby facility with concentrated traffic
Warrant 4 – Pedestrian Volume	No	Volumes below threshold
Warrant 5 – School Crossing	N/A	Not near a school
Warrant 6 – Coordinated Signal System	No	Signals are spaced less than 1,000 feet apart
Warrant 7 – Crash Experience	No	Crash data below thresholds
Warrant 8 – Road Network	No	Criteria not satisfied
Warrant 9 – Near Railroad Crossing	N/A	Not within proximity to railroad tracks
All-way Stop Warrants	No	Volume criteria not satisfied

The signal at this intersection did not meet the criteria for any applicable MUTCD signal or all-way stop warrants. As a result, the capacity analysis included evaluation of an alternative, two-way stop control configuration.

Peak Hours

Using the 24-hour traffic volumes collected, the following peak hours were observed:

- AM Peak Hour: 10:30am-11:30am (322 total vehicles)
- PM Peak Hour: 3:15pm-4:15pm (434 total vehicles)

Capacity Analysis

Intersection performance was evaluated using Synchro 12 and HCM 7th Edition methodology. Due to software constraints, the posted speed limit of 20 mph was modeled as 25 mph. Since volume-based signal warrants were not met, the intersection was also evaluated under a two-way stop control scenario to assess operational feasibility.

Table 16: Intersection Capacity Analysis (8th Ave & Commercial St)

			8 th Avenue		Commercial Street		Intersection
			EB	WB	NB	SB	
AM PEAK	Existing Traffic Signal	Delay (s/veh)	8.4	8.4	9.3	9.4	9.1
		LOS	A	A	A	A	A
	Alternative 2 (2-Way Stop)	Delay (s/veh)	11.4	11.0	Free	Free	3.2
		LOS	B	B	Free	Free	A
PM PEAK	Existing Traffic Signal	Delay (s/veh)	8.6	8.6	9.5	3.7	6.9
		LOS	A	A	A	A	A
	Alternative 2 (2-Way Stop)	Delay (s/veh)	13	13	Free	Free	3.7
		LOS	B	B	Free	Free	A

Under existing signalized conditions, the intersection operates at Level of Service (LOS) A during both AM and PM peak periods, with overall delays well below thresholds for concern. The two-way stop alternative results in slightly higher delays on the minor street approaches (8th Avenue), but still maintains LOS A overall, with free-flow conditions on the major street (Commercial Street).

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Should the City choose to remove the signal, the intersection capacity analysis suggests that a two-way stop control could be an operationally viable alternative, given that the existing signal does not meet MUTCD warrant criteria. The alternative maintains acceptable levels of service and delay, comparable to the existing signalized condition.

The traffic analysis worksheet for this intersection can be found in **Appendix C: Traffic Analysis Worksheets**.

Signal Equipment and Operations

Based on the Gades Sales Co. inventory and field observations, the following equipment conditions were noted:

- Controller: M50 – outdated, software unsupported by Yunex
- MMU: SSM-6LE – older than 12 years
- Vehicle and/or Pedestrian Detection: None. System operates on fixed time/cycle.
- Battery Backup: None installed
- Special Equipment: None
- Installation Date: Unknown

Summary of Findings

The evaluation of the intersection at 8th Avenue & Commercial Street indicates:

- The crash rate is within expected limits and below the statewide average for similar intersections.
- The signal does not meet any of the current MUTCD signal warrants.
- Existing signal equipment is outdated and unsupported.
- LOS under the evaluated control scenarios (signalized and two-way stop) is excellent (LOS A).
- The existing signals lack sufficient mast arm length and the appropriate number of signal heads required for the number of lanes based on current MUTCD standards on all approaches.

Recommendations

- If signal is retained:
 - Replace the existing signal controller cabinet with a new cabinet and modern equipment supported by manufacturers. Consider either (1) adding a vehicle and pedestrian detection system and/or (2) implementing a corridor signal coordination project to enhance signal performance and traffic flow.
 - Add battery backup for reliability.
 - Replace signal poles to provide the appropriate number of signal heads for each lane group, improving visibility and compliance.
 - Add accessible pedestrian signal features to the traffic signal system.
- If signal is removed:
 - Implement 2-way stop control measures along 8th Avenue and monitor performance.
 - Evaluate pedestrian safety enhancements.

8 INTERSECTION ANALYSIS: 12TH AVENUE & COMMERCIAL STREET

Intersection Overview

The intersection of 12th Avenue (K-99) & Commercial Street (K-99) is a four-legged signalized intersection located north of Emporia’s CBD. The west leg of 12th Avenue and the south leg of Commercial Street also function as Kansas Highway 99 (K-99) at this location. The posted speed limit for the east and west legs is 20 mph; the south leg is posted at 30 mph; and the north leg has a posted speed limit of 15 mph. On-street parking is prohibited on all four approaches near the intersection.

- **Northbound/Southbound Approaches (Commercial Street):** The northbound approach has one dedicated left-turn lane (~100 ft), one dedicated through lane, and one dedicated right-turn lane (~25 ft). The southbound approach has one dedicated left-turn lane (~20 ft) and one shared through and right-turn lane.
- **Eastbound/Westbound Approaches (12th Avenue):** Each approach includes one dedicated left-turn lane (~100 ft), one dedicated through lane, and one shared lane for the through and right-turn movements.

Pictures of the existing intersection, signal, and/or signal cabinet can be found in **Appendix A: Site Photos**.

Crash History

The following table summarizes crash history at this location:

Table 17: Crash Summary (12th Ave & Commercial St)

Crash Type	Count	Severity (PDO/Injury/Fatal)	Notes
Angle	2	2 / 0 / 0	
Rear-end	0	0 / 0 / 0	
Pedestrian/Bike	0	0 / 0 / 0	
Other	4	4 / 0 / 0	
TOTAL	6	6 / 0 / 0	

Crash Metrics:

- $CR_{int} = 0.280$ c/mev (below the statewide average)
- $CCR_{int} = 1.446$ c/mev
- $C.I. = 0.19$

Crash data within the study period indicates a total of six reported crashes at the intersection of 12th Avenue & Commercial Street. Two angle crashes were reported, resulting in property damage only incidents.

Crash rate analysis yielded a Crash Rate (CR_{int}) of 0.280 crashes per million entering vehicles, which is below the Critical Crash Rate (CCR_{int}) of 1.446 crashes per million entering vehicles. The resulting Crash Index (CI) of 0.19 indicates that the crash frequency at this location is well within expected limits for similar intersections and does not suggest an unusually high crash rate.

The crash diagram for this intersection can be found in **Appendix B: Crash Diagrams**.

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Signal Warrant Evaluation

The intersection was evaluated against the nine signal warrants outlined in the MUTCD. See the results in Table 18: Warrant Criteria (12th Ave & Commercial St):

Table 18: Warrant Criteria (12th Ave & Commercial St)

Warrant	Met?	Notes
Warrant 1 – Eight-Hour Vehicular Volume	No	Volumes below threshold
Warrant 2 – Four-Hour Vehicular Volume	No	Volumes below threshold
Warrant 3 – Peak Hour	N/A	No nearby facility with concentrated traffic
Warrant 4 – Pedestrian Volume	No	Pedestrian volumes below threshold
Warrant 5 – School Crossing	N/A	Not applicable
Warrant 6 – Coordinated Signal System	N/A	Signals are spaced less than 1,000 ft. apart
Warrant 7 – Crash Experience	No	Crash data below thresholds
Warrant 8 – Road Network	Yes	Criteria met
Warrant 9 – Near Railroad Crossing	N/A	Not near a railroad

The signal at this intersection only met the criteria for Warrant 8 – Road Network. Given that this location serves traffic volumes exceeding 11,000 vehicles per day and functions as the intersection of two major highway routes (US-50 and K-99), maintaining a signal at this location is recommended.

Peak Hours

Using the 24-hour traffic volumes collected, the following peak hours were observed:

- AM Peak Hour: 7:30am-8:30am (720 total vehicles)
- PM Peak Hour: 4:30pm-5:30pm (1,073 total vehicles)

Capacity Analysis

Intersection performance was evaluated using Synchro 12 and HCM 7th Edition methodology. Due to software constraints, posted speed limits of 20 mph or less were modeled as 25 mph.

Table 19: Intersection Capacity Analysis (12th Ave & Commercial St)

		12 th Avenue		Commercial Street		Intersection
		EB	WB	NB	SB	
Existing Traffic Signal (AM Peak)	Delay (s/veh)	9.7	10.6	8.8	8.2	10.1
	LOS	A	B	A	A	B
Existing Traffic Signal (PM Peak)	Delay (s/veh)	4.0	10.2	8.9	9.1	7.7
	LOS	A	B	A	A	A

Under existing signalized conditions, the intersection operates at Level of Service (LOS) A during both AM and PM peak periods. While the westbound approach experiences slightly higher delays (LOS B), overall intersection performance remains well within acceptable thresholds.

The traffic analysis worksheet for this intersection can be found in **Appendix C: Traffic Analysis Worksheets**.

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Signal Equipment and Operations

Based on the Gades Sales Co. inventory and field observations, the following equipment conditions were noted:

- Controller: M50 – outdated, software unsupported by Yunex
- MMU: MMU2-16LE – older than 12 years
- Vehicle and/or Pedestrian Detection: In-pavement loops for vehicles. Push buttons for pedestrians.
- Battery Backup: None installed
- Special Equipment: Loops
- Installation Date: 1998

The city noted that the signal pole in the southwest corner of the intersection gets hit regularly.

Summary of Findings

The evaluation of the intersection at 12th Avenue & Commercial Street indicates:

- The crash rate is within expected limits and below the statewide average for similar intersections.
- The signal meets current MUTCD Warrant 8 – Road Network.
- The existing signal equipment is outdated and unsupported.
- LOS under all evaluated conditions is excellent (LOS A) for all movements, except the westbound movement, which operates at LOS B – still considered acceptable.
- The existing signals lack sufficient mast arm length and the appropriate number of signal heads required for the number of lanes based on current MUTCD standards for three of the four approaches.

Recommendations

- Replace the existing signal controller cabinet with a new cabinet and modern equipment supported by manufacturers. Add emergency preemption equipment.
- Replace the in-pavement loops with a modern vehicle detection system. Add battery backup for improved reliability.
- Replace signal poles to ensure the appropriate number of signal heads are provided for each lane group, improving visibility and compliance.
- Add accessible pedestrian signal features to the traffic signal system.
- Consider implementing a corridor signal coordination project to enhance signal performance and traffic flow efficiency between this intersection and the 12th Avenue/Merchant Street traffic signal

9 INTERSECTION ANALYSIS: 6TH AVENUE & RURAL STREET

Intersection Overview

The intersection of 6th Avenue (US-50) & Rural Street is a four-legged signalized intersection located half a mile west of Emporia’s CBD. 6th Avenue also functions as US Highway 50 (US-50) at this location. The posted speed limit is 30 mph. On-street parking is prohibited along 6th Avenue and is allowed along Rural Street.

- **Northbound/Southbound Approaches (Rural Street):** Each approach includes a single lane serving left, through, and right-turn movements.
- **Eastbound/Westbound Approaches (6th Avenue):** Each approach includes a dedicated left-turn lane (~100 ft) and two through lanes, with the outside lane serving both through and right-turn movements.

Pictures of the existing intersection, signal, and/or signal cabinet can be found in **Appendix A: Site Photos**.

Crash History

The following table summarizes crash history at this location:

Table 20: Crash Summary (6th Ave & Rural St)

Crash Type	Count	Severity (PDO/Injury/Fatal)	Notes
Angle	12	7 / 5 / 0	
Rear-end	5	5 / 0 / 0	
Pedestrian/Bike	3	1 / 2 / 0	
Other	4	3 / 1 / 0	
TOTAL	24	16 / 8 / 0	

Crash Metrics:

- $CR_{int} = 0.766$ c/mev (below the statewide average)
- $CCR_{int} = 1.366$ c/mev
- $C.I. = 0.56$

Crash data within the study period indicates a total of twenty-four reported crashes at the intersection of 6th Avenue & Rural Street. Twelve angle and five rear-end crashes were reported, resulting in eight injuries and sixteen property damage only incidents. Additionally, three pedestrian or bicycle crashes were recorded, two of which resulted in injuries and one in property damage only.

Over half of the crashes at this intersection were angle and rear-end crashes. Repeated rear-end crashes were noted along 6th Avenue. This concentration may be attributed to several factors:

- Higher left-turning movements from Rural Street.
- Driver behavior, such as sudden stops or aggressive turns, especially during peak periods.
- Multiple crash reports indicated that signal timing may be an issue at the intersection, with Rural Street reportedly changing from green to red “very quickly.” Several reports noted uncertainty about which direction had the green light.
- Several citations were issued for red-light violations on 6th Avenue, with repeated westbound offenses noted.

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Crash rate analysis yielded a Crash Rate (CRint) of 0.766 crashes per million entering vehicles, which is below the Critical Crash Rate (CCRint) of 1.366 crashes per million entering vehicles. The resulting Crash Index (CI) of 0.56 indicates that the crash frequency at this location is within expected limits for similar intersections.

The crash diagram for this intersection can be found in **Appendix B: Crash Diagrams**.

Crash Mitigation Recommendations

To address the elevated number of angle and rear-end crashes, several mitigation strategies should be considered. Given the high volume of left-turning movements from Rural Street, the addition of dedicated left-turn lanes on both the northbound and southbound approaches may reduce conflict points and improve traffic flow. Implementing protected left-turn phasing could further separate turning vehicles from opposing through movements, reducing the likelihood of angle collisions. On 6th Avenue, the existing signal lacks the full number of signal heads, which may contribute to driver confusion and reduced awareness of signal indications. Upgrading the signal to include the appropriate number of heads per lane group, in accordance with MUTCD standards, could enhance visibility and compliance. These improvements may help reduce crash frequency and improve overall intersection safety.

Signal Warrant Evaluation

The intersection was evaluated against the nine signal warrants outlined in the MUTCD. See the results in Table 21: Warrant Criteria (6th Ave & Rural St):

Table 21: Warrant Criteria (6th Ave & Rural St)

Warrant	Met?	Notes
Warrant 1 – Eight-Hour Vehicular Volume	No	Volumes below threshold
Warrant 2 – Four-Hour Vehicular Volume	No	Volumes below threshold
Warrant 3 – Peak Hour	N/A	No nearby facility with concentrated traffic
Warrant 4 – Pedestrian Volume	No	Pedestrian volumes below threshold
Warrant 5 – School Crossing	N/A	Not applicable
Warrant 6 – Coordinated Signal System	Yes	Criteria met
Warrant 7 – Crash Experience	Yes	Criteria met
Warrant 8 – Road Network	Yes	Criteria met
Warrant 9 – Near Railroad Crossing	N/A	Not near a railroad

The signal at this intersection met criteria for three warrants: Warrant 6 – Coordinated Signal System, Warrant 7 – Crash Experience, and Warrant 8 – Road Network.

Peak Hours

Using the 24-hour traffic volumes collected, the following peak hours were observed:

- AM Peak Hour: 10:30am-11:30am (991 total vehicles)
- PM Peak Hour: 4:45pm-5:45pm (1,483 total vehicles)

Capacity Analysis

Intersection performance was evaluated using Synchro 12 and HCM 7th Edition methodology.

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Table 22: Intersection Capacity Analysis (6th Ave & Rural St)

		6 th Avenue		Rural Street		Intersection
		EB	WB	NB	SB	
Existing Traffic Signal (AM Peak)	Delay (s/veh)	10.6	15.6	8.7	8.9	12.6
	LOS	B	B	A	A	B
Existing Traffic Signal (PM Peak)	Delay (s/veh)	12.4	18.8	8.7	9.6	14.9
	LOS	B	B	A	A	B

Under existing signalized conditions, the intersection operates at Level of Service (LOS) B during both AM and PM peak periods. The intersection performance is well within acceptable thresholds.

The traffic analysis worksheet for this intersection can be found in **Appendix C: Traffic Analysis Worksheets**.

Signal Equipment and Operations

Based on the Gades Sales Co. inventory and field observations, the following equipment conditions were noted:

- Controller: M50 – outdated, software unsupported by Yunex
- MMU: NSM-3 – older than 12 years
- Vehicle and/or Pedestrian Detection: Video detection for vehicles. Push buttons for pedestrians.
- Battery Backup: None installed
- Special Equipment: None
- Installation Date: 1990

Summary of Findings

The evaluation of the intersection at 6th Avenue & Rural Street indicates:

- The crash rate is within expected limits and below the statewide average for similar intersections although repeated crash types indicate improvements could be beneficial.
- The signal meets current MUTCD Warrant 6 – Coordinated Signal System and Warrant 8 – Crash Experience.
- The existing signal equipment is outdated and unsupported.
- LOS under the existing conditions is good (LOS B) for the intersection and considered acceptable.
- The existing signals over 6th Avenue lack sufficient mast arm length and the appropriate number of signal heads required for the number of lanes based on current MUTCD standards.

Recommendations

- Replace the existing signal controller cabinet with a new cabinet and modern equipment supported by manufacturers. Add emergency preemption equipment to improve emergency vehicle access.
- Consider a geometric improvement to add dedicated left-turn lanes on Rural Street to reduce conflict points and improve traffic flow.
- Replace signal poles to ensure the appropriate number of signal heads are provided for each lane group, improving visibility and compliance.
- Add battery backup to enhance reliability and operational resilience.
- Retain retroreflective backplates on signal heads to improve visibility.
- Add accessible pedestrian signal features to the traffic signal system.

10 INTERSECTION ANALYSIS: 6TH AVENUE & CONGRESS STREET

Intersection Overview

The intersection of 6th Avenue (US-50) & Congress Street is a four-legged signalized intersection located just west of Emporia’s CBD. 6th Avenue also functions as US Highway 50 (US-50) at this location. The posted speed limit is 30 mph. On-street parking is present on the north and south legs adjacent to the driving lanes. Marked crosswalks are located on all four approaches.

- **Northbound/Southbound Approaches (Congress Street):** Each approach includes a single lane serving left, through, and right-turn movements.
- **Eastbound/Westbound Approaches (6th Avenue):** Each approach includes a dedicated left-turn lane (~100 ft) and two through lanes, with the outside lane serving both through and right-turn movements.

The signal at this intersection currently operates in flash mode, having been damaged by a lightning strike over ten years ago. It has remained non-operational since.

Pictures of the existing intersection, signal, and/or signal cabinet can be found in **Appendix A: Site Photos**.

Crash History

The following table summarizes crash history at this location:

Table 23: Crash Summary (6th Avenue & Congress St)

Crash Type	Count	Severity (PDO/Injury/Fatal)	Notes
Angle	3	3 / 0 / 0	
Rear-end	2	2 / 0 / 0	
Pedestrian/Bike	0	0 / 0 / 0	
Other	1	1 / 0 / 0	
TOTAL	6	6 / 0 / 0	

Crash Metrics:

- $CR_{int} = 0.237$ c/mev (below the statewide average)
- $CCR_{int} = 1.409$ c/mev
- $C.I. = 0.17$

Crash data within the study period indicates a total of six reported crashes at the intersection of 6th Avenue & Congress Street. Three angle and two rear-end crashes were reported, all resulting in property damage only. No pedestrian or bicycle crashes were recorded.

Crash rate analysis yielded a Crash Rate (CR_{int}) of 0.237 crashes per million entering vehicles, which is below the Critical Crash Rate (CCR_{int}) of 1.409 crashes per million entering vehicles. The resulting Crash Index (CI) of 0.17 indicates that the crash frequency at this location is well within expected limits for similar intersections and does not suggest an unusually high crash rate.

The crash diagram for this intersection can be found in **Appendix B: Crash Diagrams**.

KDOT TEAP Study

Signal Warrant Evaluation

The intersection was evaluated against the nine signal warrants outlined in the MUTCD. See the results in Table 24: Warrant Criteria (6th Ave & Congress St):

Table 24: Warrant Criteria (6th Ave & Congress St)

Warrant	Met?	Notes
Warrant 1 – Eight-Hour Vehicular Volume	No	Volumes below threshold
Warrant 2 – Four-Hour Vehicular Volume	No	Volumes below threshold
Warrant 3 – Peak Hour	N/A	No nearby facility with concentrated traffic
Warrant 4 – Pedestrian Volume	No	Volumes below threshold
Warrant 5 – School Crossing	N/A	Not near a school
Warrant 6 – Coordinated Signal System	No	Signals are spaced less than 1,000 feet apart
Warrant 7 – Crash Experience	No	Crash data below thresholds
Warrant 8 – Road Network	No	Criteria not satisfied
Warrant 9 – Near Railroad Crossing	N/A	Not within proximity to railroad tracks

The signal at this intersection did not meet the criteria for any applicable MUTCD signal warrants. As the signal currently operates in flash mode and no warrants were satisfied, the capacity analysis focused solely on evaluating the existing two-way stop control configuration.

Peak Hours

Using the 24-hour traffic volumes collected, the following peak hours were observed:

- AM Peak Hour: 10:30am-11:30am (860 total vehicles)
- PM Peak Hour: 4:45pm-5:45pm (1,209 total vehicles)

Capacity Analysis

Intersection performance was evaluated using Synchro 12 and HCM 7th Edition methodology. Since volume-based warrants were not met, and the signal currently operates in flash mode, the intersection was also evaluated under a two-way stop control scenario.

Table 25: Intersection Capacity Analysis (6th Ave & Congress St)

		6 th Avenue		Congress St		Intersection
		EB	WB	NB	SB	
Alternative: 2-Way Stop (AM Peak)	Delay (s/veh)	0.2	0.2	12.7	11.8	1.1
	LOS	A	A	B	B	A
Alternative: 2-Way Stop (PM Peak)	Delay (s/veh)	0.1	0.1	15.4	15.2	1.2
	LOS	A	A	C	C	A

Modeling the intersection as a two-way stop controlled facility, with stop signs located on Congress Street, the intersection operates at LOS A during both AM and PM peak periods. The minor street approaches (Congress Street) experience higher delays, operating at LOS B during the AM peak and LOS C during the PM peak periods. Overall, intersection performance remains well within acceptable thresholds under this control scenario.

The traffic analysis worksheet for this intersection can be found in **Appendix C: Traffic Analysis Worksheets**.

KDOT TEAP Study

Signal Equipment and Operations

Based on the Gades Sales Co. inventory and field observations, the following equipment conditions were noted:

- Controller: EPAC300 (Not working) – outdated, software unsupported by Yunex
- MMU: SSM-6LE – older than 12 years
- Vehicle and/or Pedestrian Detection: No vehicle detection. Pedestrian push-buttons present, but inoperable due to flash function of signal system.
- Battery Backup: None installed
- Special Equipment: Emergency preemption (reported by City as non-functional)
- Installation Date: 1990

Summary of Findings

The evaluation of the intersection at 6th Avenue & Congress Street indicates:

- The crash rate is within expected limits and below the statewide average for similar intersections.
- The signal does not meet any of the current MUTCD signal warrants.
- The signal has been non-operational for over a decade and currently operates in flash mode.
- The intersection LOS under the evaluated two-way stop control scenario is excellent (LOS A).

Recommendations

- Remove the existing signal and supporting equipment.
- Remove existing northbound and southbound crosswalk markings and eastbound and westbound stop bars on 6th Avenue.
- Formalize and maintain two-way stop control along Congress Street; monitor performance periodically. If northbound/southbound pedestrian crossings increase significantly, consider adding an RRFB and other pedestrian facility crosswalk treatments per the KDOT Crosswalk Guide.

11 INTERSECTION ANALYSIS: 6TH AVENUE & CONSTITUTION STREET

Intersection Overview

The intersection of 6th Avenue (US-50) & Constitution Street is a four-legged signalized intersection located just west of Emporia’s CBD. 6th Avenue also functions as US Highway 50 (US-50) at this location. The posted speed limit is 30 mph. On-street parking is present on the north and south legs adjacent to the driving lanes. Marked crosswalks are located on all four approaches.

- **Northbound/Southbound Approaches (Constitution Street):** Each approach includes a single lane serving left, through, and right-turn movements.
- **Eastbound/Westbound Approaches (6th Avenue):** Each approach includes a dedicated left-turn lane (~100 ft) and two through lanes, with the outside lane serving both through and right-turn movements.

The signal at this intersection currently operates in flash mode.

Pictures of the existing intersection, signal, and/or signal cabinet can be found in **Appendix A: Site Photos**.

Crash History

The following table summarizes crash history at this location:

Table 26: Crash Summary (6th Ave & Constitution St)

Crash Type	Count	Severity (PDO/Injury/Fatal)	Notes
Angle	10	8 / 2 / 0	
Rear-end	3	2 / 1 / 0	
Pedestrian/Bike	1	0 / 0 / 1	
Other	3	3 / 0 / 0	
TOTAL	17	13 / 3 / 1	

Crash Metrics:

- $CR_{int} = 0.695$ c/mev (below the statewide average)
- $CCR_{int} = 1.417$ c/mev
- $C.I. = 0.49$

Crash data within the study period indicates a total of seventeen reported crashes at the intersection of 6th Avenue & Constitution Street. Ten angle, three rear-end, and one pedestrian/bike crashes were reported, resulting in ten property damage only crashes, three injury crashes, and one fatality. This intersection was the site of the only fatality recorded in this study – a pedestrian struck in the eastern crosswalk by an eastbound driver.

Crash rate analysis yielded a Crash Rate (CR_{int}) of 0.695 crashes per million entering vehicles, which is below the Critical Crash Rate (CCR_{int}) of 1.417 crashes per million entering vehicles. The resulting Crash Index (CI) of 0.49 indicates that the crash frequency at this location is within expected limits for similar intersections and does not suggest an unusually high crash rate.

The crash diagram for this intersection can be found in **Appendix B: Crash Diagrams**.

KDOT TEAP Study

Signal Warrant Evaluation

The intersection was evaluated against the nine signal warrants outlined in the MUTCD. See the results in Table 27: Warrant Criteria (6th Ave & Constitution St):

Table 27: Warrant Criteria (6th Ave & Constitution St)

Warrant	Met?	Notes
Warrant 1 – Eight-Hour Vehicular Volume	No	Volumes below threshold
Warrant 2 – Four-Hour Vehicular Volume	No	Volumes below threshold
Warrant 3 – Peak Hour	N/A	No nearby facility with concentrated traffic
Warrant 4 – Pedestrian Volume	No	Volumes below threshold
Warrant 5 – School Crossing	N/A	Not near a school
Warrant 6 – Coordinated Signal System	No	Signals are spaced less than 1,000 feet apart
Warrant 7 – Crash Experience	No	Crash data below thresholds
Warrant 8 – Road Network	No	Criteria not satisfied
Warrant 9 – Near Railroad Crossing	N/A	Not within proximity to railroad tracks

The signal at this intersection did not meet the criteria for any applicable MUTCD signal warrants. As the signal currently operates in flash mode and no warrants were satisfied, the capacity analysis focused solely on evaluating the existing two-way stop control configuration.

Peak Hours

Using the 24-hour traffic volumes collected, the following peak hours were observed:

- AM Peak Hour: 10:30am-11:30am (847 total vehicles)
- PM Peak Hour: 4:45pm-5:45pm (1,194 total vehicles)

Capacity Analysis

Intersection performance was evaluated using Synchro 12 and HCM 7th Edition methodology. Since volume-based warrants were not met, and the signal currently operates in flash mode, the intersection was also evaluated under a two-way stop control scenario.

Table 28: Intersection Capacity Analysis (6th Ave & Constitution St)

		6 th Avenue		Constitution St		Intersection
		EB	WB	NB	SB	
Alternative: 2-Way Stop (AM Peak)	Delay (s/veh)	0.6	0.2	12.2	10.8	1.3
	LOS	A	A	B	B	A
Alternative: 2-Way Stop (PM Peak)	Delay (s/veh)	0.3	0.2	14.6	13.1	1.4
	LOS	A	A	B	B	A

Modeling the intersection as a two-way stop controlled facility, with stop signs located on Constitution Street, the intersection operates at LOS A during both AM and PM peak periods. The minor street approaches (Constitution Street) experience higher delays, operating at LOS B during both peak periods. Overall, intersection performance remains well within acceptable thresholds under this control scenario.

The traffic analysis worksheet for this intersection can be found in **Appendix C: Traffic Analysis Worksheets**.

KDOT TEAP Study

Signal Equipment and Operations

Based on the Gades Sales Co. inventory and field observations, the following equipment conditions were noted:

- Controller: EPAC300 – outdated, software unsupported by Yunex
- MMU: SSM-6LE – older than 12 years
- Vehicle and/or Pedestrian Detection: No vehicle detection. Pedestrian push-buttons present, but inoperable due to flash function of signal system.
- Battery Backup: None installed
- Special Equipment: Emergency preemption (reported by City as non-functional)
- Installation Date: 1998

Summary of Findings

The evaluation of the intersection at 6th Avenue & Constitution Street indicates:

- The crash rate is within expected limits and below the statewide average for similar intersections.
- The signal does not meet any of the current MUTCD signal warrants.
- The signal has been operating in flash mode.
- The intersection LOS under the evaluated two-way stop control scenario is excellent (LOS A).

Recommendations

- Remove the existing signal and supporting equipment.
- Remove existing northbound and southbound crosswalk markings and eastbound and westbound stop bars on 6th Avenue.
- Formalize and maintain two-way stop control along Congress Street; monitor performance periodically. If northbound/southbound pedestrian crossings increase significantly, consider adding an RRFB and other pedestrian facility crosswalk treatments per the KDOT Crosswalk Guide.

12 INTERSECTION ANALYSIS: 6TH AVENUE & MERCHANT STREET

Intersection Overview

The intersection of 6th Avenue (US-50) & Merchant Street is a four-legged signalized intersection located within Emporia’s CBD. 6th Avenue also functions as US Highway 50 (US-50) at this location. The posted speed limit is 20 mph. On-street parking is present on all four approaches adjacent to the driving lanes. Marked crosswalks are located on all four approaches.

- **Northbound/Southbound Approaches (Merchant Street):** Each approach includes a single lane serving left, through, and right-turn movements.
- **Eastbound/Westbound Approaches (6th Avenue):** Each approach includes a dedicated left-turn lane (~100 ft) and two through lanes, with the outside lane serving both through and right-turn movements.

Pictures of the existing intersection, signal, and/or signal cabinet can be found in **Appendix A: Site Photos**.

Crash History

The following table summarizes crash history at this location:

Table 29: Crash Summary (6th Ave & Merchant St)

Crash Type	Count	Severity (PDO/Injury/Fatal)	Notes
Angle	9	5 / 4 / 0	
Rear-end	3	3 / 0 / 0	
Pedestrian/Bike	1	0 / 1 / 0	
Other	3	3 / 0 / 0	
TOTAL	16	11 / 5 / 0	

Crash Metrics:

- $CR_{int} = 0.566$ c/mev (below the statewide average)
- $CCR_{int} = 1.386$ c/mev
- $C.I. = 0.41$

Crash data within the study period indicates a total of sixteen reported crashes at the intersection of 6th Avenue & Merchant Street. Nine angle and three rear-end crashes were reported, resulting in four injury crashes and eight property damage only incidents. Additionally, one pedestrian or bicycle crash was recorded, which resulted in injury.

Crash rate analysis yielded a Crash Rate (CR_{int}) of 0.566 crashes per million entering vehicles, which is below the Critical Crash Rate (CCR_{int}) of 1.386 crashes per million entering vehicles. The resulting Crash Index (CI) of 0.41 indicates that the crash frequency at this location is within expected limits for similar intersections.

The crash diagram for this intersection can be found in **Appendix B: Crash Diagrams**.

KDOT TEAP Study

Signal Warrant Evaluation

The intersection was evaluated against the nine signal warrants outlined in the MUTCD. See the results in Table 30: Warrant Criteria (6th Ave & Merchant St):

Table 30: Warrant Criteria (6th Ave & Merchant St)

Warrant	Met?	Notes
Warrant 1 – Eight-Hour Vehicular Volume	Yes	Criteria met
Warrant 2 – Four-Hour Vehicular Volume	Yes	Criteria met
Warrant 3 – Peak Hour	N/A	No nearby facility with concentrated traffic
Warrant 4 – Pedestrian Volume	No	Volumes below threshold
Warrant 5 – School Crossing	N/A	Not near a school
Warrant 6 – Coordinated Signal System	No	Signals are spaced less than 1,000 feet apart
Warrant 7 – Crash Experience	Yes	Criteria met
Warrant 8 – Road Network	No	Criteria not satisfied
Warrant 9 – Near Railroad Crossing	N/A	Not within proximity to railroad tracks

The signal at this intersection met the criteria for three MUTCD warrants: Warrant 1 – Eight-Hour Vehicular Volume, Warrant 2 – Four-Hour Vehicular Volume, and Warrant 7 – Crash Experience. These findings support continued signalization at this location.

Peak Hours

Using the 24-hour traffic volumes collected, the following peak hours were observed:

- AM Peak Hour: 10:30am-11:30am (957 total vehicles)
- PM Peak Hour: 4:45pm-5:45pm (1,401 total vehicles)

Capacity Analysis

Intersection performance was evaluated using Synchro 12 and HCM 7th Edition methodology. Due to software constraints, posted speed limits of 20 mph were modeled as 25 mph.

Table 31: Intersection Capacity Analysis (6th Ave & Merchant St)

		6 th Avenue		Merchant Street		Intersection
		EB	WB	NB	SB	
Existing Traffic Signal (AM Peak)	Delay (s/veh)	3.7	3.7	9.1	11.3	6.1
	LOS	A	A	A	B	A
Existing Traffic Signal (PM Peak)	Delay (s/veh)	4.3	4.6	10.4	11.9	6.7
	LOS	A	A	B	B	A

Under existing signalized conditions, the intersection operates at Level of Service (LOS) A during both AM and PM peak periods. Slightly longer delays are observed on the northbound and southbound approaches (Merchant Street), which operate at LOS B during the PM peak. Overall, intersection performance remains well within acceptable thresholds.

The traffic analysis worksheet for this intersection can be found in **Appendix C: Traffic Analysis Worksheets**.

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Signal Equipment and Operations

Based on the Gades Sales Co. inventory and field observations, the following equipment conditions were noted:

- Controller: M50 – outdated, software unsupported by Yunex
- MMU: SSM-6LE – older than 12 years
- Vehicle and/or Pedestrian Detection: None. System operates on fixed time/cycle.
- Battery Backup: None installed
- Special Equipment: Emergency preemption (reported by City as non-functional)
- Installation Date: 1990

Summary of Findings

The evaluation of the intersection at 6th Avenue & Merchant Street indicates:

- The crash rate is within expected limits and below the statewide average for similar intersections.
- The signal meets three current MUTCD signal warrant criteria: Warrant 1 – Eight-Hour Vehicular Volume, Warrant 2 – Four-Hour Vehicular Volume, and Warrant 7 – Crash Experience.
- The existing signal equipment is outdated and unsupported.
- LOS under all evaluated conditions is excellent (LOS A) for most movements, with minor delays observed on Merchant Street (LOS B).
- The existing signals over 6th Avenue lack sufficient mast arm length and the appropriate number of signal heads required for the number of lanes based on current MUTCD standards.

Recommendations

- Replace the existing signal controller cabinet with a new cabinet and modern equipment supported by manufacturers.
- Upgrade the emergency preemption equipment to restore functionality.
- Replace signal poles on 6th Avenue to ensure the appropriate number of signal heads are provided for each lane group, improving visibility and compliance.
- Add vehicle detection and battery backup to enhance reliability and operational resilience.
- Add accessible pedestrian signal features to the traffic signal system.

13 INTERSECTION ANALYSIS: 6TH AVENUE & MECHANIC STREET

Intersection Overview

The intersection of 6th Avenue (US-50) & Mechanic Street is a four-legged signalized intersection located within Emporia’s CBD. 6th Avenue also functions as US Highway 50 (US-50) at this location. The posted speed limit is 30 mph. On-street parking is present on all four approaches adjacent to the driving lanes. Marked crosswalks are located on all four approaches.

- **Northbound/Southbound Approaches (Mechanic Street):** Each approach includes a single lane serving left, through, and right-turn movements.
- **Eastbound/Westbound Approaches (6th Avenue):** Each approach includes a dedicated left-turn lane (~100 ft) and two through lanes, with the outside lane serving both through and right-turn movements.

Pictures of the existing intersection, signal, and/or signal cabinet can be found in **Appendix A: Site Photos**.

Crash History

The following table summarizes crash history at this location:

Table 32: Crash Summary (6th Ave & Mechanic St)

Crash Type	Count	Severity (PDO/Injury/Fatal)	Notes
Angle	4	2 / 2 / 0	
Rear-end	8	7 / 1 / 0	
Pedestrian/Bike	0	0 / 0 / 0	
Other	4	4 / 0 / 0	
TOTAL	16	13 / 3 / 0	

Crash Metrics:

- $CR_{int} = 0.725$ c/mev (below the statewide average)
- $CCR_{int} = 1.440$ c/mev
- $C.I. = 0.50$

Crash data within the study period indicates a total of sixteen reported crashes at the intersection of 6th Avenue & Mechanic Street. Four angle and eight rear-end crashes were reported, resulting in three injury crashes and thirteen property damage only incidents. No pedestrian or bicycle crashes were recorded.

Crash rate analysis yielded a Crash Rate (CR_{int}) of 0.725 crashes per million entering vehicles, which is below the Critical Crash Rate (CCR_{int}) of 1.440 crashes per million entering vehicles. The resulting Crash Index (CI) of 0.50 indicates that the crash frequency at this location is within expected limits for similar intersections.

The crash diagram for this intersection can be found in **Appendix B: Crash Diagrams**.

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Signal Warrant Evaluation

The intersection was evaluated against MUTCD signal warrants:

Table 33: Warrant Criteria (6th Ave & Mechanic St)

Warrant	Met?	Notes
Warrant 1 – Eight-Hour Vehicular Volume	No	Volumes below threshold
Warrant 2 – Four-Hour Vehicular Volume	No	Volumes below threshold
Warrant 3 – Peak Hour	N/A	No nearby facility with concentrated traffic
Warrant 4 – Pedestrian Volume	No	Volumes below threshold
Warrant 5 – School Crossing	N/A	Not near a school
Warrant 6 – Coordinated Signal System	No	Signals are spaced less than 1,000 feet apart
Warrant 7 – Crash Experience	No	Crash data below thresholds
Warrant 8 – Road Network	No	Criteria not satisfied
Warrant 9 – Near Railroad Crossing	N/A	Not within proximity to railroad tracks
All-way Stop Warrants	No	Volume criteria not satisfied

The signal at this intersection did not meet the criteria for any applicable MUTCD signal or all-way stop warrants. As a result, the capacity analysis included evaluation of an alternative, two-way stop control configuration.

Peak Hours

Using the 24-hour traffic volumes collected, the following peak hours were observed:

- AM Peak Hour: 7:15am-8:15am (841 total vehicles)
- PM Peak Hour: 4:15pm-5:15pm (1,057 total vehicles)

Capacity Analysis

Intersection performance was evaluated using Synchro 12 and HCM 7th Edition methodology. Since volume-based signal warrants were not met, the intersection was also evaluated under a two-way stop control scenario to assess operational feasibility.

Table 34: Intersection Capacity Analysis (6th Ave & Mechanic St)

			6 th Avenue		Mechanic Street		Intersection
			EB	WB	NB	SB	
AM PEAK	Existing Traffic Signal	Delay (s/veh)	9.7	10.2	11.2	8.8	10.2
		LOS	A	B	B	A	B
	Alternative 2 (2-Way Stop)	Delay (s/veh)	0.7	1.9	54.6	27.6	17.9
		LOS	A	A	F	D	C
PM PEAK	Existing Traffic Signal	Delay (s/veh)	4.0	9.8	10.9	9.1	7.8
		LOS	A	A	B	A	A
	Alternative 2 (2-Way Stop)	Delay (s/veh)	0.6	1.1	106.6	29.0	26.0
		LOS	A	A	F	D	D

Under existing signalized conditions, the intersection operates efficiently, with LOS B during the AM peak and LOS A during the PM peak. Delays are minimal and well within acceptable thresholds for all approaches.

In contrast, the two-way stop control scenario results in substantial delays on the minor street approaches (Mechanic Street), with LOS D and F observed during both peak periods. These delays, while technically

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within the intersection capacity, represent a level of operational inefficiency that may be perceived as unacceptable by drivers, particularly those on the northbound and southbound approaches. This level of delay can lead to driver frustration, riskier gap acceptance behavior, and an increased likelihood of angle crashes—a pattern commonly observed at unsignalized intersections with similar traffic characteristics.

An all-way stop control scenario was also considered for comparison, but volume criteria were not met, and such control is not recommended due to 6th Avenue's function as US-50, a principal arterial.

Although the intersection does not meet current MUTCD signal warrants, engineering judgment supports retaining the existing signal. The signal provides a more balanced distribution of delay, improves operational efficiency for all users, and likely contributes to the relatively low crash rate observed. Replacing the signal with two-way stop control could degrade minor street operations and increase crash risk, particularly for angle-type collisions.

The traffic analysis worksheet for this intersection can be found in **Appendix C: Traffic Analysis Worksheets**.

Signal Equipment and Operations

Based on the Gades Sales Co. inventory and field observations, the following equipment conditions were noted:

- Controller: M50 – outdated, software unsupported by Yunex
- MMU: SSM-6LE – older than 12 years
- Vehicle and/or Pedestrian Detection: None. System operates on fixed time/cycle.
- Battery Backup: None installed
- Special Equipment: Emergency preemption (reported by City as non-functional)
- Installation Date: 1990

Summary of Findings

The evaluation of the intersection at 6th Avenue & Mechanic Street indicates:

- The crash rate is within expected limits and below the statewide average for similar intersections.
- The signal does not meet any of the current MUTCD signal warrants.
- Existing signal equipment is outdated and unsupported.
- LOS under the existing signal is acceptable, while the two-way stop control scenario results in delays that approach undesirable thresholds, particularly on the minor street approaches.
- The existing signals over 6th Avenue lack sufficient mast arm length and the appropriate number of signal heads required for the number of lanes based on current MUTCD standards.

Recommendations

- Replace the existing signal controller cabinet with a new cabinet and modern equipment supported by manufacturers. Consider either (1) adding a vehicle detection system and/or (2) implementing a corridor signal coordination project to enhance signal performance and traffic flow.
- Upgrade the emergency preemption equipment to restore functionality.
- Replace signal poles to ensure the appropriate number of signal heads are provided for each lane group, improving visibility and compliance.
- Add battery backup to enhance reliability and operational resilience.
- Add accessible pedestrian signal features to the traffic signal system.

14 INTERSECTION ANALYSIS: MERCHANT STREET & 7TH AVENUE

Intersection Overview

The intersection of Merchant Street & 7th Avenue is a four-legged signalized intersection located within Emporia’s CBD. The posted speed limit is 20 mph. On-street parking is present on all four approaches adjacent to the driving lanes.

- **Northbound/Southbound Approaches (Merchant Street):** Each approach includes a single lane serving left, through, and right-turn movements.
- **Eastbound/Westbound Approaches (7th Avenue):** Each approach includes a single lane serving left, through, and right-turn movements.

Pictures of the existing intersection, signal, and/or signal cabinet can be found in **Appendix A: Site Photos**.

Crash History

The following table summarizes crash history at this location:

Table 35: Crash Summary (7th Ave & Merchant St)

Crash Type	Count	Severity (PDO/Injury/Fatal)	Notes
Angle	1	1 / 0 / 0	
Rear-end	3	2 / 1 / 0	
Pedestrian/Bike	0	0 / 0 / 0	
Other	0	0 / 0 / 0	
TOTAL	4	3 / 1 / 0	

Crash Metrics:

- $CR_{int} = 0.362$ c/mev (below the statewide average)
- $CCR_{int} = 1.635$ c/mev
- $C.I. = 0.22$

Crash data within the study period indicates a total of four reported crashes at the intersection of Merchant Street & 7th Avenue. One angle and three rear-end crashes were reported, resulting in one injury crash and three property damage only incidents. No pedestrian or bicycle crashes were recorded.

Crash rate analysis yielded a Crash Rate (CR_{int}) of 0.362 crashes per million entering vehicles, which is below the Critical Crash Rate (CCR_{int}) of 1.635 crashes per million entering vehicles. The resulting Crash Index (CI) of 0.22 indicates that the crash frequency at this location is within expected limits for similar intersections.

The crash diagram for this intersection can be found in **Appendix B: Crash Diagrams**.

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Signal Warrant Evaluation

The intersection was evaluated against MUTCD signal warrants:

Table 36: Warrant Criteria (Merchant St & 7th Ave)

Warrant	Met?	Notes
Warrant 1 – Eight-Hour Vehicular Volume	No	Volumes below threshold
Warrant 2 – Four-Hour Vehicular Volume	No	Volumes below threshold
Warrant 3 – Peak Hour	N/A	No nearby facility with concentrated traffic
Warrant 4 – Pedestrian Volume	No	Volumes below threshold
Warrant 5 – School Crossing	N/A	Not near a school
Warrant 6 – Coordinated Signal System	No	Signals are spaced less than 1,000 feet apart
Warrant 7 – Crash Experience	No	Crash data below thresholds
Warrant 8 – Road Network	No	Criteria not satisfied
Warrant 9 – Near Railroad Crossing	N/A	Not within proximity to railroad tracks
All-way Stop Warrants	No	Volume criteria not satisfied

The signal at this intersection did not meet the criteria for any applicable MUTCD signal or all-way stop warrants. As a result, the capacity analysis included evaluation of an alternative, two-way stop control configuration.

Peak Hours

Using the 24-hour traffic volumes collected, the following peak hours were observed:

- AM Peak Hour: 10:30am-11:30am (394 total vehicles)
- PM Peak Hour: 4:45pm-5:45pm (578 total vehicles)

Capacity Analysis

Intersection performance was evaluated using Synchro 12 and HCM 7th Edition methodology. Due to software constraints, posted speed limits of 20 mph were modeled as 25 mph. Since volume-based signal warrants were not met, the intersection was also evaluated under a two-way stop control scenario to assess operational feasibility.

Table 37: Intersection Capacity Analysis (Merchant St & 7th Ave)

			7 th Avenue		Merchant Street		Intersection
			EB	WB	NB	SB	
AM PEAK	Existing Traffic Signal	Delay (s/veh)	8.4	8.3	9.5	10.6	9.9
		LOS	A	A	A	B	A
	Alternative 2 (2-Way Stop)	Delay (s/veh)	10.8	10.4	0.54	0.38	1.7
		LOS	B	B	A	A	A
PM PEAK	Existing Traffic Signal	Delay (s/veh)	8.5	8.4	10.4	11.6	10.8
		LOS	A	A	B	B	B
	Alternative 2 (2-Way Stop)	Delay (s/veh)	12.9	11.2	0.4	0.47	1.9
		LOS	B	B	A	A	A

Under existing signalized conditions, the intersection operates at Level of Service (LOS) A during both AM and PM peak periods, with overall delays well below thresholds for concern. The two-way stop alternative results in slightly higher delays on the minor street approaches (7th Avenue), but overall intersection delays remain low, indicating that this configuration could also be an acceptable alternative.

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Should the City choose to remove the signal, the intersection capacity analysis suggests that the two-way stop control (with stop signs on 7th Avenue) could be operationally viable. Given that the existing signal does not meet MUTCD warrant criteria, the alternative two-way stop control maintains acceptable levels of service and delay, comparable to the existing signalized condition.

The traffic analysis worksheet for this intersection can be found in **Appendix C: Traffic Analysis Worksheets**.

Signal Equipment and Operations

Based on the Gades Sales Co. inventory and field observations, the following equipment conditions were noted:

- Controller: EPAC300 – outdated, software unsupported by Yunex
- MMU: MMU-16 – older than 12 years
- Vehicle and/or Pedestrian Detection: None. System operates on fixed time/cycle.
- Battery Backup: None installed
- Special Equipment: None
- Installation Date: 1998

Summary of Findings

The evaluation of the intersection at Merchant Street & 7th Avenue indicates:

- The crash rate is within expected limits and below the statewide average for similar intersections.
- The signal does not meet any of the current MUTCD signal warrants.
- Existing signal equipment is outdated and unsupported.
- LOS under the existing signal and two-way stop control scenarios is acceptable.
- The existing signal system lacks the appropriate number of signal heads required for the number of lanes based on current MUTCD standards.

Recommendations

- If signal is retained:
 - Replace the existing signal controller cabinet with a new cabinet and modern equipment supported by manufacturers.
 - Add a vehicle detection system.
 - Add battery backup for reliability.
 - Replace signal poles to ensure the appropriate number of signal heads are provided for each lane group, improving visibility and compliance.
 - Add accessible pedestrian signal features to the traffic signal system.
- If signal is removed:
 - Implement either 2-way stop control measures along 7th Avenue and monitor performance.
 - Evaluate pedestrian safety enhancements.

15 INTERSECTION ANALYSIS: 12TH AVENUE & MERCHANT STREET

Intersection Overview

The intersection of 12th Avenue (K-99) & Merchant Street (K-99) is a four-legged signalized intersection located north of Emporia’s CBD. The east leg of 12th Avenue and the north leg of Merchant Street also functions as Kansas Highway 99 (K-99) at this location. The posted speed limit is 20 mph. On-street parking is prohibited on all four approaches near the intersection. All four approaches have marked crosswalks.

- **Northbound/Southbound Approaches (Merchant Street):** The northbound approach has one dedicated left-turn lane (~85 ft) and one shared lane for through and right-turn movements. The southbound approach has one dedicated left-turn lane (~125 ft), one dedicated through lane and one dedicated right-turn lane (~185 ft).
- **Eastbound/Westbound Approaches (12th Avenue):** The eastbound approach has one dedicated left-turn lane (~115 ft), one dedicated through lane and one shared lane serving through and right-turn movements. The westbound approach has one dedicated left turn lane (~90 ft), one dedicated through lane and one dedicated right-turn lane (~110 ft).

Pictures of the existing intersection, signal, and/or signal cabinet can be found in **Appendix A: Site Photos**.

Crash History

The following table summarizes crash history at this location:

Table 38: Crash Summary (12th Ave & Merchant St)

Crash Type	Count	Severity (PDO/Injury/Fatal)	Notes
Angle	2	2 / 0 / 0	
Rear-end	10	9 / 1 / 0	
Pedestrian/Bike	2	0 / 2 / 0	
Other	4	4 / 0 / 0	
TOTAL	18	15 / 3 / 0	

Crash Metrics:

- $CR_{int} = 0.566$ c/mev (below the statewide average)
- $CCR_{int} = 1.363$ c/mev
- $C.I. = 0.42$

Crash data within the study period indicates a total of eighteen reported crashes at the intersection of 12th Avenue & Merchant Street. Two angle and ten rear-end crashes were reported, resulting in one injury crash and eleven property damage only crashes. Two pedestrian or bicycle crashes were reported, both resulting in injuries. Rear-end crashes on 12th Avenue were common and frequently attributed to driver inattention.

Crash rate analysis yielded a Crash Rate (CR_{int}) of 0.566 crashes per million entering vehicles, which is below the Critical Crash Rate (CCR_{int}) of 1.363 crashes per million entering vehicles. The resulting Crash Index (CI) of 0.42 indicates that the crash frequency at this location is well within expected limits for similar intersections and does not suggest an unusually high crash rate.

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The crash diagram for this intersection can be found in **Appendix B: Crash Diagrams**.

Signal Warrant Evaluation

The intersection was evaluated against MUTCD signal warrants:

Table 39: Warrant Criteria (12th Ave & Merchant St)

Warrant	Met?	Notes
Warrant 1 – Eight-Hour Vehicular Volume	Yes	Criteria met
Warrant 2 – Four-Hour Vehicular Volume	Yes	Criteria met
Warrant 3 – Peak Hour	N/A	No nearby facility with concentrated traffic
Warrant 4 – Pedestrian Volume	No	Volumes below threshold
Warrant 5 – School Crossing	N/A	Not near a school
Warrant 6 – Coordinated Signal System	No	Signals are spaced less than 1,000 feet apart
Warrant 7 – Crash Experience	Yes	Criteria met
Warrant 8 – Road Network	Yes	Criteria met
Warrant 9 – Near Railroad Crossing	N/A	Not within proximity to railroad tracks

The signal at this intersection met the criteria for four MUTCD warrants: Warrant 1 – Eight-Hour Vehicular Volume, Warrant 2 – Four-Hour Vehicular Volume, Warrant 7 – Crash Experience, and Warrant 8 – Road Network. These findings support continued signalization at this location.

Peak Hours

Using the 24-hour traffic volumes collected, the following peak hours were observed:

- AM Peak Hour: 7:30am-8:30am (1,153 total vehicles)
- PM Peak Hour: 5:00pm-6:00pm (1,607 total vehicles)

Capacity Analysis

Intersection performance was evaluated using Synchro 12 and HCM 7th Edition methodology. Due to software constraints, posted speed limits of 20 mph were modeled as 25 mph.

Table 40: Intersection Capacity Analysis (12th Ave & Merchant St)

		12 th Avenue		Merchant Street		Intersection
		EB	WB	NB	SB	
Existing Traffic Signal (AM Peak)	Delay (s/veh)	9.9	4.0	10.0	9.6	8.0
	LOS	A	A	A	A	A
Existing Traffic Signal (PM Peak)	Delay (s/veh)	9.7	4.5	9.4	9.9	7.7
	LOS	A	A	A	A	A

Under existing signalized conditions, the intersection operates at Level of Service (LOS) A during both AM and PM peak periods. All approaches experience low delays, and overall intersection performance remains well within acceptable thresholds

The traffic analysis worksheet for this intersection can be found in **Appendix C: Traffic Analysis Worksheets**.

KDOT TEAP Study

Signal Equipment and Operations

Based on the Gades Sales Co. inventory and field observations, the following equipment conditions were noted:

- Controller: M50 / MARC – outdated, software unsupported by Yunex
- MMU: MMU2-16LE – older than 12 years
- Vehicle and/or Pedestrian Detection: In-pavement loops for vehicles. Push buttons for pedestrians.
- Battery Backup: None installed
- Special Equipment: Loops
- Installation Date: 1998

Summary of Findings

The evaluation of the intersection at 12th Avenue & Merchant Street indicates:

- The crash rate is within expected limits and below the statewide average for similar intersections.
- The signal meets three current MUTCD signal warrant criteria: Warrant 1 – Eight-Hour Vehicular Volume, Warrant 2 – Four-Hour Vehicular Volume, and Warrant 8 – Road Network.
- The existing signal equipment is outdated and unsupported.
- LOS under all evaluated conditions is excellent (LOS A) for most movements, with minor delays observed on Merchant Street (LOS B).

Recommendations

- Replace the existing signal controller cabinet with a new cabinet and modern equipment supported by manufacturers. Upgrade and/or replace the emergency preemption equipment to restore functionality.
- Replace the in-pavement loops with a modern vehicle detection system.
- Add battery backup to enhance reliability and operational resilience.
- Upgrade existing pedestrian signal features to accessible pedestrian signals.
- Consider implementing a corridor signal coordination project to enhance signal performance and traffic flow efficiency between this intersection and the 12th Avenue/Commercial Street traffic signal.

16 INTERSECTION ANALYSIS: 18TH AVENUE & MERCHANT STREET

Intersection Overview

The intersection of Merchant Street (K-99) & 18th Avenue Street is a four-legged stop-controlled intersection, with stop sign on 18th Avenue. The intersection is located about half a mile north of Emporia’s Central Business District (CBD). Merchant Street also function as Kansas Highway 99 (K-99) at this location. The posted speed limit is 30 mph. On-street parking is prohibited on all four approaches. Marked crosswalks are located on the west and north legs of the intersection.

- **Northbound/Southbound Approaches (Merchant Street):** Each approach has a dedicated left-turn lane (~ 100 ft) and one shared lane for through and right-turn movements.
- **Eastbound/Westbound Approaches (18th Avenue):** Each approach has a single lane serving left, through, and right-turn movements.

Crash History

Crash data was not requested for this intersection due to its relatively low traffic volumes and the absence of operational or safety concerns identified during field observations. Based on preliminary review and observed conditions, the intersection was not expected to exhibit elevated crash risk and therefore was not prioritized for detailed crash analysis under this study.

Signal Warrant Evaluation

The intersection was evaluated against MUTCD signal warrants:

Table 41: Warrant Criteria (Merchant St & 18th Ave)

Warrant	Met?	Notes
Warrant 1 – Eight-Hour Vehicular Volume	No	Volumes below threshold
Warrant 2 – Four-Hour Vehicular Volume	No	Volumes below threshold
Warrant 3 – Peak Hour	N/A	No nearby facility with concentrated traffic
Warrant 4 – Pedestrian Volume	No	Volumes below threshold
Warrant 5 – School Crossing	N/A	Not near a school
Warrant 6 – Coordinated Signal System	No	Signals are spaced less than 1,000 feet apart
Warrant 7 – Crash Experience	N/A	Crash data not provided
Warrant 8 – Road Network	No	Criteria not satisfied
Warrant 9 – Near Railroad Crossing	N/A	Not within proximity to railroad tracks

The signal at this intersection did not meet the criteria for any applicable MUTCD signal warrants. As a result, the capacity analysis only considered the existing two-way stop condition.

Peak Hours

Using the 24-hour traffic volumes collected, the following peak hours were observed:

- AM Peak Hour: 7:30am-8:30am (661 total vehicles)
- PM Peak Hour: 4:15pm-5:15pm (788 total vehicles)

Capacity Analysis

Intersection performance was evaluated using Synchro 12 and HCM 7th Edition methodology. Since volume-based warrants were not met, the intersection was only evaluated under the existing two-way stop control scenario.

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Table 42: Intersection Capacity Analysis (Merchant St & 18th Ave)

		18 th Avenue		Merchant Street		Intersection
		EB	WB	NB	SB	
Existing 2-Way Stop (AM Peak)	Delay (s/veh)	15.3	10.6	1.2	0.42	4.0
	LOS	C	B	A	A	A
Existing 2-Way Stop (PM Peak)	Delay (s/veh)	24.1	15.5	2.34	0.12	4.5
	LOS	C	C	A	A	A

Under existing stop-controlled conditions, the intersection operates at LOS A overall during both AM and PM peak periods. The eastbound and westbound approaches (18th Avenue) experience slightly higher delays, operating at LOS B and C, respectively. These delays are typical for minor street approaches and remain well within acceptable thresholds.

The traffic analysis worksheet for this intersection can be found in **Appendix C: Traffic Analysis Worksheets**.

Future Conditions with Proposed Recreation Center

The City of Emporia is currently evaluating the development of a new recreation center west of the intersection of 18th Avenue and Merchant Street. While the intersection does not currently meet signal warrants under existing conditions, the proposed facility is expected to generate additional traffic volumes, particularly during peak recreational hours.

To assess the potential impact, a future scenario was developed based on anticipated membership and trip generation. The facility is expected to serve approximately 2,075 members, with an estimated 175 average daily trips (including staff and users) on a typical day. Assuming a 33% increase on peak days, this results in approximately 233 trips per day, or 466 total vehicle movements (233 entering, 233 exiting).

Peak hour traffic was estimated using standard distribution assumptions:

- **AM Peak Hour:** 10% of daily trips → 23 vehicles entering and exiting
- **PM Peak Hour:** 40% of daily trips → 93 vehicles entering and exiting

Based on existing traffic patterns and the facility's location, it is assumed that 75% of this traffic will pass through the 18th Avenue & Merchant Street intersection, while the remaining 25% will use alternate routes. Of the traffic using the intersection, 75% is expected to approach from the south (along Merchant Street) and 25% from the north (along Merchant Avenue).

This results in the following estimated turning movements at the intersection:

- **AM Peak Hour:**
 - **Entering:** 13 northbound left turns, 4 southbound right turn movements
 - **Exiting:** 13 eastbound right turns, 4 northbound left turn movements
- **PM Peak Hour:**
 - **Entering:** 52 northbound left turns, 18 southbound right turn movements
 - **Exiting:** 52 eastbound right turns, 18 eastbound left turn movements

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These projected volumes were incorporated into a Synchro model to evaluate future intersection performance under the existing two-way stop control. The resulting turning movement diagrams and capacity analysis are provided below in Figure 3.

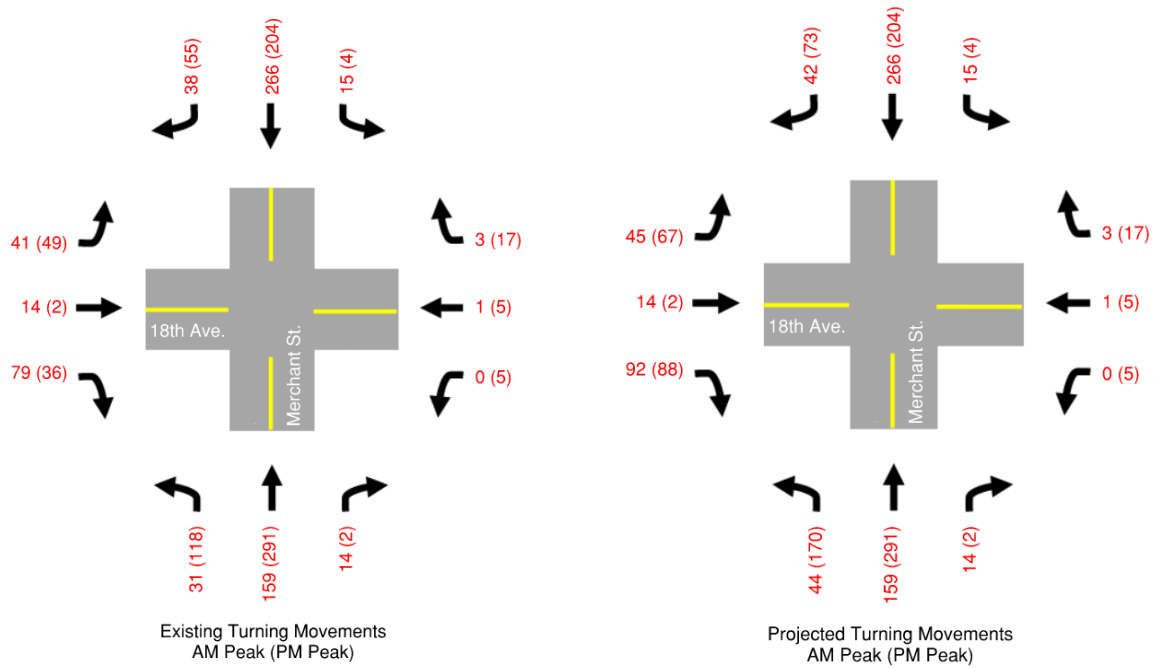


Figure 3: Projected Traffic from Recreation Center

These volumes were incorporated into a Synchro model to evaluate intersection performance under the existing two-way stop control.

Table 43: Projected Intersection Capacity Analysis (Merchant St & 18th Ave) summarizes the projected delays and Levels of Service (LOS) for each approach.

Table 43: Projected Intersection Capacity Analysis (Merchant St & 18th Ave)

		18 th Avenue		Merchant Street		Intersection
		EB	WB	NB	SB	
Projected 2-Way Stop (AM Peak)	Delay (s/veh)	16.4	10.8	1.7	0.4	4.5
	LOS	C	B	A	A	A
Projected 2-Way Stop (PM Peak)	Delay (s/veh)	42.5	18.4	3.1	0.1	9.2
	LOS	E	C	A	A	A

The analysis indicates that while overall intersection operations remain acceptable, delays on the eastbound and westbound approaches are expected to increase—particularly during the PM peak hour. If the recreation center is constructed, the City may wish to monitor traffic conditions and reevaluate signal warrants or consider alternative control strategies, such as a roundabout, to maintain acceptable operations.

KDOT TEAP Study

Summary of Findings

The evaluation of the intersection at Merchant Street & 18th Avenue indicates:

- The intersection does not meet any current MUTCD signal warrants.
- The existing control (two-way stop) is appropriate given observed volumes and LOS.
- Existing delays on the eastbound approach are compounded by the interaction of right-turning and left-turning vehicles during peak periods.

Recommendations

- Maintain existing two-way stop control.
- Consider adding an eastbound right-turn lane to reduce delay and improve operational efficiency.
- Alternative to the addition of a right-turn lane, traffic operations at the intersection would improve for the 18th Avenue approaches if the intersection is converted to a modern roundabout.
- Monitor crash history periodically to determine if future changes are warranted.

17 CONCLUSION AND RECOMMENDATIONS

The evaluation of 13 signalized and one unsignalized intersections within Emporia's Central Business District and adjacent corridors revealed consistent themes: aging infrastructure, limited warrant satisfaction, and generally acceptable operational performance. While crash rates were within expected limits, several intersections exhibited recurring crash types or operational inefficiencies that warrant targeted improvements.

Key Findings:

Signal Warrant Compliance:

Only five intersections met multiple MUTCD signal warrants and are recommended for continued signalization:

- 6th Avenue & Commercial Street
- 12th Avenue & Commercial Street
- 6th Avenue & Rural Street
- 6th Avenue & Merchant Street
- 12th Avenue & Merchant Street

In addition, the signal at 6th Avenue & Mechanic Street is recommended to be retained based on engineering judgment due to operational efficiency and safety considerations, despite not meeting warrant criteria.

Signal Equipment Condition:

All intersections were found to have outdated controllers (M50) and MMUs older than 12 years, with many lacking battery backup, vehicle detection, or functional emergency preemption. Several signals have been operating in flash mode for years due to damage or disrepair.

Crash Patterns:

While overall crash rates were within acceptable thresholds, rear-end and angle crashes were common at several locations, particularly along 6th Avenue. These patterns suggest a need for improved visibility, better signal head placement, and geometric enhancements (e.g., dedicated turn lanes).

Operational Performance:

Most intersections operate at LOS A or B, even under alternative control scenarios (i.e., two-way stop). This indicates that removal of signals at non-warranted locations could not significantly degrade performance and may reduce maintenance costs.

18th Avenue & Merchant Street:

This unsignalized intersection did not meet any MUTCD signal warrants. Capacity analysis under existing two-way stop control showed acceptable performance (LOS A overall). The efficiency of the eastbound movement could be improved with the addition of a right-turn lane. Crash data was not requested due to low traffic volumes and lack of safety concerns.

Improvement Priorities:

Retain and Upgrade Signals at intersections that meet warrants:

- Replace controllers and MMUs
- Install battery backup and vehicle detection
- Install updated emergency preemption
- Replace signal poles to ensure the correct number of heads per lane group to meet MUTCD signal head requirements.

Remove Signals and Implement Stop Control Measures at intersections that do not meet warrants and operate efficiently under alternative controls:

- 4th Avenue & Commercial Street
- 8th Avenue & Commercial Street
- 6th Avenue & Congress Street
- 6th Avenue & Constitution Street
- Merchant Street & 7th Avenue

These locations should transition to two-way stop control measures, with monitoring and pedestrian safety enhancements as needed.

Remove existing Pedestrian Signals and Implement Crosswalk Countermeasures such as high-visibility crosswalk markings, raised crosswalks, in-street pedestrian crossing signs, curb extensions or a pedestrian refuge islands at:

- 5th Avenue & Commercial Street
- 7th Avenue & Commercial Street

These locations do not meet signal warrants and should maintain the existing two-way stop control measures, with monitoring.

Geometric Improvements:

- Consider adding dedicated northbound and southbound left-turn lanes at 6th Ave. & Rural Street.
- Consider adding a dedicated eastbound right-turn lane at 18th Avenue & Merchant Street. Alternative to the addition of a right-turn lane, traffic operations at the intersection would improve for the 18th Avenue approaches if the intersection is converted to a modern roundabout.

Maintain Existing Stop Control at 18th Avenue & Merchant Street:

- This location operates efficiently under existing two-way stop control.

18 IMPLEMENTATION CONSIDERATIONS

The cost estimates presented in this study are planning-level opinions of probable project costs. They are intended to provide the City with an *a la carte* framework, where individual improvements can be selected, combined, or phased based on available funding, intersection priorities, and operational needs. These estimates are not intended to replace detailed engineering cost estimates, which will be developed during future design phases as site-specific data (e.g., survey, utilities, etc.) becomes available. Actual costs may vary depending on site-specific conditions, design refinements, ROW needs, utility relocation needs, and construction market fluctuations at the time of letting.

- Intersection signal upgrades (cabinet work only) = **\$90,000**
- Intersection signal upgrades (full signal replacement) = **\$425,000**
- Intersection signal upgrades (full signal replacement w/curb improvement) = **\$500,000**
- Intersection conversion to stop control conditions (Option 1) = **\$45,000**
- Intersection conversion to stop control conditions (Option 2) = **\$325,000**
- Geometric improvements and signal upgrades at 6th Avenue and Rural Street = **\$620,000**
- Geometric improvements at 18th Avenue & Merchant Street = **\$110,000**

Total full signal replacements (3 intersections) = **\$1,700,000**

Total full signal replacements w/curb improvement (1 intersection) = **\$500,000**

Total intersection conversions (7 intersections) = **\$315,000 - \$2,275,000**

Geometric Improvements at 6th Ave. & Rural Street = **\$620,000**

Geometric Improvements at 18th Ave. & Merchant Street = **\$110,000**

TOTAL IMPROVEMENTS: \$2,820,000 - \$4,770,000

18.1.1 Detailed Cost Breakdowns and Assumptions

The following subsection provides the underlying assumptions and itemized planning-level costs used to develop the improvement estimates summarized above. Each cost scenario is presented with a breakdown of major construction items, contingency, and project costs. These details are intended to provide transparency in how the estimates were developed and to support refinement during future design phases.

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Intersection Signal Upgrades (cabinet work only):

- Signals where the number of signal heads meets MUTCD requirements for number of lanes.

Description	Cost
Video / Radar Detection	\$ 50,000.00
Emergency Vehicle System	\$ 10,000.00
Traffic Control	\$ 5,000.00
Construction Subtotal	\$ 65,000.00
+ 10% Contingency	\$ 6,500.00
Construction Total (2024 Bid Averages)	\$ 71,500.00
+ 10% (Estimated) for Engineering Design	\$ 7,150.00
+ 10% (Estimated) for Const. Engineering/Observation	\$ 7,150.00
Design, Construction & CE Total	\$ 85,800.00
+ 5% Budget for Legal, Admin., City Soft Costs	\$ 4,290.00
Grand Total	\$ 90,090.00

Intersection Signal Upgrades (full signal replacement):

- 6th Avenue & Commercial Street
- 6th Avenue & Merchant Street
- 6th Avenue & Mechanic Street

Description	Cost
Traffic Signal System	\$ 225,000.00
Video / Radar Detection	\$ 50,000.00
Emergency Vehicle System	\$ 10,000.00
Traffic Control	\$ 20,000.00
Construction Subtotal	\$ 305,000.00
+ 10% Contingency	\$ 30,000.00
Construction Total (2024 Bid Averages)	\$ 335,000.00
+ 10% (Estimated) for Engineering Design	\$ 33,500.00
+ 10% (Estimated) for Const. Engineering/Observation	\$ 33,500.00
Design, Construction & CE Total	\$ 402,000.00
+ 5% Budget for Legal, Admin., City Soft Costs	\$ 20,100.00
Grand Total	\$ 422,100.00

KDOT TEAP Study

Intersection Signal Upgrades (full signal replacement w/curb improvement):

- 12th Avenue & Merchant Street

Description	Cost
Sidewalk and Ramp Improvements	\$ 21,000.00
Curb and Gutter	\$ 5,000.00
Site Preparation/Grading	\$ 5,000.00
Traffic Signal System	\$ 225,000.00
Video / Radar Detection	\$ 50,000.00
Emergency Vehicle System	\$ 10,000.00
Traffic Control	\$ 20,000.00
Construction Subtotal	\$ 336,000.00
+ 10% Contingency	\$ 33,600.00
Construction Total (2024 Bid Averages)	\$ 369,600.00
+ 10% (Estimated) for Engineering Design	\$ 36,960.00
+ 10% (Estimated) for Const. Engineering/Observation	\$ 36,960.00
Design, Construction & CE Total	\$ 442,520.00
ROW	\$ 22,176.00
+ 5% Budget for Legal, Admin., City Soft Costs	\$ 22,176.00
Grand Total	\$ 487,872.00

Intersection conversion to stop control conditions:

- 4th Avenue & Commercial Street
- 5th Avenue & Commercial Street
- 7th Avenue & Commercial Street
- 8th Avenue & Commercial Street
- 6th Avenue & Congress Street
- 6th Avenue & Constitution Street
- Merchant Street & 7th Avenue

Option 1: Removal of Signal Infrastructure Only

Description	Cost
Removal of Existing Signals/Cabinets	\$ 25,000.00
Signs	\$ 1,000.00
Traffic Control	\$ 5,000.00
Construction Subtotal	\$ 31,000.00
+ 10% Contingency	\$ 3,100.00
Construction Total (2024 Bid Averages)	\$ 34,100.00
+ 10% (Estimated) for Engineering Design	\$ 3,410.00
+ 10% (Estimated) for Const. Engineering/Observation	\$ 3,410.00
Design, Construction & CE Total	\$ 40,920.00
+ 5% Budget for Legal, Admin., City Soft Costs	\$ 2,046.00
Grand Total	\$ 42,966.00

KDOT TEAP Study

Option 2: Removal of Signal Infrastructure and Addition of Bulb-out Crosswalk Measures

Description	Cost
Sidewalk and Ramp Improvements	\$ 85,000.00
Curb and Gutter	\$ 10,000.00
Site Preparation/Grading	\$ 10,000.00
Storm Sewer	\$ 40,000.00
Removal of Existing Signals/Cabinets	\$ 25,000.00
Signs	\$ 1,000.00
Traffic Control	\$ 15,000.00
Miscellaneous	\$ 45,000.00
Construction Subtotal	\$ 231,000.00
+ 10% Contingency	\$ 23,100.00
Construction Total (2024 Bid Averages)	\$ 254,100.00
+ 10% (Estimated) for Engineering Design	\$ 25,410.00
+ 10% (Estimated) for Const. Engineering/Observation	\$ 25,410.00
Design, Construction & CE Total	\$ 304,920.00
+ 5% Budget for Legal, Admin., City Soft Costs	\$ 15,246.00
Grand Total	\$ 320,166.00

Geometric improvements:

- 6th Avenue & Rural Street

Description	Cost
Mobilization/Staking/Grading	\$ 55,000.00
SWPPP/Seeding	\$ 6,500.00
Pavement	\$ 72,000.00
Pavement Markings/Signing	\$ 3,500.00
Traffic Signal System	\$ 225,000.00
Video / Radar Detection	\$ 50,000.00
Emergency Vehicle System	\$ 10,000.00
Traffic Control	\$ 20,000.00
Construction Subtotal	\$ 442,000.00
+ 10% Contingency	\$ 44,200.00
Construction Total (2024 Bid Averages)	\$ 486,200.00
+ 10% (Estimated) for Engineering Design	\$ 48,620.00
+ 10% (Estimated) for Const. Engineering/Observation	\$ 48,620.00
Design, Construction & CE Total	\$ 583,440.00
+ 5% Budget for Legal, Admin., City Soft Costs	\$ 29,172.00
Grand Total	\$ 612,612.00

KDOT TEAP Study

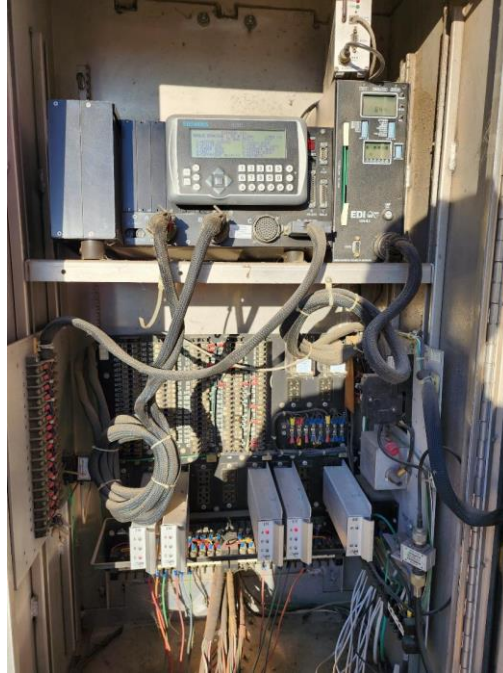
Geometric improvements:

- 18th Avenue & Rural Street

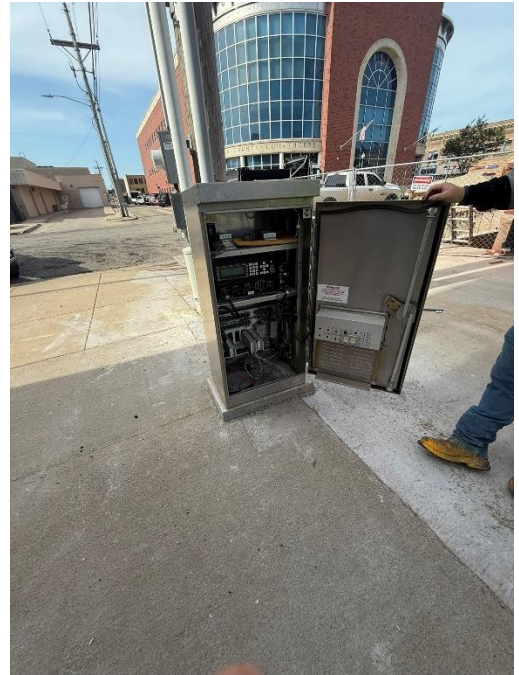
Description	Cost
Mobilization/Staking/Grading	\$ 25,000.00
SWPPP/Seeding	\$ 3,500.00
Pavement	\$ 24,000.00
Sidewalk	\$ 5,600.00
Pavement Markings/Signing	\$ 3,500.00
Traffic Control	\$ 15,000.00
Construction Subtotal	\$ 76,600.00
+ 10% Contingency	\$ 7,660.00
Construction Total (2024 Bid Averages)	\$ 84,260.00
+ 10% (Estimated) for Engineering Design	\$ 8,426.00
+ 10% (Estimated) for Const. Engineering/Observation	\$ 8,426.00
Design, Construction & CE Total	\$ 101,112.00
+ 5% Budget for Legal, Admin., City Soft Costs	\$ 5,056.00
Grand Total	\$ 106,168.00

APPENDIX A: SITE PHOTOS

4th Avenue & Commercial Street

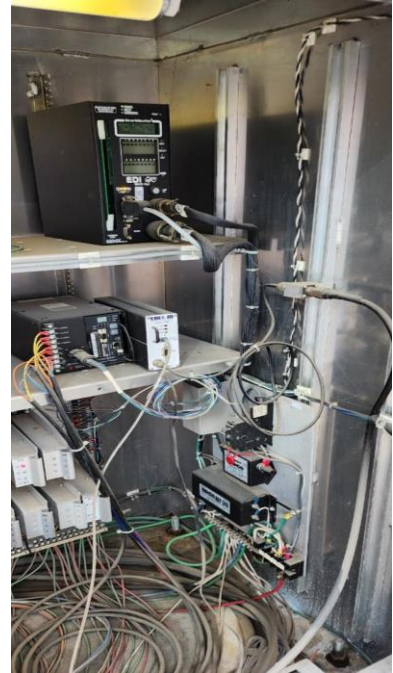


5th Avenue & Commercial Street



DRAFT Discovery Report

6th Avenue & Commercial Street



7th Avenue & Commercial Street (see 7th Avenue & Merchant Street)

8th Avenue & Commercial Street

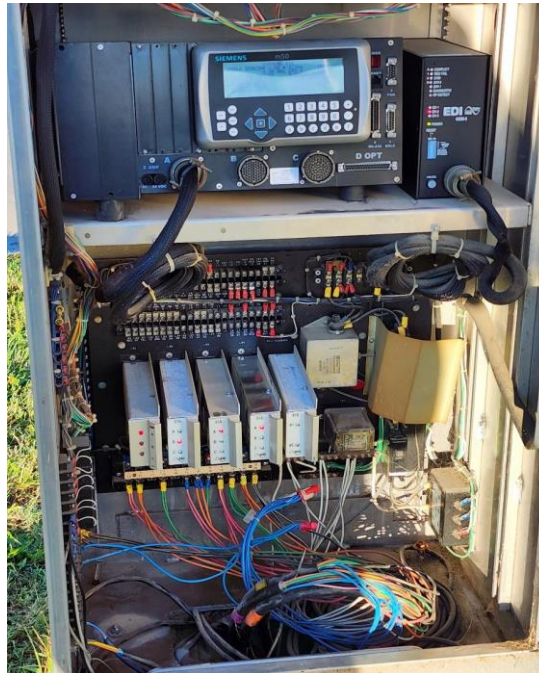
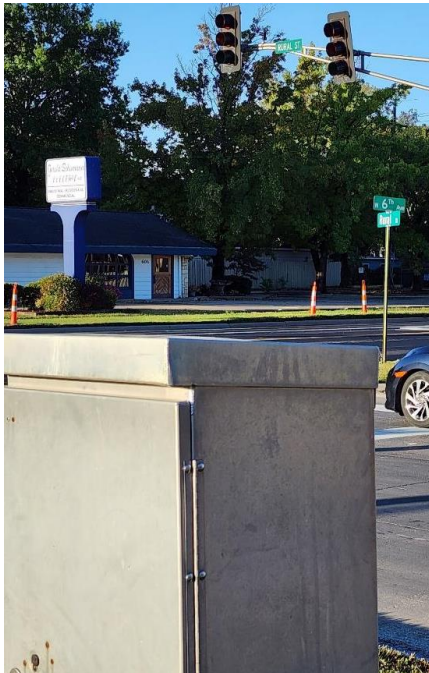


DRAFT Discovery Report

12th Avenue & Commercial Street



6th Avenue & Rural Street



DRAFT Discovery Report

6th Avenue & Congress Street

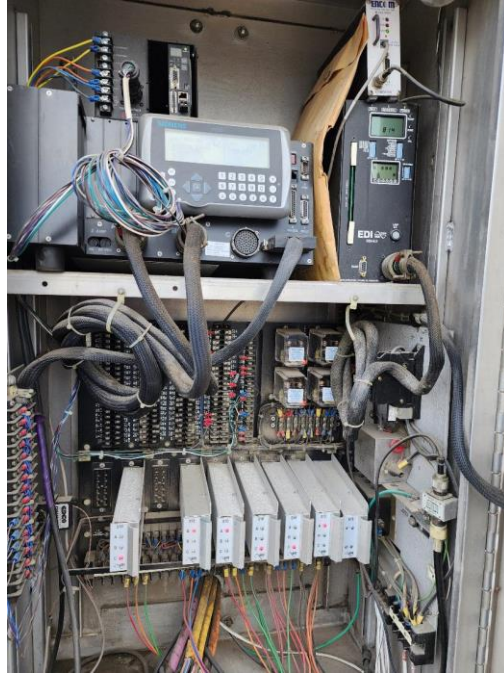


6th Avenue & Constitution Street



DRAFT Discovery Report

6th Avenue & Merchant Street

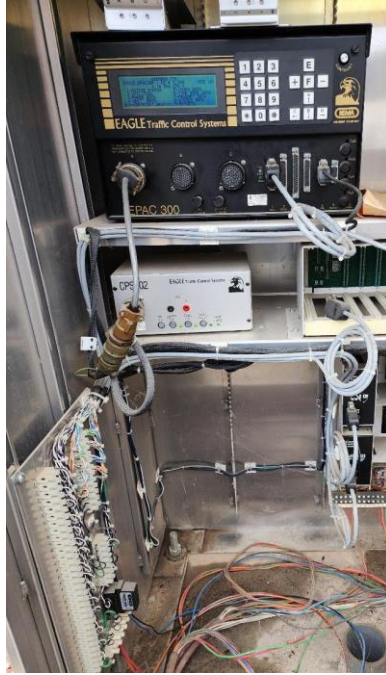


6th Avenue & Mechanic Street



DRAFT Discovery Report

Merchant Street & 7th Avenue



12th Avenue & Merchant Street



APPENDIX B: CRASH DIAGRAMS

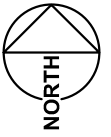
CRASH SUMMARY

No. of Crashes: 3
 Fatal: 0
 Personal Injury: 0
 Property Damage: 3

$CCR_{int} = 1.726 \text{ c/mev}$

$CR_{int} = [3 \times 10^6] / [4,718 \times 5 \times 365]$
 $= 0.348 \text{ c/mev}$

C.I. $= 0.348 / 1.726$
 $= 0.20$



Commercial Street

20230108059, MAY2023 (1500), 1, 1, E

20210100616, JAN2021 (0837), 1, 1, V

20230115605, SEP2023 (2217), 1, 3, M

4th Avenue

4th Avenue

Commercial Street

SYMBOL LEGEND

- Moving Vehicle
- ← Backing Vehicle
- ↘ Turning Vehicle
- Non-Involved Vehicle
- × --- Pedestrian
- Fatal Crash
- Injury Crash
- ◇ Moving Object
- Fixed Object
- ▭ Parked Vehicle
- ←+ Rear-End
- Head-On
- ↔ Sideswipe
- ⊥ Out of Control
- ┌ Angle Impact

DRIVER ACTION

- A. Illegal or Unsafe Speed
- B. Impeding Traffic
- C. Following too Close
- D. Improper Overtaking
- E. Improper Turn
- F. Improper Start, Stop, Park
- G. Traf. Control Viol'n. Lights
- H. Traf. Control Viol'n. Signs
- J. Fail to Yield R/W
- K. Drove Left of Center
- L. No or Improper Signal
- M. Careless - Inattention
- N. Avoid Vehicle, Object, Ped.
- O. Improper Lane Change
- P. Ill or Med. Condit.
- Q. Slick due to Weather
- R. Backed Into
- S. Hit a Deer
- T. Alcohol Related
- V. Did Not See
- W. Hit & Run
- X. Vision Obstructed by Other Vehicles, Sun and/or Fog
- Y. Unsecure Cargo
- Z. Vehicular Malfunction
- (*) Median Related

CONTRIBUTING FACTORS

- | ROAD SURFACE CONDITION | LIGHT CONDITION |
|------------------------|------------------|
| 1. Dry | 1. Daylight |
| 2. Wet | 2. Dawn / Dusk |
| 3. Flooded | 3. Dark, LTG. |
| 4. Snow/Ice | 4. Dark, NO LTG. |
| 5. Slippery | 5. Unknown |
| 6. Unknown | |

Data Shown for Each Crash:

[Case #], [Date (Time)], [Road Cond.], [Light Cond.], [Action]

CRASH DIAGRAM

Engineer: Diane Rosebaugh

Drafter: Fred Rhamy

Crash Period: June 2020 - June 2025

KDOT: 106 C-4855-25 / BG: 25-1160

Location: Emporia, Kansas
 Intersection: 4th Ave. & Commercial St.

BG CONSULTANTS
 ENGINEERS • ARCHITECTS • SURVEYORS
 1405 WAKARUSA DRIVE LAWRENCE, KANSAS 66049
 T: (785) 749-4474 WEB: www.bgcons.com
 LAWRENCE SMITHVILLE EMPORIA MANHATTAN

CRASH SUMMARY

No. of Crashes: 3
 Fatal: 0
 Personal Injury: 0
 Property Damage: 3

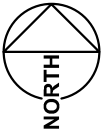
$CCR_{int} = 1.787 \text{ c/mev}$

$CR_{int} = [3 \times 10^6] / [4,061 \times 5 \times 365]$
 $= 0.405 \text{ c/mev}$

C.I. = $0.405 / 1.787$
 $= 0.23$

20250106221, APR2025 (1621), 1, 1, M

Commercial Street



20230113938, AUG2023 (1420), 1, 1, J
 20210104392, FEB2021 (1209), 1, 1, H

5th Avenue

5th Avenue

Commercial Street

SYMBOL LEGEND

- | | |
|--------------------------|------------------|
| → Moving Vehicle | ◇ Moving Object |
| ← Backing Vehicle | □ Fixed Object |
| ↘ Turning Vehicle | ▭ Parked Vehicle |
| --- Non-Involved Vehicle | ⊕ Rear-End |
| × --- Pedestrian | ⊖ Head-On |
| ● Fatal Crash | ↔ Sideswipe |
| ○ Injury Crash | ⊙ Out of Control |
| | ↗ Angle Impact |

DRIVER ACTION

- | | | |
|---------------------------------|--------------------------------|--|
| A. Illegal or Unsafe Speed | J. Fail to Yield R/W | T. Alcohol Related |
| B. Impeding Traffic | K. Drove Left of Center | V. Did Not See |
| C. Following too Close | L. No or Improper Signal | W. Hit & Run |
| D. Improper Overtaking | M. Careless - Inattention | X. Vision Obstructed by Other Vehicles, Sun and/or Fog |
| E. Improper Turn | N. Avoid Vehicle, Object, Ped. | Y. Unsecure Cargo |
| F. Improper Start, Stop, Park | O. Improper Lane Change | Z. Vehicular Malfunction |
| G. Traf. Control Viol'n. Lights | P. Ill or Med. Condit. | |
| H. Traf. Control Viol'n. Signs | Q. Slick due to Weather | |
| | R. Backed Into | |
| | S. Hit a Deer | (*) Median Related |

CONTRIBUTING FACTORS

- | | |
|-------------------------------|------------------------|
| ROAD SURFACE CONDITION | LIGHT CONDITION |
| 1. Dry | 1. Daylight |
| 2. Wet | 2. Dawn / Dusk |
| 3. Flooded | 3. Dark, LTG. |
| 4. Snow/Ice | 4. Dark, NO LTG. |
| 5. Slippery | 5. Unknown |
| 6. Unknown | |

Data Shown for Each Crash:

[Case #], [Date (Time)], [Road Cond.], [Light Cond.], [Action]

CRASH DIAGRAM

Location: Emporia, Kansas
 Intersection: 5th Ave. & Commercial St.



Engineer: Diane Rosebaugh

Drafter: Fred Rhamy

Crash Period: June 2020 - June 2025

KDOT: 106 C-4855-25 / BG: 25-1160

CRASH SUMMARY

No. of Crashes: 19
 Fatal: 0
 Personal Injury: 7
 Property Damage: 12

$CCR_{int} = 1.419 \text{ c/mev}$

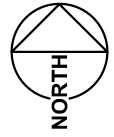
$CR_{int} = [19 \times 10^6] / [13,293 \times 5 \times 365]$
 $= 0.783 \text{ c/mev}$

C.I. = $0.783 / 1.419$
 $= 0.55$

20250106549, APR2025 (2023), 1, 3, C
 20200112752, JUL2020 (0845), 1, 1, M

20200114414, JUL2020 (1736), 1, 1, E
 20210124095, DEC2021 (1250), 1, 1, P

Commercial Street



- 20230114216, SEP2023 (1903), 1, 3, C
- 20230113287, AUG2023 (1257), 1, 1, C
- 20230105566, MAR 2023 (2018), 1, 3, M
- 20230119852, NOV2023 (2004), 1, 3, Z
- 20210109253, MAY2021 (0900), 1, 1, G
- 20210115430, AUG2021 (2034), 1, 3, G
- 20240122919, NOV2024 (1129), 1, 1, G,
- 20210118813, OCT2021 (1648), 1, 1, E
- 20250103528, FEB2025 (1429), 1, 1, W
- 20230116911, OCT2023 (1931), 1, 3, G

20240117211, SEP2024 (1035), 1, 1, M

20200113874, JUL2020 (0019), 1, 3, K

20250101358, JAN2025 (1253), 1, 1, W

20210104287, MAR2021 (0215), 2, 3, W

20230124002, DEC2023 (1347), 2, 1, G

6th Avenue

6th Avenue

Commercial Street

SYMBOL LEGEND

- Moving Vehicle
- ← Backing Vehicle
- ↪ Turning Vehicle
- Non-Involved Vehicle
- × --- Pedestrian
- Fatal Crash
- Injury Crash
- ◇ Moving Object
- Fixed Object
- ▭ Parked Vehicle
- ⊕ Rear-End
- ⊖ Head-On
- ↔ Sideswipe
- ⊙ Out of Control
- ↗ Angle Impact

DRIVER ACTION

- A. Illegal or Unsafe Speed
- B. Impeding Traffic
- C. Following too Close
- D. Improper Overtaking
- E. Improper Turn
- F. Improper Start, Stop, Park
- G. Traf. Control Viol'n. Lights
- H. Traf. Control Viol'n. Signs
- J. Fail to Yield R/W
- K. Drove Left of Center
- L. No or Improper Signal
- M. Careless - Inattention
- N. Avoid Vehicle, Object, Ped.
- O. Improper Lane Change
- P. Ill or Med. Condit.
- Q. Slick due to Weather
- R. Backed Into
- S. Hit a Deer
- T. Alcohol Related
- V. Did Not See
- W. Hit & Run
- X. Vision Obstructed by Other Vehicles, Sun and/or Fog
- Y. Unsecure Cargo
- Z. Vehicular Malfunction
- (*) Median Related

CONTRIBUTING FACTORS

- | | |
|-------------------------------|------------------------|
| ROAD SURFACE CONDITION | LIGHT CONDITION |
| 1. Dry | 1. Daylight |
| 2. Wet | 2. Dawn / Dusk |
| 3. Flooded | 3. Dark, LTG. |
| 4. Snow/Ice | 4. Dark, NO LTG. |
| 5. Slippery | 5. Unknown |
| 6. Unknown | |

Data Shown for Each Crash:

[Case #], [Date (Time)], [Road Cond.], [Light Cond.], [Action]

CRASH DIAGRAM

Engineer: Diane Rosebaugh

Drafter: Fred Rhamy

Crash Period: June 2020 - June 2025

KDOT: 106 C-4855-25 / BG: 25-1160

Location: Emporia, Kansas
 Intersection: 6th Ave. & Commercial St.



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CRASH SUMMARY

No. of Crashes: 2
 Fatal: 0
 Personal Injury: 0
 Property Damage: 2

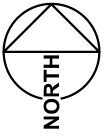
$CCR_{int} = 1.784 \text{ c/mev}$

$CR_{int} = [2 \times 10^6] / [4,091 \times 5 \times 365]$
 $= 0.268 \text{ c/mev}$

$C.I. = 0.268 / 1.784$
 $= 0.15$

20230110740, JUL.2023 (1453), 1, 1, C

Commercial Street



20220116449, SEP.2022 (0741), 1, 2, X



7th Avenue

7th Avenue

Commercial Street

SYMBOL LEGEND

- Moving Vehicle
- ← Backing Vehicle
- ↻ Turning Vehicle
- Non-Involved Vehicle
- × Pedestrian
- Fatal Crash
- Injury Crash
- ◇ Moving Object
- Fixed Object
- ▭ Parked Vehicle
- ⊕ Rear-End
- Head-On
- ↔ Sideswipe
- ⊙ Out of Control
- ↗ Angle Impact

DRIVER ACTION

- A. Illegal or Unsafe Speed
- B. Impeding Traffic
- C. Following too Close
- D. Improper Overtaking
- E. Improper Turn
- F. Improper Start, Stop, Park
- G. Traf. Control Viol'n. Lights
- H. Traf. Control Viol'n. Signs
- J. Fail to Yield R/W
- K. Drove Left of Center
- L. No or Improper Signal
- M. Careless - Innattention
- N. Avoid Vehicle, Object, Ped.
- O. Improper Lane Change
- P. Ill or Med. Condit.
- Q. Slick due to Weather
- R. Backed Into
- S. Hit a Deer
- T. Alcohol Related
- V. Did Not See
- W. Hit & Run
- X. Vision Obstructed by Other Vehicles, Sun and/or Fog
- Y. Unsecure Cargo
- Z. Vehicular Malfunction
- (*) Median Related

CONTRIBUTING FACTORS

- | ROAD SURFACE CONDITION | LIGHT CONDITION |
|------------------------|------------------|
| 1. Dry | 1. Daylight |
| 2. Wet | 2. Dawn / Dusk |
| 3. Flooded | 3. Dark, LTG. |
| 4. Snow/Ice | 4. Dark, NO LTG. |
| 5. Slippery | 5. Unknown |
| 6. Unknown | |

Data Shown for Each Crash:

[Case #], [Date (Time)], [Road Cond.], [Light Cond.], [Action]

CRASH DIAGRAM

Location: Emporia, Kansas
 Intersection: 7th Ave. & Commercial St.

KDOT: 106 C-4855-25 / BG: 25-1160

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Engineer: Diane Rosebaugh

Drafter: Fred Rhamy

Crash Period: June 2020 - June 2025

CRASH SUMMARY

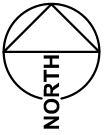
No. of Crashes: 2
 Fatal: 0
 Personal Injury: 0
 Property Damage: 2

$CCR_{int} = 1.700 \text{ c/mev}$

$CR_{int} = [2 \times 10^6] / [5,045 \times 5 \times 365]$
 $= 0.217 \text{ c/mev}$

C.I. $= 0.217 / 1.700$
 $= 0.13$

Commercial Street



← 20230013461, JUL2023 (1830), 1, 1, M

20240116412, AUG2024 (1454), 1, 1, M

8th Avenue

8th Avenue

Commercial Street

SYMBOL LEGEND

- Moving Vehicle
- ← Backing Vehicle
- ↻ Turning Vehicle
- Non-Involved Vehicle
- × Pedestrian
- Fatal Crash
- Injury Crash
- ◇ Moving Object
- Fixed Object
- ▭ Parked Vehicle
- ⊕ Rear-End
- Head-On
- ↔ Sideswipe
- ⊙ Out of Control
- ↗ Angle Impact

Data Shown for Each Crash:

[Case #], [Date (Time)], [Road Cond.],
 [Light Cond.], [Action]

DRIVER ACTION

- A. Illegal or Unsafe Speed
- B. Impeding Traffic
- C. Following too Close
- D. Improper Overtaking
- E. Improper Turn
- F. Improper Start, Stop, Park
- G. Traf. Control Viol'n. Lights
- H. Traf. Control Viol'n. Signs
- J. Fail to Yield R/W
- K. Drove Left of Center
- L. No or Improper Signal
- M. Careless - Innattention
- N. Avoid Vehicle, Object, Ped.
- O. Improper Lane Change
- P. Ill or Med. Condit.
- Q. Slick due to Weather
- R. Backed Into
- S. Hit a Deer
- T. Alcohol Related
- V. Did Not See
- W. Hit & Run
- X. Vision Obstructed by Other Vehicles, Sun and/or Fog
- Y. Unsecure Cargo
- Z. Vehicular Malfunction
- (*) Median Related

CONTRIBUTING FACTORS

- | | |
|-------------------------------|------------------------|
| ROAD SURFACE CONDITION | LIGHT CONDITION |
| 1. Dry | 1. Daylight |
| 2. Wet | 2. Dawn / Dusk |
| 3. Flooded | 3. Dark, LTG. |
| 4. Snow/Ice | 4. Dark, NO LTG. |
| 5. Slippery | 5. Unknown |
| 6. Unknown | |

Engineer: Diane Rosebaugh

Drafter: Fred Rhamy

Crash Period: June 2020 - June 2025

CRASH DIAGRAM

KDOT: 106 C-4855-25 / BG: 25-1160

Location: Emporia, Kansas
 Intersection: 8th Ave. & Commercial St.

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CRASH SUMMARY

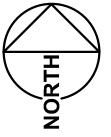
No. of Crashes: 6
 Fatal: 0
 Personal Injury: 0
 Property Damage: 6

$CCR_{int} = 1.446 \text{ c/mev}$

$CR_{int} = [6 \times 10^6] / [11,756 \times 5 \times 365]$
 $= 0.280 \text{ c/mev}$

C.I. = $0.280 / 1.446$
 $= 0.19$

Commercial Street



20240122110, NOV2024 (0530), 1, 3, S

20240117228, SEP2024 (1820), 1, 1, M

20220118472, OCT2022 (1957), 1, 2, J

20200120014, OCT2020 (1905), 1, 3, J

20210118659, OCT2021 (1448), 1, 1, E

20210104140, MAR2021 (0950), 2, 1, N

12th Avenue

12th Avenue

Commercial Street

SYMBOL LEGEND

- Moving Vehicle
- ← Backing Vehicle
- ↻ Turning Vehicle
- Non-Involved Vehicle
- × Pedestrian
- Fatal Crash
- Injury Crash
- ◇ Moving Object
- Fixed Object
- ▭ Parked Vehicle
- ⊥ Rear-End
- Head-On
- ↔ Sideswipe
- ⊕ Out of Control
- ↗ Angle Impact

DRIVER ACTION

- A. Illegal or Unsafe Speed
- B. Impeding Traffic
- C. Following too Close
- D. Improper Overtaking
- E. Improper Turn
- F. Improper Start, Stop, Park
- G. Traf. Control Viol'n. Lights
- H. Traf. Control Viol'n. Signs
- J. Fail to Yield R/W
- K. Drove Left of Center
- L. No or Improper Signal
- M. Careless - Innattention
- N. Avoid Vehicle, Object, Ped.
- O. Improper Lane Change
- P. Ill or Med. Condit.
- Q. Slick due to Weather
- R. Backed Into
- S. Hit a Deer
- T. Alcohol Related
- V. Did Not See
- W. Hit & Run
- X. Vision Obstructed by Other Vehicles, Sun and/or Fog
- Y. Unsecure Cargo
- Z. Vehicular Malfunction
- (*) Median Related

CONTRIBUTING FACTORS

- | | |
|-------------------------------|------------------------|
| ROAD SURFACE CONDITION | LIGHT CONDITION |
| 1. Dry | 1. Daylight |
| 2. Wet | 2. Dawn / Dusk |
| 3. Flooded | 3. Dark, LTG. |
| 4. Snow/Ice | 4. Dark, NO LTG. |
| 5. Slippery | 5. Unknown |
| 6. Unknown | |

Data Shown for Each Crash:

[Case #], [Date (Time)], [Road Cond.], [Light Cond.], [Action]

CRASH DIAGRAM

Engineer: Diane Rosebaugh

Drafter: Fred Rhamy

Crash Period: June 2020 - June 2025

KDOT: 106 C-4855-25 / BG: 25-1160

Location: Emporia, Kansas
 Intersection: 12th Ave. & Commercial St

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CRASH SUMMARY

No. of Crashes: 24
 Fatal: 0
 Personal Injury: 8
 Property Damage: 16

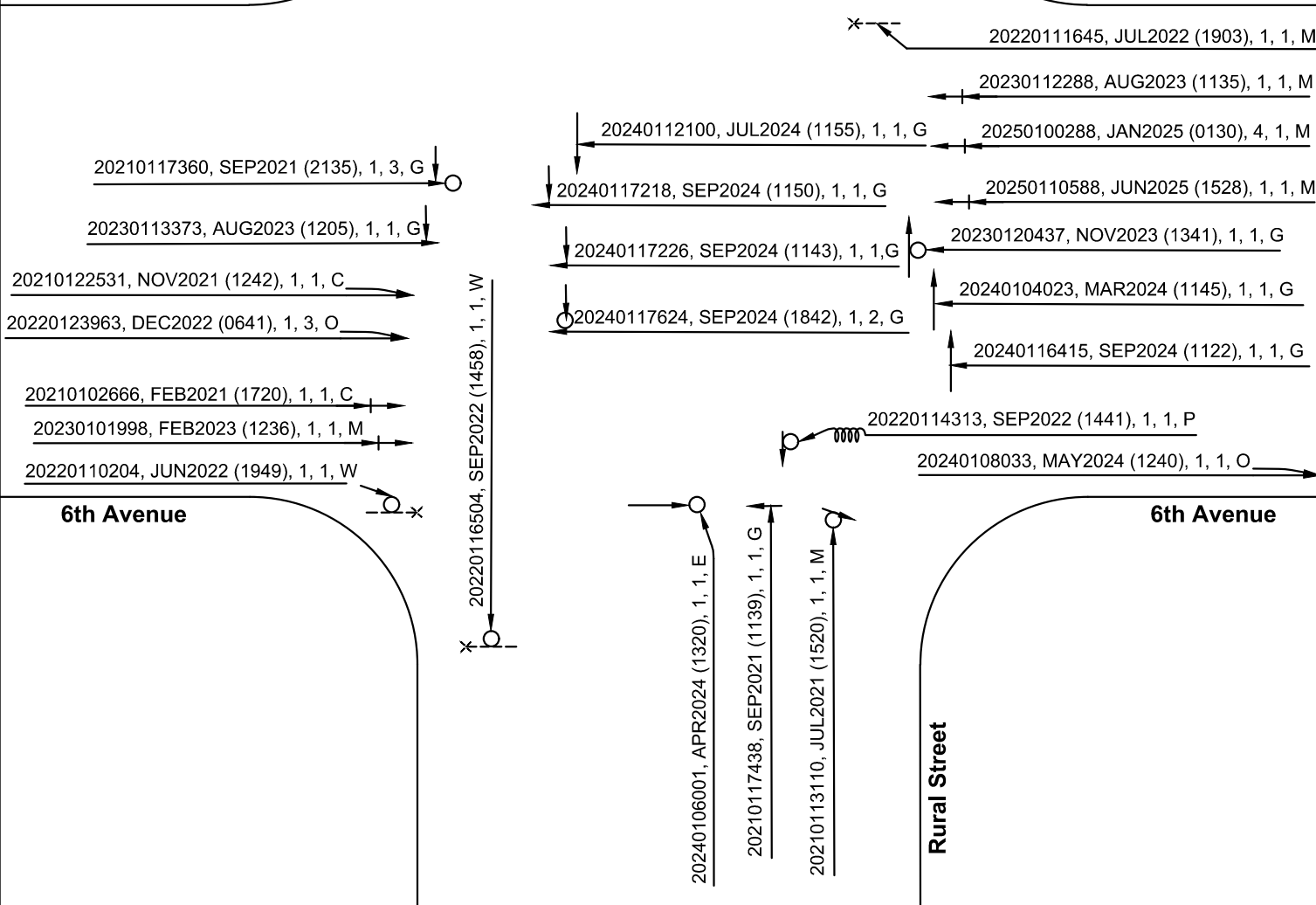
CCR_{int} = 1.366 c/mev

CR_{int} = [24 x 10⁶] / [17,157 x 5 x 365]
 = 0.766 c/mev

C.I. = 0.766 / 1.366
 = 0.56



Rural Street



SYMBOL LEGEND

- Moving Vehicle
- ← Backing Vehicle
- ↻ Turning Vehicle
- Non-Involved Vehicle
- * Pedestrian
- Fatal Crash
- Injury Crash
- ◇ Moving Object
- Fixed Object
- ▭ Parked Vehicle
- ← Rear-End
- Head-On
- ↔ Sideswipe
- ⊕ Out of Control
- ↗ Angle Impact

DRIVER ACTION

- A. Illegal or Unsafe Speed
- B. Impeding Traffic
- C. Following too Close
- D. Improper Overtaking
- E. Improper Turn
- F. Improper Start, Stop, Park
- G. Traf. Control Viol'n. Lights
- H. Traf. Control Viol'n. Signs
- J. Fail to Yield R/W
- K. Drove Left of Center
- L. No or Improper Signal
- M. Careless - Inattention
- N. Avoid Vehicle, Object, Ped.
- O. Improper Lane Change
- P. Ill or Med. Condit.
- Q. Slick due to Weather
- R. Backed Into
- S. Hit a Deer
- T. Alcohol Related
- V. Did Not See
- W. Hit & Run
- X. Vision Obstructed by Other Vehicles, Sun and/or Fog
- Y. Unsecure Cargo
- Z. Vehicular Malfunction
- (*) Median Related

CONTRIBUTING FACTORS

- | | |
|-------------------------------|------------------------|
| ROAD SURFACE CONDITION | LIGHT CONDITION |
| 1. Dry | 1. Daylight |
| 2. Wet | 2. Dawn / Dusk |
| 3. Flooded | 3. Dark, LTG. |
| 4. Snow/Ice | 4. Dark, NO LTG. |
| 5. Slippery | 5. Unknown |
| 6. Unknown | |

Data Shown for Each Crash:

[Case #], [Date (Time)], [Road Cond.], [Light Cond.], [Action]

CRASH DIAGRAM

KDOT: 106 C-4855-25 / BG: 25-1160

Location: Emporia, Kansas
 Intersection: 6th Ave. & Rural St.

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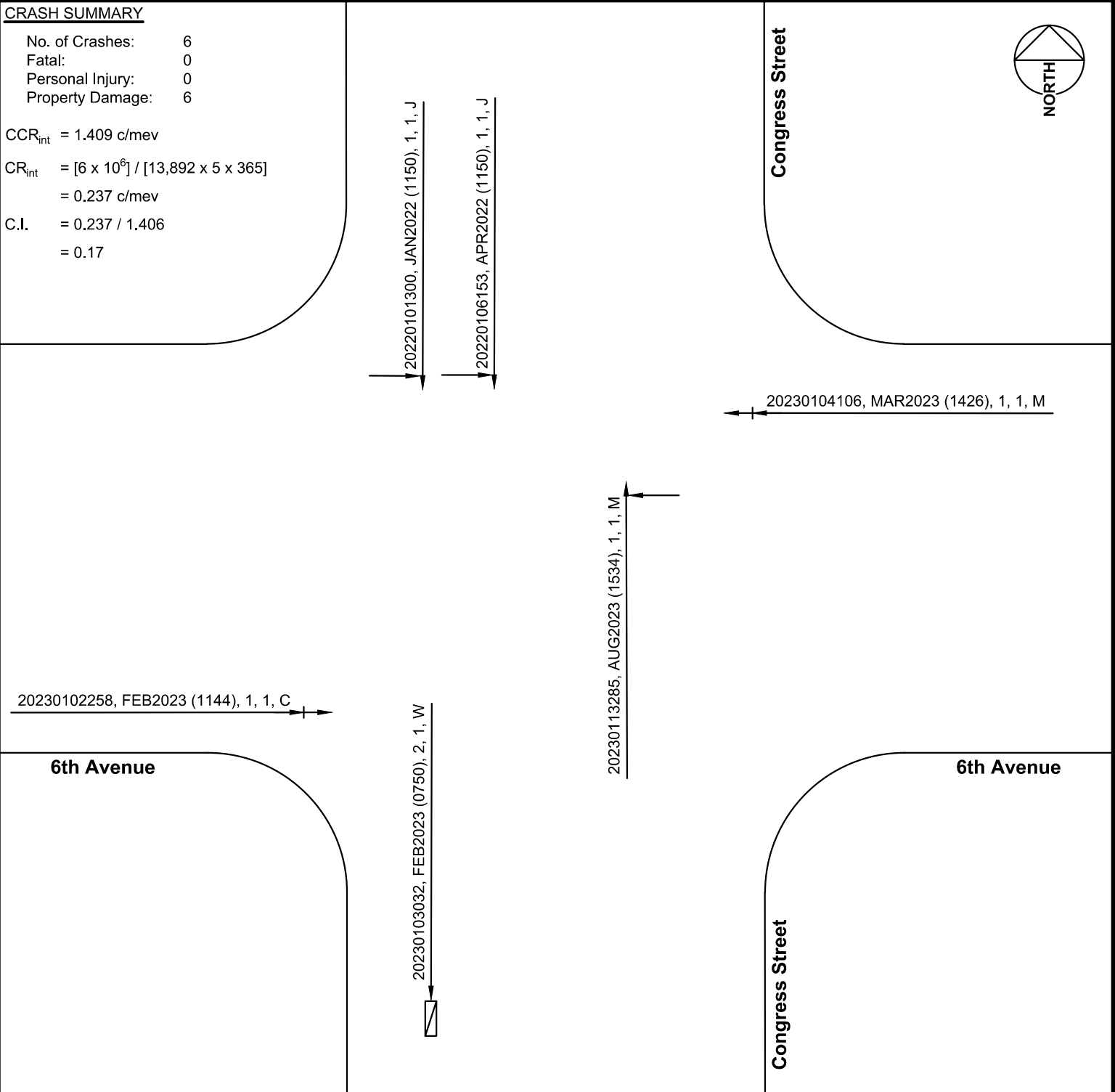
CRASH SUMMARY

No. of Crashes: 6
 Fatal: 0
 Personal Injury: 0
 Property Damage: 6

$CCR_{int} = 1.409 \text{ c/mev}$

$CR_{int} = [6 \times 10^6] / [13,892 \times 5 \times 365]$
 $= 0.237 \text{ c/mev}$

C.I. $= 0.237 / 1.406$
 $= 0.17$



SYMBOL LEGEND

- Moving Vehicle
- ← Backing Vehicle
- ↻ Turning Vehicle
- Non-Involved Vehicle
- × --- Pedestrian
- Fatal Crash
- Injury Crash
- ◇ Moving Object
- Fixed Object
- ▭ Parked Vehicle
- ←+ Rear-End
- Head-On
- ↔ Sideswipe
- ⊖ Out of Control
- ↗ Angle Impact

DRIVER ACTION

- A. Illegal or Unsafe Speed
- B. Impeding Traffic
- C. Following too Close
- D. Improper Overtaking
- E. Improper Turn
- F. Improper Start, Stop, Park
- G. Traf. Control Viol'n. Lights
- H. Traf. Control Viol'n. Signs
- J. Fail to Yield R/W
- K. Drove Left of Center
- L. No or Improper Signal
- M. Careless - Innattention
- N. Avoid Vehicle, Object, Ped.
- O. Improper Lane Change
- P. Ill or Med. Condit.
- Q. Slick due to Weather
- R. Backed Into
- S. Hit a Deer
- T. Alcohol Related
- V. Did Not See
- W. Hit & Run
- X. Vision Obstructed by Other Vehicles, Sun and/or Fog
- Y. Unsecure Cargo
- Z. Vehicular Malfunction
- (*) Median Related

CONTRIBUTING FACTORS

- | ROAD SURFACE CONDITION | LIGHT CONDITION |
|------------------------|------------------|
| 1. Dry | 1. Daylight |
| 2. Wet | 2. Dawn / Dusk |
| 3. Flooded | 3. Dark, LTG. |
| 4. Snow/Ice | 4. Dark, NO LTG. |
| 5. Slippery | 5. Unknown |
| 6. Unknown | |

Data Shown for Each Crash:

[Case #], [Date (Time)], [Road Cond.], [Light Cond.], [Action]

CRASH DIAGRAM

Engineer: Diane Rosebaugh

Drafter: Fred Rhamy

Crash Period: June 2020 - June 2025

KDOT: 106 C-4855-25 / BG: 25-1160

Location: Emporia, Kansas
 Intersection: 6th Ave. & Congress St.

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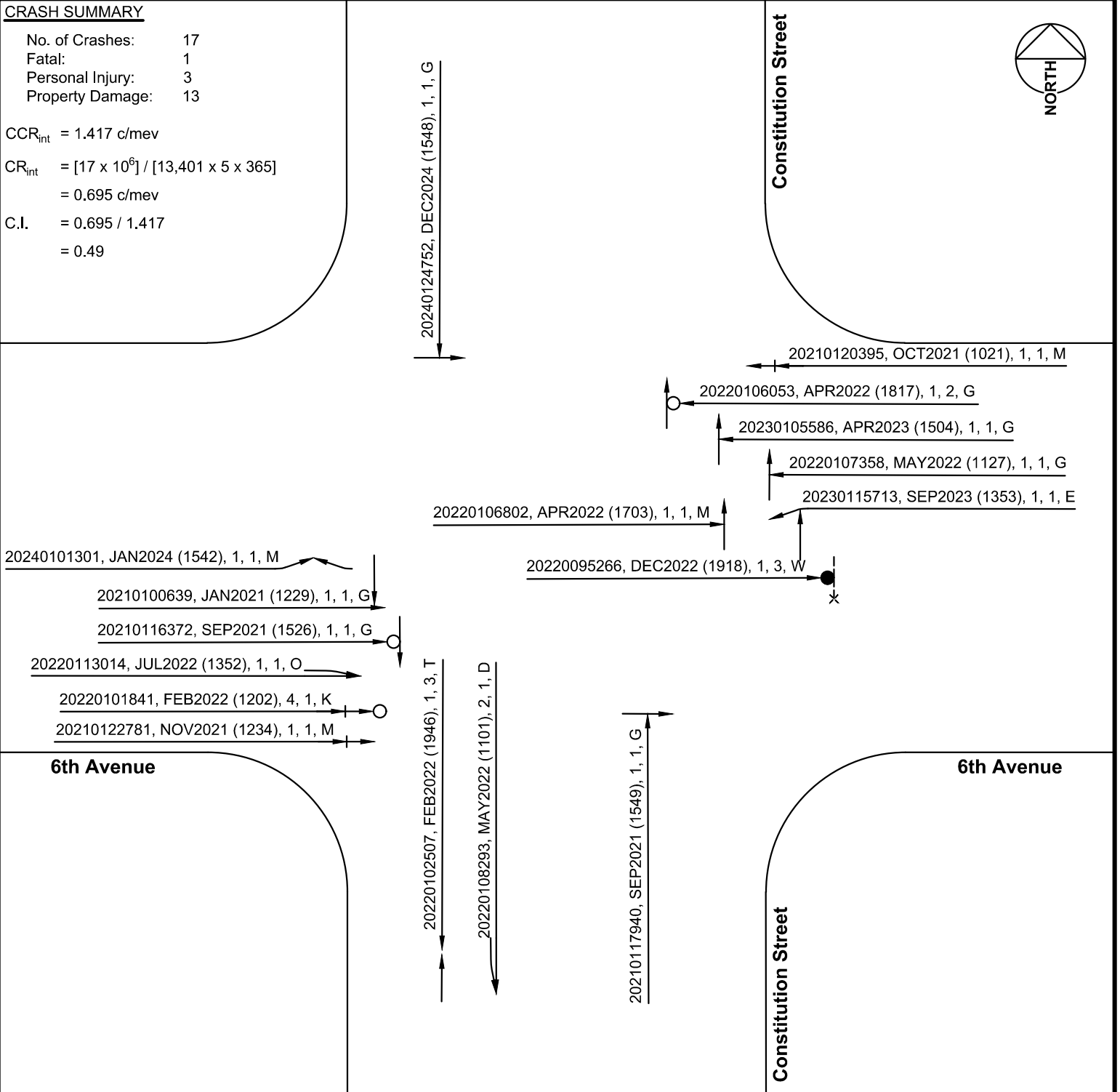
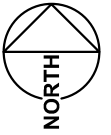
CRASH SUMMARY

No. of Crashes: 17
 Fatal: 1
 Personal Injury: 3
 Property Damage: 13

$CCR_{int} = 1.417 \text{ c/mev}$

$CR_{int} = [17 \times 10^6] / [13,401 \times 5 \times 365]$
 $= 0.695 \text{ c/mev}$

C.I. = $0.695 / 1.417$
 $= 0.49$



SYMBOL LEGEND

- Moving Vehicle
- ← Backing Vehicle
- ↪ Turning Vehicle
- Non-Involved Vehicle
- × Pedestrian
- Fatal Crash
- Injury Crash
- ◇ Moving Object
- Fixed Object
- ▭ Parked Vehicle
- ⊕ Rear-End
- ⊖ Head-On
- ↔ Sideswipe
- ⊙ Out of Control
- ↗ Angle Impact

DRIVER ACTION

- A. Illegal or Unsafe Speed
- B. Impeding Traffic
- C. Following too Close
- D. Improper Overtaking
- E. Improper Turn
- F. Improper Start, Stop, Park
- G. Traf. Control Viol'n. Lights
- H. Traf. Control Viol'n. Signs
- J. Fail to Yield R/W
- K. Drove Left of Center
- L. No or Improper Signal
- M. Careless - Inattention
- N. Avoid Vehicle, Object, Ped.
- O. Improper Lane Change
- P. Ill or Med. Condit.
- Q. Slick due to Weather
- R. Backed Into
- S. Hit a Deer
- T. Alcohol Related
- V. Did Not See
- W. Hit & Run
- X. Vision Obstructed by Other Vehicles, Sun and/or Fog
- Y. Unsecure Cargo
- Z. Vehicular Malfunction
- (*) Median Related

CONTRIBUTING FACTORS

- | | |
|-------------------------------|------------------------|
| ROAD SURFACE CONDITION | LIGHT CONDITION |
| 1. Dry | 1. Daylight |
| 2. Wet | 2. Dawn / Dusk |
| 3. Flooded | 3. Dark, LTG. |
| 4. Snow/Ice | 4. Dark, NO LTG. |
| 5. Slippery | 5. Unknown |
| 6. Unknown | |

Data Shown for Each Crash:

[Case #], [Date (Time)], [Road Cond.], [Light Cond.], [Action]

CRASH DIAGRAM

Location: Emporia, Kansas
 Intersection: 6th Ave. & Constitution St.

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Engineer: Diane Rosebaugh

Drafter: Fred Rhamy

Crash Period: June 2020 - June 2025

KDOT: 106 C-4855-25 / BG: 25-1160

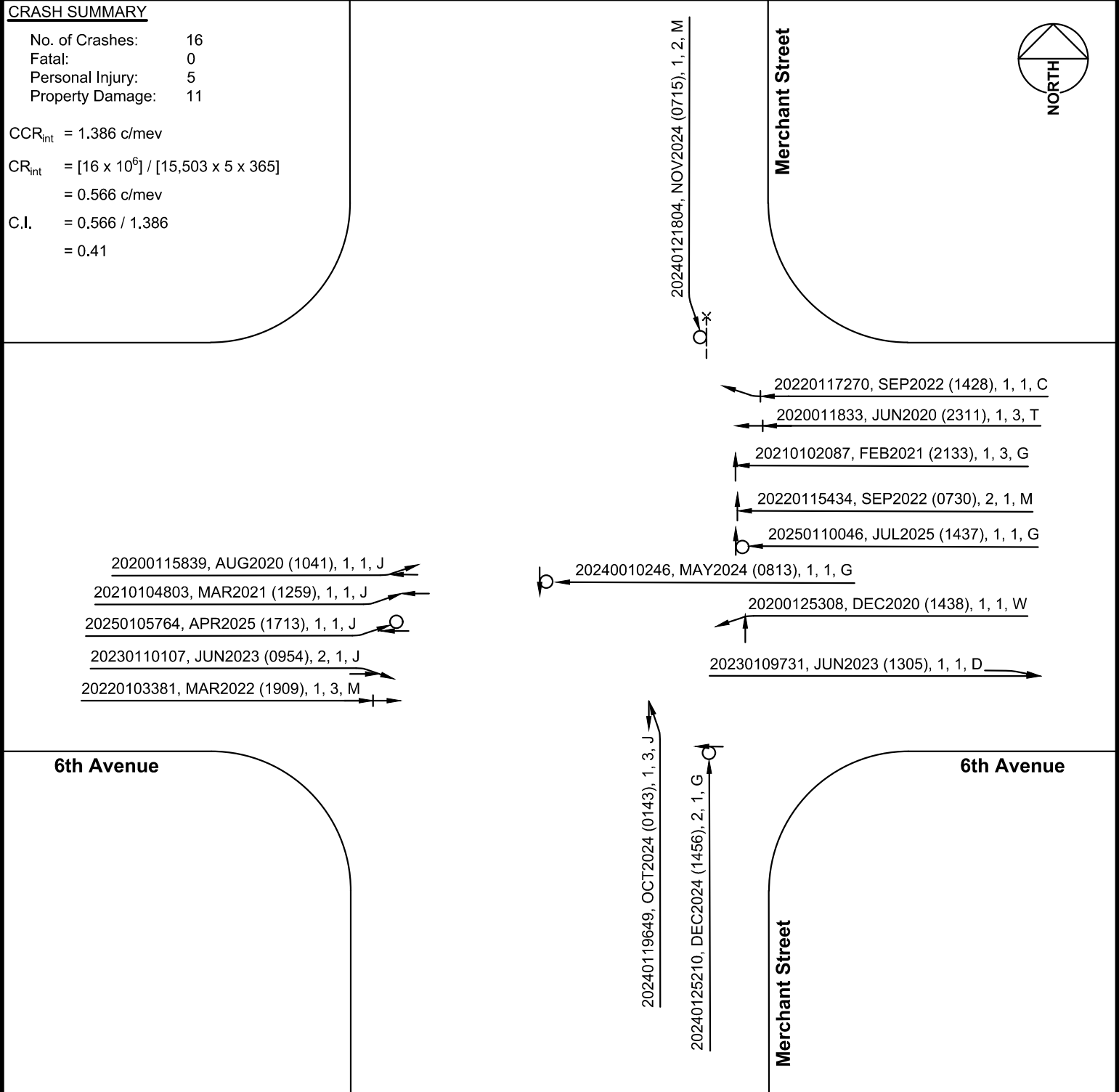
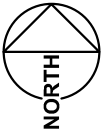
CRASH SUMMARY

No. of Crashes: 16
 Fatal: 0
 Personal Injury: 5
 Property Damage: 11

CCR_{int} = 1.386 c/mev

CR_{int} = [16 x 10⁶] / [15,503 x 5 x 365]
 = 0.566 c/mev

C.I. = 0.566 / 1.386
 = 0.41



SYMBOL LEGEND

- Moving Vehicle
- ← Backing Vehicle
- ↪ Turning Vehicle
- Non-Involved Vehicle
- *--- Pedestrian
- Fatal Crash
- Injury Crash
- ◇ Moving Object
- Fixed Object
- ▭ Parked Vehicle
- ⊕ Rear-End
- ⊖ Head-On
- ↔ Sideswipe
- ⊙ Out of Control
- ↗ Angle Impact

DRIVER ACTION

- A. Illegal or Unsafe Speed
- B. Impeding Traffic
- C. Following too Close
- D. Improper Overtaking
- E. Improper Turn
- F. Improper Start, Stop, Park
- G. Traf. Control Viol'n. Lights
- H. Traf. Control Viol'n. Signs
- J. Fail to Yield R/W
- K. Drove Left of Center
- L. No or Improper Signal
- M. Careless - Inattention
- N. Avoid Vehicle, Object, Ped.
- O. Improper Lane Change
- P. Ill or Med. Condit.
- Q. Slick due to Weather
- R. Backed Into
- S. Hit a Deer
- T. Alcohol Related
- V. Did Not See
- W. Hit & Run
- X. Vision Obstructed by Other Vehicles, Sun and/or Fog
- Y. Unsecure Cargo
- Z. Vehicular Malfunction
- (*) Median Related

CONTRIBUTING FACTORS

- | | |
|-------------------------------|------------------------|
| ROAD SURFACE CONDITION | LIGHT CONDITION |
| 1. Dry | 1. Daylight |
| 2. Wet | 2. Dawn / Dusk |
| 3. Flooded | 3. Dark, LTG. |
| 4. Snow/Ice | 4. Dark, NO LTG. |
| 5. Slippery | 5. Unknown |
| 6. Unknown | |

Data Shown for Each Crash:

[Case #], [Date (Time)], [Road Cond.], [Light Cond.], [Action]

CRASH DIAGRAM

KDOT: 106 C-4855-25 / BG: 25-1160

Location: Emporia, Kansas
 Intersection: 6th Ave. & Merchant St.

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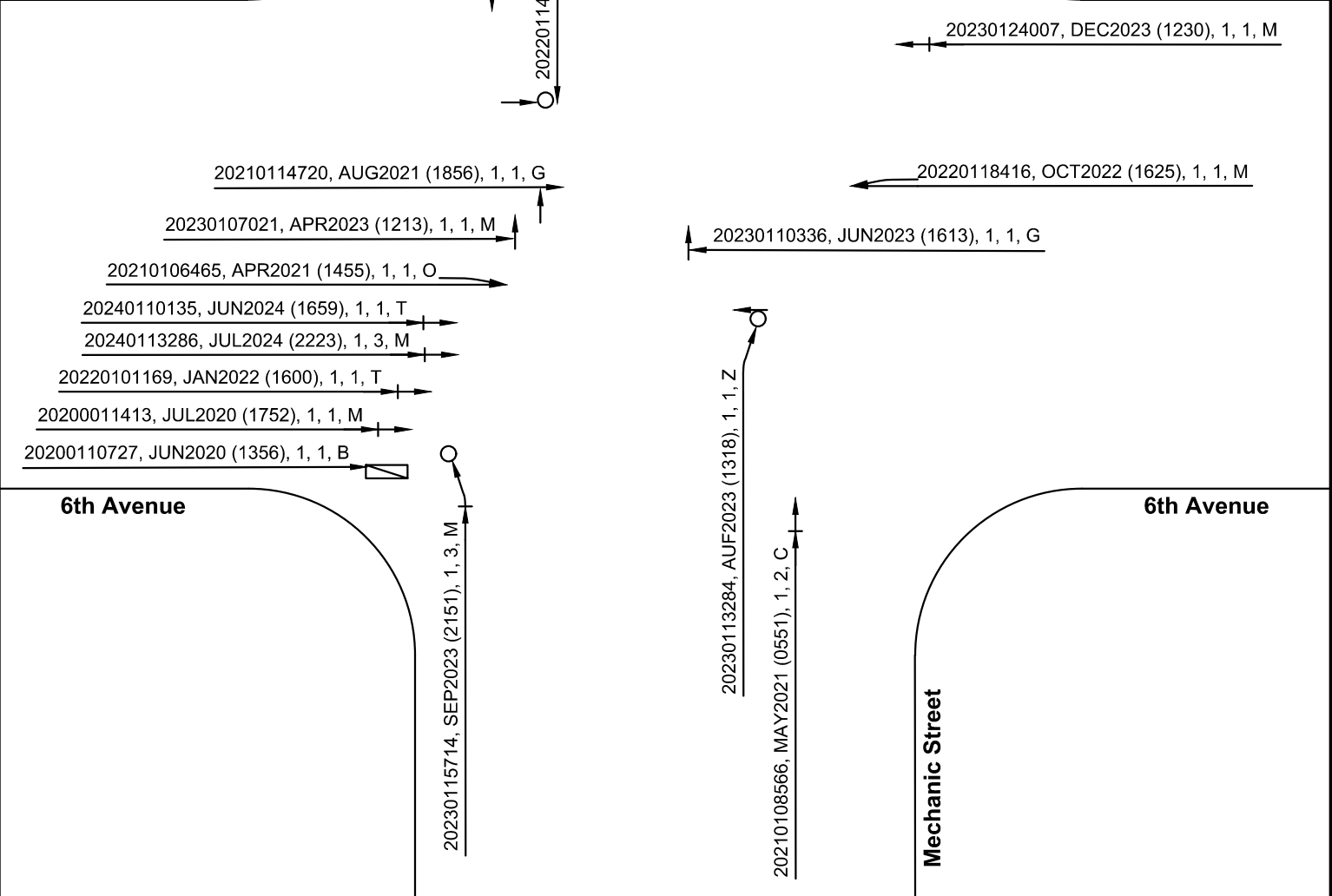
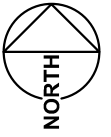
CRASH SUMMARY

No. of Crashes: 16
 Fatal: 0
 Personal Injury: 3
 Property Damage: 13

$CCR_{int} = 1.440 \text{ c/mev}$

$CR_{int} = [16 \times 10^6] / [12,095 \times 5 \times 365]$
 $= 0.725 \text{ c/mev}$

C.I. = $0.725 / 1.440$
 $= 0.50$



SYMBOL LEGEND

- Moving Vehicle
- ← Backing Vehicle
- ↻ Turning Vehicle
- Non-Involved Vehicle
- *--- Pedestrian
- Fatal Crash
- Injury Crash
- ◇ Moving Object
- Fixed Object
- ▣ Parked Vehicle
- ←+ Rear-End
- Head-On
- ↔ Sideswipe
- ↺ Out of Control
- ↻ Angle Impact

DRIVER ACTION

- A. Illegal or Unsafe Speed
- B. Impeding Traffic
- C. Following too Close
- D. Improper Overtaking
- E. Improper Turn
- F. Improper Start, Stop, Park
- G. Traf. Control Viol'n. Lights
- H. Traf. Control Viol'n. Signs
- J. Fail to Yield R/W
- K. Drove Left of Center
- L. No or Improper Signal
- M. Careless - Inattention
- N. Avoid Vehicle, Object, Ped.
- O. Improper Lane Change
- P. Ill or Med. Condit.
- Q. Slick due to Weather
- R. Backed Into
- S. Hit a Deer
- T. Alcohol Related
- V. Did Not See
- W. Hit & Run
- X. Vision Obstructed by Other Vehicles, Sun and/or Fog
- Y. Unsecure Cargo
- Z. Vehicular Malfunction
- (*) Median Related

CONTRIBUTING FACTORS

- | ROAD SURFACE CONDITION | LIGHT CONDITION |
|------------------------|------------------|
| 1. Dry | 1. Daylight |
| 2. Wet | 2. Dawn / Dusk |
| 3. Flooded | 3. Dark, LTG. |
| 4. Snow/Ice | 4. Dark, NO LTG. |
| 5. Slippery | 5. Unknown |
| 6. Unknown | |

Data Shown for Each Crash:

[Case #], [Date (Time)], [Road Cond.], [Light Cond.], [Action]

CRASH DIAGRAM

Location: Emporia, Kansas
 Intersection: 6th Ave. & Mechanic St.

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 LAWRENCE SMITHVILLE EMPORIA MANHATTAN

Engineer: Diane Rosebaugh

Drafter: Fred Rhamy

Crash Period: June 2020 - June 2025

KDOT: 106 C-4855-25 / BG: 25-1160

CRASH SUMMARY

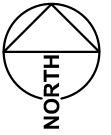
No. of Crashes: 18
 Fatal: 0
 Personal Injury: 3
 Property Damage: 15

CCR_{int} = 1.363 c/mev

CR_{int} = [18 x 10⁶] / [17,433 x 5 x 365]
 = 0.566 c/mev

C.I. = 0.566 / 1.363
 = 0.42

20250109034, MAY2025 (1255), 1, 1, E
 20230119846, NOV2023 (0817), 1, 1, M
 2025011816, JUN2025 (1156), 1, 1, E



Merchant Street

20240116409, AUG2024 (1133), 1, 1, M
 20210117542, SEP2021 (1559), 1, 1, M

20210119926, OCT2021 (1707), 1, 1, G
 20230123837, NOV2023 (1620), 1, 1, M
 20210119459, SEP2021 (1955), 1, 3, M

20220106481, APR2022 (2227), 2, 3, M

20240108886, JUN2024 (1059), 1, 1, M
 20200117789, SEP2020 (1330), 2, 1, M
 20200113153, JUN2020 (1746), 1, 1, M

20210100996, JAN2021 (1256), 1, 1, G
 20250107119, MAY2025 (1255), 1, 1, M
 20210117320, SEP2021 (1900), 1, 1, M

20210107733, APR2021 (1253), 1, 1, R

20210119718, OCT2021 (1605), 1, 1, M
 20250105723, APR2025 (1400), 1, 1, M

12th Avenue

12th Avenue

Merchant Street

SYMBOL LEGEND

- Moving Vehicle
- ← Backing Vehicle
- ↶ Turning Vehicle
- Non-Involved Vehicle
- × Pedestrian
- Fatal Crash
- Injury Crash
- ◇ Moving Object
- Fixed Object
- ▭ Parked Vehicle
- ⊕ Rear-End
- ⊖ Head-On
- ↔ Sideswipe
- ⊙ Out of Control
- ↗ Angle Impact

DRIVER ACTION

- A. Illegal or Unsafe Speed
- B. Impeding Traffic
- C. Following too Close
- D. Improper Overtaking
- E. Improper Turn
- F. Improper Start, Stop, Park
- G. Traf. Control Viol'n. Lights
- H. Traf. Control Viol'n. Signs
- J. Fail to Yield R/W
- K. Drove Left of Center
- L. No or Improper Signal
- M. Careless - Inattention
- N. Avoid Vehicle, Object, Ped.
- O. Improper Lane Change
- P. Ill or Med. Condit.
- Q. Slick due to Weather
- R. Backed Into
- S. Hit a Deer
- T. Alcohol Related
- V. Did Not See
- W. Hit & Run
- X. Vision Obstructed by Other Vehicles, Sun and/or Fog
- Y. Unsecure Cargo
- Z. Vehicular Malfunction
- (*) Median Related

CONTRIBUTING FACTORS

- | | |
|-------------------------------|------------------------|
| ROAD SURFACE CONDITION | LIGHT CONDITION |
| 1. Dry | 1. Daylight |
| 2. Wet | 2. Dawn / Dusk |
| 3. Flooded | 3. Dark, LTG. |
| 4. Snow/Ice | 4. Dark, NO LTG. |
| 5. Slippery | 5. Unknown |
| 6. Unknown | |

Data Shown for Each Crash:

[Case #], [Date (Time)], [Road Cond.], [Light Cond.], [Action]

CRASH DIAGRAM

KDOT: 106 C-4855-25 / BG: 25-1160

Location: Emporia, Kansas
 Intersection: 12th Ave & Merchant St

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 LAWRENCE SMITHVILLE EMPORIA MANHATTAN

Engineer: Diane Rosebaugh

Drafter: Fred Rhamy

Crash Period: June 2020 - June 2025

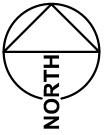
CRASH SUMMARY

No. of Crashes: 4
 Fatal: 0
 Personal Injury: 1
 Property Damage: 3

$CCR_{int} = 1.635 \text{ c/mev}$

$CR_{int} = [4 \times 10^6] / [6,054 \times 5 \times 365]$
 $= 0.362 \text{ c/mev}$

C.I. = $0.362 / 1.635$
 $= 0.22$



Merchant Street

Merchant Street

20210108954, MAY2021 (1016), 1, 1, C

20230101461, JAN2023 (1612), 1, 1, G

20210116796, SEP2021 (1759), 1, 1, M

20220103619, MAR2022 (1344), 1, 1, C

7th Avenue

7th Avenue

SYMBOL LEGEND

- Moving Vehicle
- ← Backing Vehicle
- ↪ Turning Vehicle
- Non-Involved Vehicle
- × Pedestrian
- Fatal Crash
- Injury Crash
- ◇ Moving Object
- Fixed Object
- ▭ Parked Vehicle
- ⊕ Rear-End
- ⊖ Head-On
- ↔ Sideswipe
- ⊙ Out of Control
- ↗ Angle Impact

DRIVER ACTION

- A. Illegal or Unsafe Speed
- B. Impeding Traffic
- C. Following too Close
- D. Improper Overtaking
- E. Improper Turn
- F. Improper Start, Stop, Park
- G. Traf. Control Viol'n. Lights
- H. Traf. Control Viol'n. Signs
- J. Fail to Yield R/W
- K. Drove Left of Center
- L. No or Improper Signal
- M. Careless - Inattention
- N. Avoid Vehicle, Object, Ped.
- O. Improper Lane Change
- P. Ill or Med. Condit.
- Q. Slick due to Weather
- R. Backed Into
- S. Hit a Deer
- T. Alcohol Related
- V. Did Not See
- W. Hit & Run
- X. Vision Obstructed by Other Vehicles, Sun and/or Fog
- Y. Unsecure Cargo
- Z. Vehicular Malfunction
- (*) Median Related

CONTRIBUTING FACTORS

- | | |
|-------------------------------|------------------------|
| ROAD SURFACE CONDITION | LIGHT CONDITION |
| 1. Dry | 1. Daylight |
| 2. Wet | 2. Dawn / Dusk |
| 3. Flooded | 3. Dark, LTG. |
| 4. Snow/Ice | 4. Dark, NO LTG. |
| 5. Slippery | 5. Unknown |
| 6. Unknown | |

Data Shown for Each Crash:

[Case #], [Date (Time)], [Road Cond.], [Light Cond.], [Action]

CRASH DIAGRAM

Location: Emporia, Kansas
 Intersection: Merchant St & 7th Ave.

KDOT: 106 C-4855-25 / BG: 25-1160

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Engineer: Diane Rosebaugh

Drafter: Fred Rhamy

Crash Period: June 2020 - June 2025

APPENDIX C: TRAFFIC ANALYSIS WORKSHEETS

BG CONSULTANTS - TRAFFIC ANALYSIS

BASIC INFORMATION	
Project No.	25-1160
Project Description	Emporia Teap Study
Intersection Location	Commercial St & 4th Ave
Analysis Date	8/30/2025
Additional Notes	
Exist. signal?	Yes
<10,000 people?	No
No. of approaches	4

MAJOR STREET INFORMATION	
Street Name	Commercial Street
Direction	NB SB
Number of Thru Lanes	1
Speed Limit	20
NB Adjacent Parking?	Yes
SB Adjacent Parking?	Yes

MINOR STREET INFORMATION	
Street Name	4th Avenue
Direction	EB WB
Number of Thru Lanes	1
Speed Limit	20
EB Adjacent Parking?	Yes
WB Adjacent Parking?	Yes
EB Rt Turn to Exclude	0%
WB Rt Turn to Exclude	0%
Stop Sign?	No

TRAFFIC WARRANTS		
	Appl?	Result
Warrant 1, 8-Hour	Yes	Warrant not met
Warrant 2, 4-hour	Yes	Warrant not met
Warrant 3, Peak Hour	No	Warrant 3 not appl.
Warrant 4, Pedestrian	Yes	Warrant not met
Warrant 5, School	No	Warrant 5 not appl.
Warrant 6, Coord. Sig.	Yes	Warrant not met
Warrant 7, Crash	Yes	Warrant not met
Warrant 8, Road Net.	Yes	Warrant not met
Warrant 9, RR Cross.	No	Warrant 9 not appl.
All-Way Stop Warrants	Yes	Warrants not met

CRASH SUMMARY				
	PDO	Injury	Fatal	Total
Angle	1	0	0	1
Rear-end	1	0	0	1
Ped/Bike	0	0	0	0
Other	1	0	0	1
TOTAL	3	0	0	3
CR _{int} =	0.35			
C.I. =	0.20			

TURN LANE INFORMATION				
EB/WB Analysis		2-Lane		
NB/SB Analysis		2-Lane		
	Exist?	Len. (ft.)	Taper Analysis	Turn Lane Analysis
NB Rt	No		Criteria N/A	Criteria N/A
NB Lt	Yes	100	---	Criteria not met
SB Rt	No		Criteria N/A	Criteria N/A
SB Lt	Yes	100	---	Criteria not met
EB Rt	No		Criteria N/A	Criteria N/A
EB Lt	No		---	Criteria not met
WB Rt	No		Criteria N/A	Criteria N/A
WB Lt	No		---	Criteria not met
Notes:	The analysis presented applies KDOT's Access Management Criteria for highways to assess whether speed and traffic volumes meet the thresholds to justify a turn lane. For locations with posted speeds below 40 mph, the 40-mph criteria were applied. It is important to note that these criteria are intended for highway conditions and are used here only as supplemental information. The actual determination of whether a turn lane is warranted should not rely on this analysis alone but should also consider engineering judgment and other contributing factors, such as site geometry, intersection capacity, level of service (LOS), and crash history.			

PEAK HOUR SUMMARY			
AM Peak	10:30 AM	to	11:30 AM
	283 veh.		
Mid Day Peak	12:30 PM	to	1:30 PM
	384 veh.		
PM Peak	5:00 PM	to	6:00 PM
	432 veh.		
Peak Hour	5:00 PM	to	6:00 PM
	432 veh.		
24-hour Total	4,718 veh.		

CRITICAL CRASH RATE		
N =	5	Years
r =	1	c/mev
$tmev = \frac{AADT \times N \times 365 \frac{\text{days}}{\text{year}}}{10^6}$ $= 8.61$ $CCR_{int} = r + p \times \sqrt{\frac{r}{mev}} + \frac{1}{2 \times mev}$ $= 1.726$		

PEAK HOUR TURNING MOVEMENTS

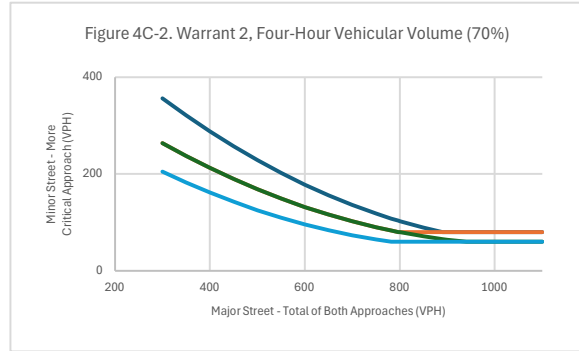
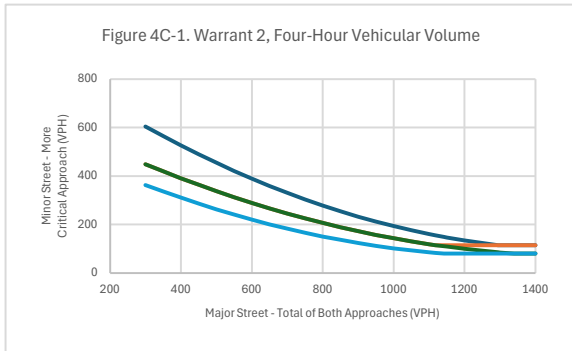
	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
	(West Leg)			(East Leg)			(South Leg)			(North Leg)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM												
10:30 AM	22	23	11	0	11	15	9	86	2	9	74	21
283 veh.		56			26			97			104	
PEDS		1			3			0			2	
BIKES			0			1			0			0
10:30 AM	7	4	4	0	3	1	1	24	1	3	12	3
10:45 AM	6	5	4	0	5	4	4	21	0	3	16	7
11:00 AM	3	5	0	0	0	4	2	13	1	2	19	5
11:15 AM	6	9	3	0	3	6	2	28	0	1	27	6
Max:		18			9			30			34	
Total:		56			26			97			104	
PHF		0.78			0.72			0.81			0.76	
Trucks	1	1	0	0	2	0	0	10	0	0	6	0
Truck %	4.5%	4.3%	0.0%	0.0%	18.2%	0.0%	0.0%	11.6%	0.0%	0.0%	8.1%	0.0%
Adjacent Parking?		Yes			Yes			Yes			Yes	
MID												
12:30 PM	35	29	16	2	18	18	7	116	6	15	94	28
384 veh.		80			38			129			137	
PEDS		4			6			1			3	
BIKES			0			1			0			0
12:30 PM	7	5	2	0	8	3	2	31	1	2	25	6
12:45 PM	13	10	7	1	4	6	1	24	2	6	29	8
1:00 PM	8	10	5	1	3	3	2	27	0	5	16	7
1:15 PM	7	4	2	0	3	6	2	34	3	2	24	7
Max:		30			11			39			43	
Total:		80			38			129			137	
PHF		0.67			0.86			0.83			0.8	
Trucks	1	2	2	0	1	0	1	5	0	0	5	1
Truck %	2.9%	6.9%	12.5%	0.0%	5.6%	0.0%	14.3%	4.3%	0.0%	0.0%	5.3%	3.6%
Adjacent Parking?		Yes			Yes			Yes			Yes	
PM												
5:00 PM	25	40	15	4	26	22	5	128	9	18	121	19
432 veh.		80			52			142			158	
PEDS		3			5			3			0	
BIKES			2			3			0			1
5:00 PM	10	8	4	2	7	9	1	38	3	6	32	6
5:15 PM	4	14	1	2	8	3	1	29	2	5	25	1
5:30 PM	4	10	2	0	3	2	2	29	3	2	34	9
5:45 PM	7	8	8	0	8	8	1	32	1	5	30	3
Max:		23			18			42			45	
Total:		80			52			142			158	
PHF		0.87			0.72			0.85			0.88	
Trucks	1	1	0	0	0	0	0	3	0	0	1	0
Truck %	4.0%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	0.0%	0.0%	0.8%	0.0%
Adjacent Parking?		Yes			Yes			Yes			Yes	

SIGNAL WARRANT ANALYSIS

WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME			
	CONDITION A (100%)	CONDITION B (100%)	CONDITION A/B (80%)*
Condition Satisfied?	NO	NO	NO
Criteria Threshold	8	8	8
Hours met:	0	0	0
Notes:			

*May only be used after adequate trial of other remedial measures.

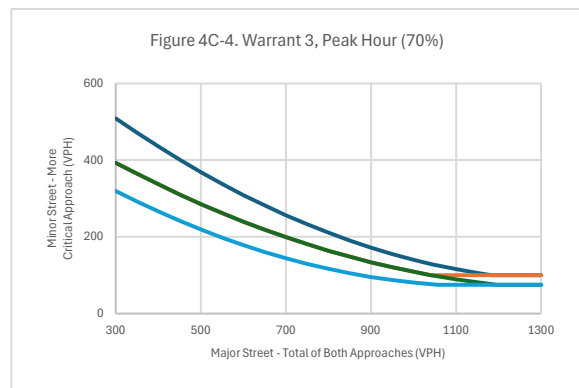
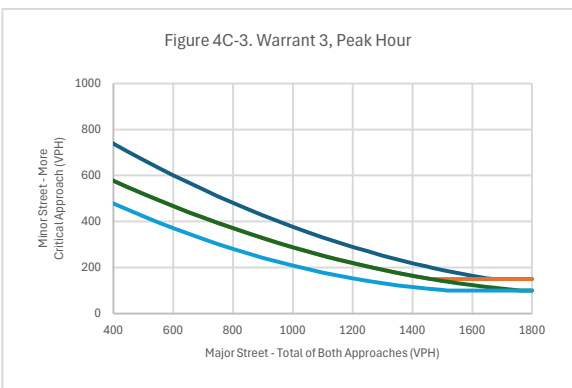
WARRANT 2, FOUR-HOUR VEHICULAR VOLUME		
	Four-Hour Vehicular Volume (100%)	Four-Hour Vehicular Volume (70%)
Warrant Satisfied?	NO	N/A
Criteria Threshold	4	N/A
Hours met:	0	N/A
Notes:		



Legend

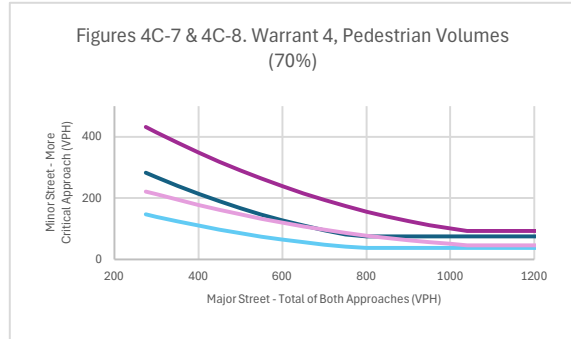
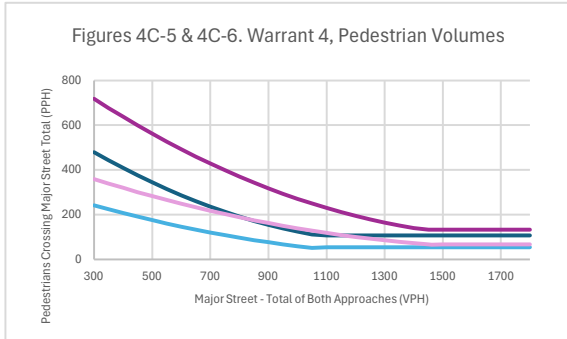
— 2+ Major / 2+ Minor
 — 1 Major / 2+ Minor
 — 2+ Major / 1 Minor
 — 1 Major / 1 Minor

WARRANT 3, PEAK HOUR				
Is the intersection near a facility that attracts or discharges large numbers of vehicles over a short time?				No
Notes:	Warrant 3 is not applicable based on a lack of nearby shift change facilities.			
Criteria A Information		Threshold	Peak Hour	5:00 PM
Is Criteria A applicable?	No		Minor VPH	80
Total stopped-time Delay (hours):			Total VPH	N/A
1. Does delay exceed threshold?	N/A	N/A	Criteria B Information	
2. Does minor exceed VPH threshold?	N/A	N/A	Criteria Satisfied?	NO
3. Does total exceed VPH threshold?	N/A	N/A	Notes (see charts below):	N/A
Criteria Satisfied?	N/A	N/A		
Notes:	Warrant not met			



SIGNAL WARRANT ANALYSIS

WARRANT 4, PEDESTRIAN VOLUME	
Crossing speed < 3.5 feet per second?	No
Major street have a median or refuge island?	No
Nearby signal/stop sign within 300'?	No
Warrant Satisfied?	No
Notes:	



Legend

- Condition A: Four-Hour Volume
- Condition B: Peak Hour Volume
- Condition A: Four-Hour Volume * 3.5fps
- Condition B: Peak Hour Volume * 3.5 Speed

WARRANT 5, SCHOOL CROSSING		
Condition Satisfied?	Warrant not applicable	
Criteria:	School children crossing the major street?	N/A
	Consideration given to alternative measures?	N/A
	300 feet or more to nearest signal or stop sign?	N/A
	If no, will new signal restrict progressive movement?*	N/A
	Minimum of 20 children crossing in peak hour?	N/A
	Engineering study shows inadequate gaps in traffic?*	N/A
*Include supporting documentation		

WARRANT 6, COORDINATED SIGNAL SYSTEM		
Condition Satisfied?	Warrant not met	
Criteria:	One-way or Two-way traffic?	Two-Way
	Would a proposed signal, working with the adjacent signals, enable progressive operation?	Yes
	Would the resultant signal spacing would be greater than 1,000 feet?	No

WARRANT 7, CRASH EXPERIENCE		
Condition Satisfied?	Warrant not met	
Criteria:	One Year: Total number of angle and pedestrian crashes (all severities):	0
	One Year: Total number of fatal-and-injury angle and pedestrian crashes:	0
	Three Year: Total number of angle and pedestrian crashes (all severities):	1
	Three Year: Total number of fatal-and-injury angle and pedestrian crashes:	0
	Adequate trial of alternatives have failed to reduce crash frequency?	Yes
	Crash history exceeds thresholds?	No
	Traffic volumes or pedestrian volumes exceed 80% thresholds?	No

SIGNAL WARRANT ANALYSIS

WARRANT 8, ROADWAY NETWORK		
Condition Satisfied?		Warrant not met
Criteria:	Intersection of two or more major routes?*	No
	Intersection has a total existing, or immediately projected, entering volume of at least 1,000vph entering during the peak hour of a typical weekday AND has 5-year projected traffic volumes that meet one or more of Warrants 1,2, and 3 during an average weekday?	No
	Intersection has total existing, or immediately projected, entering volume of at least 1,000vph for each of any 5 hours of a non-normal business day (Saturday or Sunday)?	No

*Major route defined as:

- Part of the street or highway system that serves as the principal roadway network for through traffic flow
- Rural or suburban highways outside, entering, or transversing a city
- Appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study

WARRANT 9, INTERSECTION NEAR A GRADE CROSSING		
Condition Satisfied?		Warrant not applicable
Criteria:	Adequate trial of alternatives have failed to alleviate safety concerns?	N/A
	Railroad exists on an approach controlled by a STOP or YIELD sign?	N/A
	The center of the nearest track is within 140 feet of stop or yield line?	N/A
	Clear storage distance, D in feet, between near edge of tracks and stop or yield line?	
	One or two approach lanes at railroad crossing?	N/A
	Adjustment Factor for Daily Frequency of Rail Traffic	
	Adjustment Factor for Percentage of High-Occupancy Buses	
	Adjustment Factor for Percentage of Tractor-Trailer Trucks	
	Combined Adjustment Factor	0
	Minor Crossing Approach Volume, vph (with adjustment factor applied):	
	Major Street Volume, vph (total both approaches):	
Above Figure 4C-9 or 4C-10 threshold?	N/A	

ALL-WAY STOP CONTROL WARRANTS				
Condition Satisfied?		Warrants not met		
Warrant A	Number of Legs	4	Threshold	Met?
	Number of Crashes in 12 month Period	0	5	No
	Number of Crashes in 36 month Period	1	6	No
	Criteria met?	No		
Warrant B	Does the minor-road approaches have inadequate sight distance?	No		
	Criteria met?	No		
Warrant C	Is the all-way stop an interim measure?	No		
	Criteria met?	No		
Warrant D	Is the 85% speed > 40mph?	No	Hours Met	Threshold
	Major Street 8-hour Volume, vph:	0	8	Met?
	Criteria met?	No		
Warrant E	Are there other factors to justify stop (high left-turns, 2 residential collectors, significant pedestrian or bicycle activity, etc.)	No		
	Criteria met?	No		

BG CONSULTANTS - TRAFFIC ANALYSIS

BASIC INFORMATION	
Project No.	25-1160
Project Description	Emporia Teap Study
Intersection Location	5th & Commercial
Analysis Date	8/30/2025
Additional Notes	
Exist. signal?	Yes
<10,000 people?	No
No. of approaches	4

MAJOR STREET INFORMATION	
Street Name	Commercial Street
Direction	NB SB
Number of Thru Lanes	1
Speed Limit	20
NB Adjacent Parking?	Yes
SB Adjacent Parking?	Yes

MINOR STREET INFORMATION	
Street Name	5th Street
Direction	EB WB
Number of Thru Lanes	1
Speed Limit	20
EB Adjacent Parking?	Yes
WB Adjacent Parking?	Yes
EB Rt Turn to Exclude	0%
WB Rt Turn to Exclude	0%
Stop Sign?	No

TRAFFIC WARRANTS		
	Appl?	Result
Warrant 1, 8-Hour	Yes	Warrant not met
Warrant 2, 4-hour	Yes	Warrant not met
Warrant 3, Peak Hour	No	Warrant 3 not appl.
Warrant 4, Pedestrian	Yes	Warrant not met
Warrant 5, School	No	Warrant 5 not appl.
Warrant 6, Coord. Sig.	Yes	Warrant not met
Warrant 7, Crash	Yes	Warrant not met
Warrant 8, Road Net.	Yes	Warrant not met
Warrant 9, RR Cross.	No	Warrant 9 not appl.
All-Way Stop Warrants	No	Warrants not appl.

CRASH SUMMARY				
	PDO	Injury	Fatal	Total
Angle	1	0	0	1
Rear-end	2	0	0	2
Ped/Bike	0	0	0	0
Other	0	0	0	0
TOTAL	3	0	0	3
CR _{int} =	0.40			
C.I. =	0.23			

TURN LANE INFORMATION				
EB/WB Analysis		2-Lane		
NB/SB Analysis		2-Lane		
	Exist?	Len. (ft.)	Taper Analysis	Turn Lane Analysis
NB Rt	No		Criteria N/A	Criteria N/A
NB Lt	No		---	Criteria N/A
SB Rt	No		Criteria N/A	Criteria N/A
SB Lt	No		---	Criteria N/A
EB Rt	No		Criteria N/A	Criteria N/A
EB Lt	No		---	Criteria N/A
WB Rt	No		Criteria N/A	Criteria N/A
WB Lt	No		---	Criteria N/A
Notes:	The analysis presented applies KDOT's Access Management Criteria for highways to assess whether speed and traffic volumes meet the thresholds to justify a turn lane. For locations with posted speeds below 40 mph, the 40-mph criteria were applied. It is important to note that these criteria are intended for highway conditions and are used here only as supplemental information. The actual determination of whether a turn lane is warranted should not rely on this analysis alone but should also consider engineering judgment and other contributing factors, such as site geometry, intersection capacity, level of service (LOS), and crash history.			

PEAK HOUR SUMMARY			
AM Peak	10:30 AM	to	11:30 AM
	263 veh.		
Mid Day Peak	12:30 PM	to	1:30 PM
	362 veh.		
PM Peak	2:45 PM	to	3:45 PM
	379 veh.		
Peak Hour	2:45 PM	to	3:45 PM
	379 veh.		
24-hour Total	4,061 veh.		

CRITICAL CRASH RATE		
N =	5	Years
r =	1	c/mev
$tmev = \frac{AADT \times N \times 365 \frac{days}{year}}{10^6}$ $= 7.41$ $CCR_{int} = r + p \times \sqrt{\frac{r}{mev}} + \frac{1}{2 \times mev}$ $= 1.7874$		

PEAK HOUR TURNING MOVEMENTS

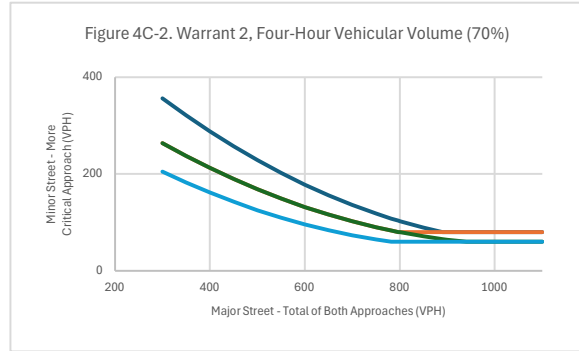
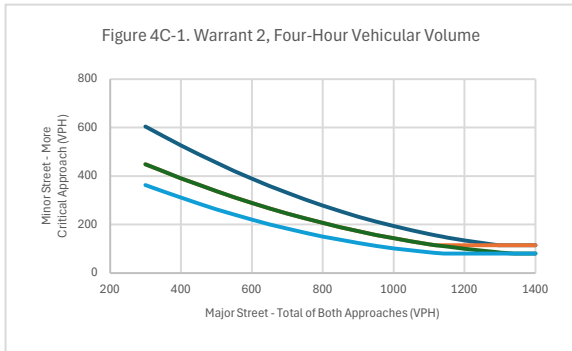
	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
	(West Leg)			(East Leg)			(South Leg)			(North Leg)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM												
10:30 AM	0	0	22	0	1	12	0	108	4	0	99	17
263 veh.		22			13			112			116	
PEDS		7			13			3			4	
BIKES			0			1			0			0
10:30 AM	0	0	5	0	0	3	0	31	1	0	14	6
10:45 AM	0	0	7	0	1	2	0	25	1	0	24	6
11:00 AM	0	0	6	0	0	2	0	19	2	0	28	3
11:15 AM	0	0	4	0	0	5	0	33	0	0	33	2
Max:		7			5			33			35	
Total:		22			13			112			116	
PHF		0.79			0.65			0.85			0.83	
Trucks	0	0	1	0	0	0	0	11	0	0	5	1
Truck %	0.0%	0.0%	4.5%	0.0%	0.0%	0.0%	0.0%	10.2%	0.0%	0.0%	5.1%	5.9%
Adjacent Parking?		Yes			Yes			Yes			Yes	
MID												
12:30 PM	0	0	15	0	1	26	0	146	20	0	138	16
362 veh.		15			27			166			154	
PEDS		11			43			19			26	
BIKES			0			0			0			0
12:30 PM	0	0	3	0	1	3	0	33	2	0	33	2
12:45 PM	0	0	5	0	0	8	0	35	9	0	44	1
1:00 PM	0	0	3	0	0	12	0	33	7	0	31	7
1:15 PM	0	0	4	0	0	3	0	45	2	0	30	6
Max:		5			12			47			45	
Total:		15			27			166			154	
PHF		0.75			0.56			0.88			0.86	
Trucks	0	0	0	0	0	1	0	10	0	0	6	0
Truck %	0.0%	0.0%	0.0%	0.0%	0.0%	3.8%	0.0%	6.8%	0.0%	0.0%	4.3%	0.0%
Adjacent Parking?		Yes			Yes			Yes			Yes	
PM												
2:45 PM	0	0	13	0	0	23	0	173	15	0	142	13
379 veh.		13			23			188			155	
PEDS		3			26			9			16	
BIKES			1			0			1			1
2:45 PM	0	0	3	0	0	5	0	37	4	0	40	3
3:00 PM	0	0	3	0	0	6	0	51	2	0	34	1
3:15 PM	0	0	4	0	0	4	0	47	6	0	34	6
3:30 PM	0	0	3	0	0	8	0	38	3	0	34	3
Max:		4			8			53			43	
Total:		13			23			188			155	
PHF		0.81			0.72			0.89			0.9	
Trucks	0	0	0	0	0	0	0	6	0	0	6	0
Truck %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.5%	0.0%	0.0%	4.2%	0.0%
Adjacent Parking?		Yes			Yes			Yes			Yes	

SIGNAL WARRANT ANALYSIS

WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME			
	CONDITION A (100%)	CONDITION B (100%)	CONDITION A/B (80%)*
Condition Satisfied?	NO	NO	NO
Criteria Threshold	8	8	8
Hours met:	0	0	0
Notes:			

*May only be used after adequate trial of other remedial measures.

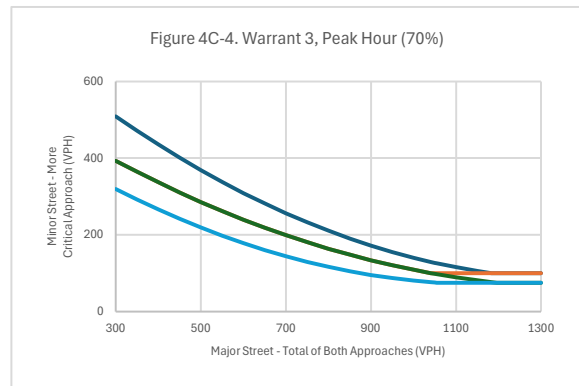
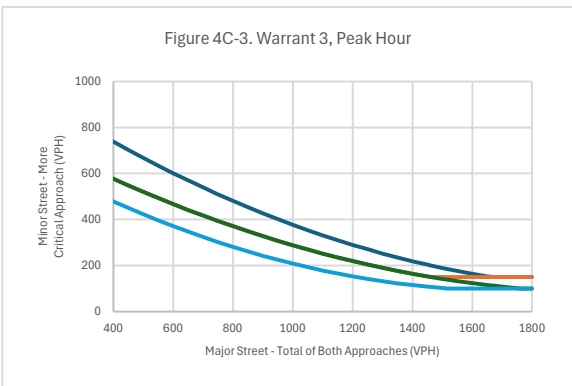
WARRANT 2, FOUR-HOUR VEHICULAR VOLUME		
	Four-Hour Vehicular Volume (100%)	Four-Hour Vehicular Volume (70%)
Warrant Satisfied?	NO	N/A
Criteria Threshold	4	N/A
Hours met:	0	N/A
Notes:		



Legend

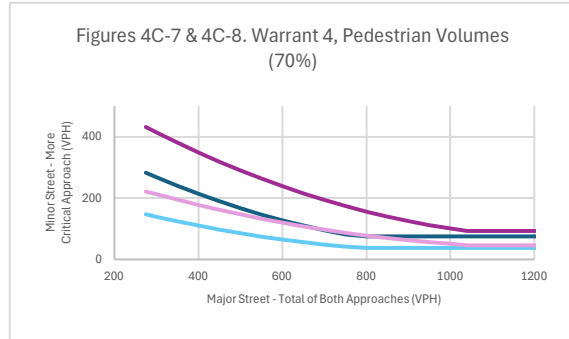
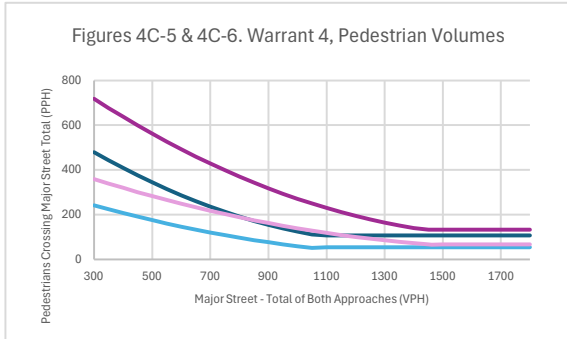
— 2+ Major / 2+ Minor
 — 1 Major / 2+ Minor
 — 2+ Major / 1 Minor
 — 1 Major / 1 Minor

WARRANT 3, PEAK HOUR				
Is the intersection near a facility that attracts or discharges large numbers of vehicles over a short time?				No
Notes:	Warrant 3 is not applicable based on a lack of nearby shift change facilities.			
Criteria A Information		Threshold	Peak Hour	2:45 PM
Is Criteria A applicable?	No		Minor VPH	23
Total stopped-time Delay (hours):			Total VPH	N/A
1. Does delay exceed threshold?	N/A	N/A	Criteria B Information	
2. Does minor exceed VPH threshold?	N/A	N/A	Criteria Satisfied?	NO
3. Does total exceed VPH threshold?	N/A	N/A	Notes (see charts below):	N/A
Criteria Satisfied?	N/A	N/A		
Notes:	Warrant not met			



SIGNAL WARRANT ANALYSIS

WARRANT 4, PEDESTRIAN VOLUME	
Crossing speed < 3.5 feet per second?	No
Major street have a median or refuge island?	No
Nearby signal/stop sign within 300'?	No
Warrant Satisfied?	No
Notes:	



Legend

- Condition A: Four-Hour Volume
- Condition B: Peak Hour Volume
- Condition A: Four-Hour Volume * 3.5fps
- Condition B: Peak Hour Volume * 3.5 Speed

WARRANT 5, SCHOOL CROSSING		
Condition Satisfied?	Warrant not applicable	
Criteria:	School children crossing the major street?	N/A
	Consideration given to alternative measures?	N/A
	300 feet or more to nearest signal or stop sign?	N/A
	If no, will new signal restrict progressive movement?*	N/A
	Minimum of 20 children crossing in peak hour?	N/A
	Engineering study shows inadequate gaps in traffic?*	N/A
*Include supporting documentation		

WARRANT 6, COORDINATED SIGNAL SYSTEM		
Condition Satisfied?	Warrant not met	
Criteria:	One-way or Two-way traffic?	Two-Way
	Would a proposed signal, working with the adjacent signals, enable progressive operation?	Yes
	Would the resultant signal spacing would be greater than 1,000 feet?	No

WARRANT 7, CRASH EXPERIENCE		
Condition Satisfied?	Warrant not met	
Criteria:	One Year: Total number of angle and pedestrian crashes (all severities):	0
	One Year: Total number of fatal-and-injury angle and pedestrian crashes:	0
	Three Year: Total number of angle and pedestrian crashes (all severities):	1
	Three Year: Total number of fatal-and-injury angle and pedestrian crashes:	0
	Adequate trial of alternatives have failed to reduce crash frequency?	Yes
	Crash history exceeds thresholds?	No
	Traffic volumes or pedestrian volumes exceed 80% thresholds?	No

SIGNAL WARRANT ANALYSIS

WARRANT 8, ROADWAY NETWORK		
Condition Satisfied?		Warrant not met
Criteria:	Intersection of two or more major routes?*	No
	Intersection has a total existing, or immediately projected, entering volume of at least 1,000vph entering during the peak hour of a typical weekday AND has 5-year projected traffic volumes that meet one or more of Warrants 1,2, and 3 during an average weekday?	No
	Intersection has total existing, or immediately projected, entering volume of at least 1,000vph for each of any 5 hours of a non-normal business day (Saturday or Sunday)?	No

*Major route defined as:

- Part of the street or highway system that serves as the principal roadway network for through traffic flow
- Rural or suburban highways outside, entering, or transverseing a city
- Appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study

WARRANT 9, INTERSECTION NEAR A GRADE CROSSING		
Condition Satisfied?		Warrant not applicable
Criteria:	Adequate trial of alternatives have failed to alleviate safety concerns?	N/A
	Railroad exists on an approach controlled by a STOP or YIELD sign?	N/A
	The center of the nearest track is within 140 feet of stop or yield line?	N/A
	Clear storage distance, D in feet, between near edge of tracks and stop or yield line?	
	One or two approach lanes at railroad crossing?	N/A
	Adjustment Factor for Daily Frequency of Rail Traffic	
	Adjustment Factor for Percentage of High-Occupancy Busses	
	Adjustment Factor for Percentage of Tractor-Trailer Trucks	
	Combined Adjustment Factor	0
	Minor Crossing Approach Volume, vph (with adjustment factor applied):	
	Major Street Volume, vph (total both approaches):	
	Above Figure 4C-9 or 4C-10 threshold?	N/A

ALL-WAY STOP CONTROL WARRANTS				
Condition Satisfied?		Warrants not applicable		
Warrant A	Number of Legs	4	Threshold	Met?
	Number of Crashes in 12 month Period	0	5	No
	Number of Crashes in 36 month Period	1	6	No
	Criteria met?	No		
Warrant B	Does the minor-road approaches have inadequate sight distance?	No		
	Criteria met?	No		
Warrant C	Is the all-way stop an interim measure?	No		
	Criteria met?	No		
Warrant D	Is the 85% speed > 40mph?	No	Hours Met	Threshold
	Major Street 8-hour Volume, vph:	0	8	Met?
	Criteria met?	No		
Warrant E	Are there other factors to justify stop (high left-turns, 2 residential collectors, significant pedestrian or bicycle activity, etc.)	No		
	Criteria met?	No		

BG CONSULTANTS - TRAFFIC ANALYSIS

BASIC INFORMATION	
Project No.	25-1160
Project Description	Emporia Teap Study
Intersection Location	6th & Commercial
Analysis Date	8/30/2025
Additional Notes	
Exist. signal?	Yes
<10,000 people?	No
No. of approaches	4

MAJOR STREET INFORMATION	
Street Name	6th Street
Direction	EB WB
Number of Thru Lanes	2
Speed Limit	30
EB Adjacent Parking?	Yes
WB Adjacent Parking?	Yes

MINOR STREET INFORMATION	
Street Name	Commercial Street
Direction	NB SB
Number of Thru Lanes	1
Speed Limit	20
NB Adjacent Parking?	Yes
SB Adjacent Parking?	Yes
NB Rt Turn to Exclude	0%
SB Rt Turn to Exclude	0%
Stop Sign?	No

TRAFFIC WARRANTS		
	Appl?	Result
Warrant 1, 8-Hour	Yes	Warrant not met
Warrant 2, 4-hour	Yes	Warrant not met
Warrant 3, Peak Hour	No	Warrant 3 not appl.
Warrant 4, Pedestrian	Yes	Warrant not met
Warrant 5, School	No	Warrant 5 not appl.
Warrant 6, Coord. Sig.	Yes	Warrant not met
Warrant 7, Crash	Yes	Warrant not met
Warrant 8, Road Net.	Yes	Warrant 8 was met
Warrant 9, RR Cross.	No	Warrant 9 not appl.
All-Way Stop Warrants	No	Warrants not appl.

CRASH SUMMARY				
	PDO	Injury	Fatal	Total
Angle	4	2	0	6
Rear-end	5	1	0	6
Ped/Bike	0	3	0	3
Other	3	1	0	4
TOTAL	12	7	0	19
CR _{int} =	0.78			
C.I. =	0.55			

TURN LANE INFORMATION				
EB/WB Analysis		2-Lane		
NB/SB Analysis		2-Lane		
	Exist?	Len. (ft.)	Taper Analysis	Turn Lane Analysis
NB Rt	No		Criteria N/A	Criteria N/A
NB Lt	Yes	150	---	Criteria not met
SB Rt	No		Criteria N/A	Criteria N/A
SB Lt	Yes	150	---	Criteria not met
EB Rt	No		Criteria met	Criteria not met
EB Lt	Yes	100	---	Criteria met
WB Rt	No		Criteria N/A	Criteria N/A
WB Lt	Yes	100	---	Criteria met
Notes:	The analysis presented applies KDOT's Access Management Criteria for highways to assess whether speed and traffic volumes meet the thresholds to justify a turn lane. For locations with posted speeds below 40 mph, the 40-mph criteria were applied. It is important to note that these criteria are intended for highway conditions and are used here only as supplemental information. The actual determination of whether a turn lane is warranted should not rely on this analysis alone but should also consider engineering judgment and other contributing factors, such as site geometry, intersection capacity, level of service (LOS), and crash history.			

PEAK HOUR SUMMARY			
AM Peak	10:30 AM	to	11:30 AM
	831 veh.		
Mid Day Peak	12:00 PM	to	1:00 PM
	1,029 veh.		
PM Peak	4:15 PM	to	5:15 PM
	1,168 veh.		
Peak Hour	4:15 PM	to	5:15 PM
	1,168 veh.		
24-hour Total	13,293 veh.		

CRITICAL CRASH RATE		
N =	5	Years
r =	1	c/mev
$tmev = \frac{AADT \times N \times 365 \frac{\text{days}}{\text{year}}}{10^6}$ $= 24.26$ $CCR_{int} = r + p \times \sqrt{\frac{r}{mev}} + \frac{1}{2 \times mev}$ $= 1.4185$		

PEAK HOUR TURNING MOVEMENTS

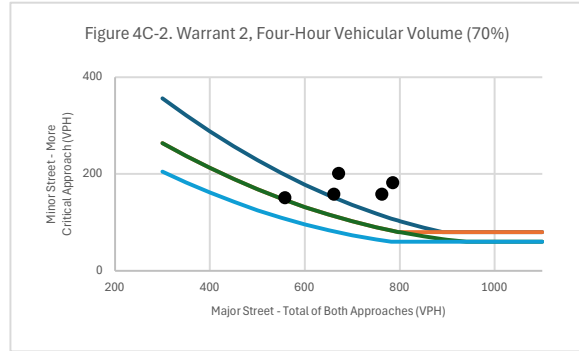
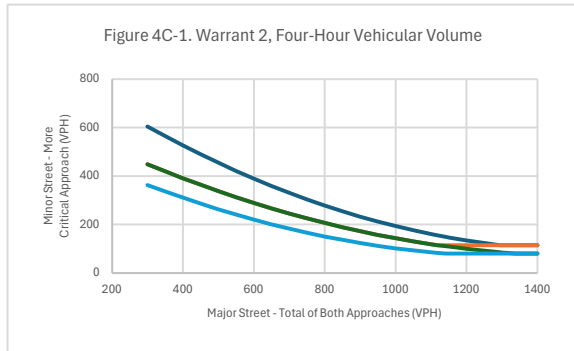
	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
	(West Leg)			(East Leg)			(South Leg)			(North Leg)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM 10:30 AM	43	222	39	17	240	25	51	52	19	29	59	35
831 veh.		304			282			122			123	
PEDS		2			5			2			1	
BIKES			0			0			0			0
10:30 AM	7	57	6	0	51	5	8	17	7	4	13	5
10:45 AM	5	58	9	8	60	8	13	14	3	9	10	11
11:00 AM	12	52	12	4	69	6	10	8	2	6	19	9
11:15 AM	19	55	12	5	60	6	20	13	7	10	17	10
Max:		86			79			40			37	
Total:		304			282			122			123	
PHF		0.88			0.89			0.76			0.83	
Trucks	1	18	0	2	14	0	5	5	1	4	3	0
Truck %	2.3%	8.1%	0.0%	11.8%	5.8%	0.0%	9.8%	9.6%	5.3%	13.8%	5.1%	0.0%
Adjacent Parking?		Yes			Yes			Yes			Yes	
MID 12:00 PM	53	287	64	7	273	29	67	61	23	35	59	71
1,029 veh.		404			309			151			165	
PEDS		9			13			6			5	
BIKES			0			0			0			0
12:00 PM	10	66	14	2	76	12	25	17	6	8	9	23
12:15 PM	16	81	5	2	56	8	13	14	7	4	13	16
12:30 PM	13	62	17	1	72	4	12	13	7	8	19	14
12:45 PM	14	78	28	2	69	5	17	17	3	15	18	18
Max:		120			90			48			51	
Total:		404			309			151			165	
PHF		0.84			0.86			0.79			0.81	
Trucks	1	24	2	1	13	1	3	2	3	0	2	0
Truck %	1.9%	8.4%	3.1%	14.3%	4.8%	3.4%	4.5%	3.3%	13.0%	0.0%	3.4%	0.0%
Adjacent Parking?		Yes			Yes			Yes			Yes	
PM 4:15 PM	32	346	64	9	350	22	79	72	26	36	82	50
1,168 veh.		442			381			177			168	
PEDS		7			3			0			1	
BIKES			1			3			2			2
4:15 PM	10	77	26	2	78	5	18	19	7	7	18	9
4:30 PM	7	93	9	2	83	4	13	24	3	11	23	9
4:45 PM	7	68	17	2	83	3	22	10	8	8	21	16
5:00 PM	8	108	12	3	106	10	26	19	8	10	20	16
Max:		128			119			53			46	
Total:		442			381			177			168	
PHF		0.86			0.8			0.83			0.91	
Trucks	0	13	0	0	8	0	0	0	2	0	1	1
Truck %	0.0%	3.8%	0.0%	0.0%	2.3%	0.0%	0.0%	0.0%	7.7%	0.0%	1.2%	2.0%
Adjacent Parking?		Yes			Yes			Yes			Yes	

SIGNAL WARRANT ANALYSIS

WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME			
	CONDITION A (100%)	CONDITION B (100%)	CONDITION A/B (80%)*
Condition Satisfied?	NO	NO	NO
Criteria Threshold	8	8	8
Hours met:	6	0	1
Notes:			

*May only be used after adequate trial of other remedial measures.

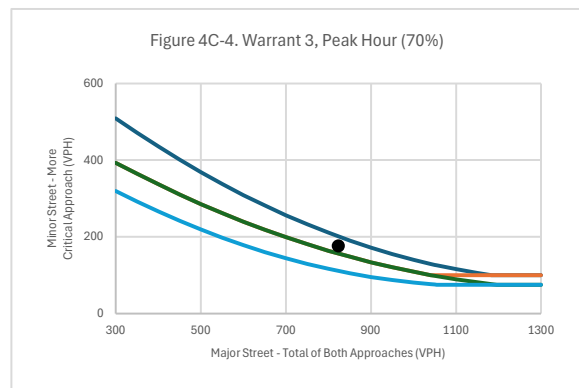
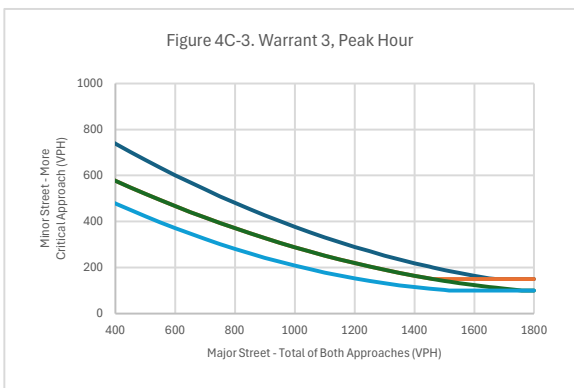
WARRANT 2, FOUR-HOUR VEHICULAR VOLUME		
	Four-Hour Vehicular Volume (100%)	Four-Hour Vehicular Volume (70%)
Warrant Satisfied?	NO	N/A
Criteria Threshold	4	N/A
Hours met:	0	N/A
Notes:		



Legend

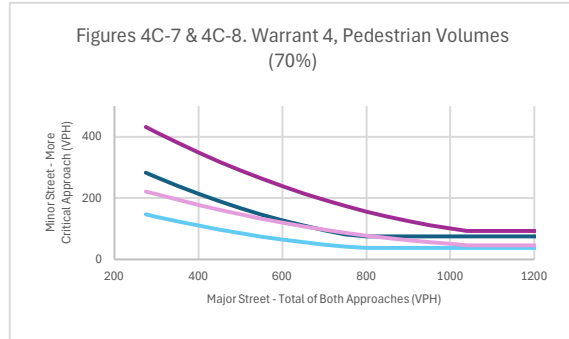
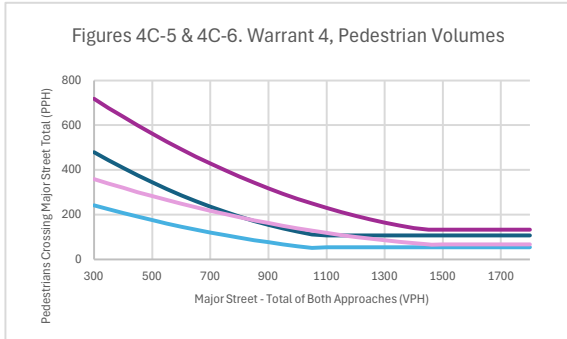
— 2+ Major / 2+ Minor
 — 1 Major / 2+ Minor
 — 2+ Major / 1 Minor
 — 1 Major / 1 Minor

WARRANT 3, PEAK HOUR				
Is the intersection near a facility that attracts or discharges large numbers of vehicles over a short time?				No
Notes:	Warrant 3 is not applicable based on a lack of nearby shift change facilities.			
Criteria A Information		Threshold	Peak Hour	4:15 PM
Is Criteria A applicable?	No		Minor VPH	177
Total stopped-time Delay (hours):			Total VPH	N/A
1. Does delay exceed threshold?	N/A	N/A	Criteria B Information	
2. Does minor exceed VPH threshold?	N/A	N/A	Criteria Satisfied?	NO
3. Does total exceed VPH threshold?	N/A	N/A	Notes (see charts below):	N/A
Criteria Satisfied?	N/A	N/A		
Notes:	Warrant not met			



SIGNAL WARRANT ANALYSIS

WARRANT 4, PEDESTRIAN VOLUME	
Crossing speed < 3.5 feet per second?	No
Major street have a median or refuge island?	No
Nearby signal/stop sign within 300'?	No
Warrant Satisfied?	No
Notes:	



Legend

- Condition A: Four-Hour Volume
- Condition B: Peak Hour Volume
- Condition A: Four-Hour Volume * 3.5fps
- Condition B: Peak Hour Volume * 3.5 Speed

WARRANT 5, SCHOOL CROSSING		
Condition Satisfied?	Warrant not applicable	
Criteria:	School children crossing the major street?	N/A
	Consideration given to alternative measures?	N/A
	300 feet or more to nearest signal or stop sign?	N/A
	If no, will new signal restrict progressive movement?*	N/A
	Minimum of 20 children crossing in peak hour?	N/A
	Engineering study shows inadequate gaps in traffic?*	N/A
*Include supporting documentation		

WARRANT 6, COORDINATED SIGNAL SYSTEM		
Condition Satisfied?	Warrant not met	
Criteria:	One-way or Two-way traffic?	Two-Way
	Would a proposed signal, working with the adjacent signals, enable progressive operation?	Yes
	Would the resultant signal spacing would be greater than 1,000 feet?	No

WARRANT 7, CRASH EXPERIENCE		
Condition Satisfied?	Warrant not met	
Criteria:	One Year: Total number of angle and pedestrian crashes (all severities):	2
	One Year: Total number of fatal-and-injury angle and pedestrian crashes:	0
	Three Year: Total number of angle and pedestrian crashes (all severities):	4
	Three Year: Total number of fatal-and-injury angle and pedestrian crashes:	0
	Adequate trial of alternatives have failed to reduce crash frequency?	Yes
	Crash history exceeds thresholds?	No
	Traffic volumes or pedestrian volumes exceed 80% thresholds?	Yes

SIGNAL WARRANT ANALYSIS

WARRANT 8, ROADWAY NETWORK		
Condition Satisfied?		Warrant 8 was met
Criteria:	Intersection of two or more major routes?*	Yes
	Intersection has a total existing, or immediately projected, entering volume of at least 1,000vph entering during the peak hour of a typical weekday AND has 5-year projected traffic volumes that meet one or more of Warrants 1,2, and 3 during an average weekday?	Yes
	Intersection has total existing, or immediately projected, entering volume of at least 1,000vph for each of any 5 hours of a non-normal business day (Saturday or Sunday)?	No

*Major route defined as:

- Part of the street or highway system that serves as the principal roadway network for through traffic flow
- Rural or suburban highways outside, entering, or transversing a city
- Appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study

WARRANT 9, INTERSECTION NEAR A GRADE CROSSING		
Condition Satisfied?		Warrant not applicable
Criteria:	Adequate trial of alternatives have failed to alleviate safety concerns?	N/A
	Railroad exists on an approach controlled by a STOP or YIELD sign?	N/A
	The center of the nearest track is within 140 feet of stop or yield line?	N/A
	Clear storage distance, D in feet, between near edge of tracks and stop or yield line?	
	One or two approach lanes at railroad crossing?	N/A
	Adjustment Factor for Daily Frequency of Rail Traffic	
	Adjustment Factor for Percentage of High-Occupancy Busses	
	Adjustment Factor for Percentage of Tractor-Trailer Trucks	
	Combined Adjustment Factor	0
	Minor Crossing Approach Volume, vph (with adjustment factor applied):	
	Major Street Volume, vph (total both approaches):	
Above Figure 4C-9 or 4C-10 threshold?	N/A	

ALL-WAY STOP CONTROL WARRANTS				
Condition Satisfied?		Warrants not applicable		
Warrant A	Number of Legs	4	Threshold	Met?
	Number of Crashes in 12 month Period	2	5	No
	Number of Crashes in 36 month Period	4	6	No
	Criteria met?	No		
Warrant B	Does the minor-road approaches have inadequate sight distance?	No		
	Criteria met?	No		
Warrant C	Is the all-way stop an interim measure?	No		
	Criteria met?	No		
Warrant D	Is the 85% speed > 40mph?	No	Hours Met	Threshold
	Major Street 8-hour Volume, vph:	10.5	8	Yes
	Criteria met?	Yes		
Warrant E	Are there other factors to justify stop (high left-turns, 2 residential collectors, significant pedestrian or bicycle activity, etc.)	No		
	Criteria met?	No		

BG CONSULTANTS - TRAFFIC ANALYSIS

BASIC INFORMATION	
Project No.	25-1160
Project Description	Emporia Teap Study
Intersection Location	7th & Commercial
Analysis Date	8/30/2025
Additional Notes	
Exist. signal?	Yes
<10,000 people?	No
No. of approaches	4

MAJOR STREET INFORMATION	
Street Name	Commercial Street
Direction	NB SB
Number of Thru Lanes	1
Speed Limit	20
NB Adjacent Parking?	Yes
SB Adjacent Parking?	Yes

MINOR STREET INFORMATION	
Street Name	7th Avenue
Direction	EB WB
Number of Thru Lanes	1
Speed Limit	20
EB Adjacent Parking?	Yes
WB Adjacent Parking?	Yes
EB Rt Turn to Exclude	0%
WB Rt Turn to Exclude	0%
Stop Sign?	No

TRAFFIC WARRANTS		
	Appl?	Result
Warrant 1, 8-Hour	Yes	Warrant not met
Warrant 2, 4-hour	Yes	Warrant not met
Warrant 3, Peak Hour	No	Warrant 3 not appl.
Warrant 4, Pedestrian	Yes	Warrant not met
Warrant 5, School	No	Warrant 5 not appl.
Warrant 6, Coord. Sig.	Yes	Warrant not met
Warrant 7, Crash	Yes	Warrant not met
Warrant 8, Road Net.	Yes	Warrant not met
Warrant 9, RR Cross.	No	Warrant 9 not appl.
All-Way Stop Warrants	No	Warrants not appl.

CRASH SUMMARY				
	PDO	Injury	Fatal	Total
Angle	0	0	0	0
Rear-end	1	0	0	1
Ped/Bike	0	0	0	0
Other	1	0	0	1
TOTAL	2	0	0	2
CR _{int} =	0.27			
C.I. =	0.15			

TURN LANE INFORMATION				
EB/WB Analysis		2-Lane		
NB/SB Analysis		2-Lane		
	Exist?	Len. (ft.)	Taper Analysis	Turn Lane Analysis
NB Rt	No		Criteria N/A	Criteria N/A
NB Lt	No		---	Criteria N/A
SB Rt	No		Criteria N/A	Criteria N/A
SB Lt	No		---	Criteria N/A
EB Rt	No		Criteria N/A	Criteria N/A
EB Lt	No		---	Criteria N/A
WB Rt	No		Criteria N/A	Criteria N/A
WB Lt	No		---	Criteria N/A
Notes:	The analysis presented applies KDOT's Access Management Criteria for highways to assess whether speed and traffic volumes meet the thresholds to justify a turn lane. For locations with posted speeds below 40 mph, the 40-mph criteria were applied. It is important to note that these criteria are intended for highway conditions and are used here only as supplemental information. The actual determination of whether a turn lane is warranted should not rely on this analysis alone but should also consider engineering judgment and other contributing factors, such as site geometry, intersection capacity, level of service (LOS), and crash history.			

PEAK HOUR SUMMARY			
AM Peak	10:30 AM	to	11:30 AM
	266 veh.		
Mid Day Peak	12:30 PM	to	1:30 PM
	359 veh.		
PM Peak	5:00 PM	to	6:00 PM
	349 veh.		
Peak Hour	12:30 PM	to	1:30 PM
	359 veh.		
24-hour Total	4,091 veh.		

CRITICAL CRASH RATE		
N =	5	Years
r =	1	c/mev
$tmev = \frac{AADT \times N \times 365 \frac{\text{days}}{\text{year}}}{10^6}$ $= 7.47$ $CCR_{int} = r + p \times \sqrt{\frac{r}{mev}} + \frac{1}{2 \times mev}$ $= 1.7843$		

PEAK HOUR TURNING MOVEMENTS

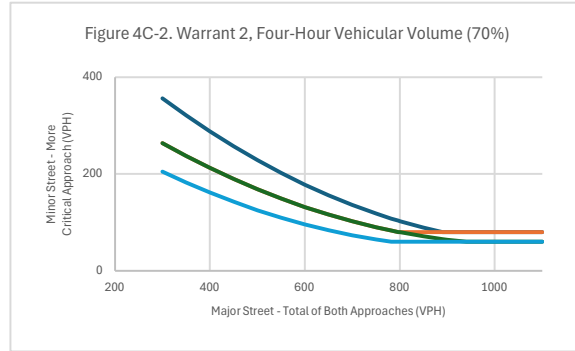
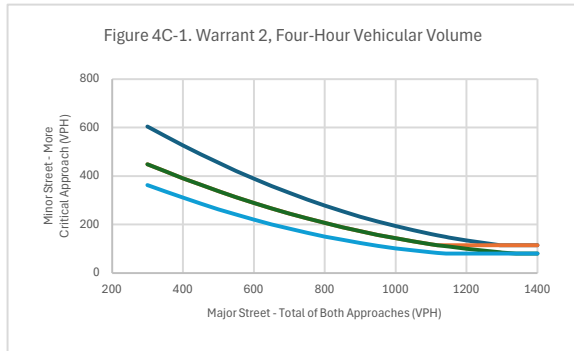
	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
	(West Leg)			(East Leg)			(South Leg)			(North Leg)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM												
10:30 AM	0	0	12	0	0	10	0	113	10	0	115	6
266 veh.		12			10			123			121	
PEDS		10			10			7			1	
BIKES			0			1			1			0
10:30 AM	0	0	2	0	0	3	0	27	1	0	19	0
10:45 AM	0	0	4	0	0	6	0	27	3	0	31	2
11:00 AM	0	0	1	0	0	0	0	23	2	0	34	1
11:15 AM	0	0	5	0	0	1	0	36	4	0	31	3
Max:		5			6			40			35	
Total:		12			10			123			121	
PHF		0.6			0.42			0.77			0.86	
Trucks	0	0	0	0	0	0	0	5	0	0	8	0
Truck %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.4%	0.0%	0.0%	7.0%	0.0%
Adjacent Parking?		Yes			Yes			Yes			Yes	
MID												
12:30 PM	0	0	28	0	0	11	0	155	11	0	141	13
359 veh.		28			11			166			154	
PEDS		24			13			6			2	
BIKES			0			0			0			0
12:30 PM	0	0	8	0	0	2	0	27	3	0	34	8
12:45 PM	0	0	9	0	0	0	0	31	4	0	38	1
1:00 PM	0	0	7	0	0	6	0	50	2	0	27	1
1:15 PM	0	0	4	0	0	3	0	47	2	0	42	3
Max:		9			6			52			45	
Total:		28			11			166			154	
PHF		0.78			0.46			0.8			0.86	
Trucks	0	0	0	0	0	1	0	4	0	0	6	1
Truck %	0.0%	0.0%	0.0%	0.0%	0.0%	9.1%	0.0%	2.6%	0.0%	0.0%	4.3%	7.7%
Adjacent Parking?		Yes			Yes			Yes			Yes	
PM												
5:00 PM	0	0	31	0	0	7	0	143	6	0	151	11
349 veh.		31			7			149			162	
PEDS		26			9			6			5	
BIKES			4			3			1			1
5:00 PM	0	0	7	0	0	1	0	33	0	0	40	2
5:15 PM	0	0	12	0	0	2	0	33	1	0	38	2
5:30 PM	0	0	2	0	0	2	0	33	2	0	40	6
5:45 PM	0	0	10	0	0	2	0	44	3	0	33	1
Max:		12			2			47			46	
Total:		31			7			149			162	
PHF		0.65			0.88			0.79			0.88	
Trucks	0	0	0	0	0	1	0	0	0	0	1	0
Truck %	0.0%	0.0%	0.0%	0.0%	0.0%	14.3%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%
Adjacent Parking?		Yes			Yes			Yes			Yes	

SIGNAL WARRANT ANALYSIS

WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME			
	CONDITION A (100%)	CONDITION B (100%)	CONDITION A/B (80%)*
Condition Satisfied?	NO	NO	NO
Criteria Threshold	8	8	8
Hours met:	0	0	0
Notes:			

*May only be used after adequate trial of other remedial measures.

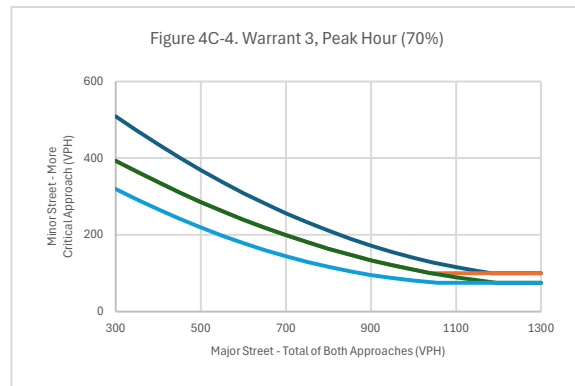
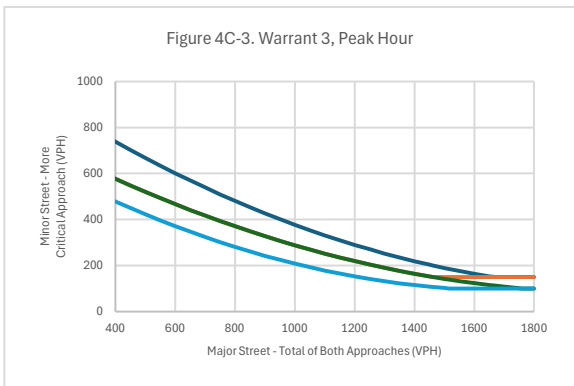
WARRANT 2, FOUR-HOUR VEHICULAR VOLUME		
	Four-Hour Vehicular Volume (100%)	Four-Hour Vehicular Volume (70%)
Warrant Satisfied?	NO	N/A
Criteria Threshold	4	N/A
Hours met:	0	N/A
Notes:		



Legend

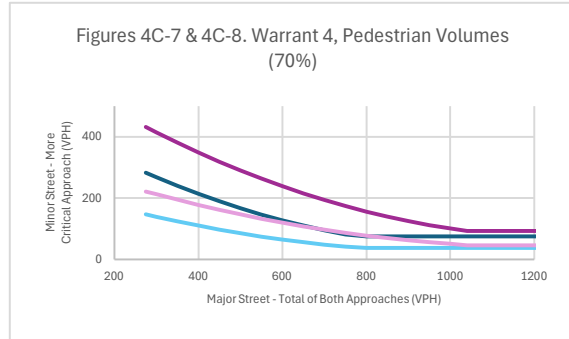
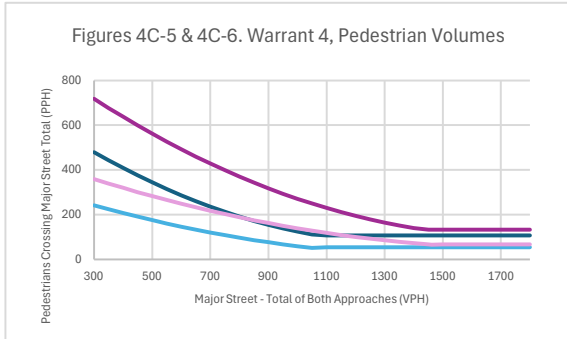
— 2+ Major / 2+ Minor
 — 1 Major / 2+ Minor
 — 2+ Major / 1 Minor
 — 1 Major / 1 Minor

WARRANT 3, PEAK HOUR				
Is the intersection near a facility that attracts or discharges large numbers of vehicles over a short time?				No
Notes:	Warrant 3 is not applicable based on a lack of nearby shift change facilities.			
Criteria A Information		Threshold	Peak Hour	12:30 PM
Is Criteria A applicable?	No		Minor VPH	28
Total stopped-time Delay (hours):			Total VPH	N/A
1. Does delay exceed threshold?	N/A	N/A	Criteria B Information	
2. Does minor exceed VPH threshold?	N/A	N/A	Criteria Satisfied?	NO
3. Does total exceed VPH threshold?	N/A	N/A	Notes (see charts below):	N/A
Criteria Satisfied?	N/A	N/A		
Notes:	Warrant not met			



SIGNAL WARRANT ANALYSIS

WARRANT 4, PEDESTRIAN VOLUME	
Crossing speed < 3.5 feet per second?	No
Major street have a median or refuge island?	No
Nearby signal/stop sign within 300'?	No
Warrant Satisfied?	No
Notes:	



Legend

- Condition A: Four-Hour Volume
- Condition B: Peak Hour Volume
- Condition A: Four-Hour Volume * 3.5fps
- Condition B: Peak Hour Volume * 3.5 Speed

WARRANT 5, SCHOOL CROSSING		
Condition Satisfied?	Warrant not applicable	
Criteria:	School children crossing the major street?	N/A
	Consideration given to alternative measures?	N/A
	300 feet or more to nearest signal or stop sign?	N/A
	If no, will new signal restrict progressive movement?*	N/A
	Minimum of 20 children crossing in peak hour?	N/A
	Engineering study shows inadequate gaps in traffic?*	N/A
*Include supporting documentation		

WARRANT 6, COORDINATED SIGNAL SYSTEM		
Condition Satisfied?	Warrant not met	
Criteria:	One-way or Two-way traffic?	Two-Way
	Would a proposed signal, working with the adjacent signals, enable progressive operation?	Yes
	Would the resultant signal spacing would be greater than 1,000 feet?	No

WARRANT 7, CRASH EXPERIENCE		
Condition Satisfied?	Warrant not met	
Criteria:	One Year: Total number of angle and pedestrian crashes (all severities):	0
	One Year: Total number of fatal-and-injury angle and pedestrian crashes:	0
	Three Year: Total number of angle and pedestrian crashes (all severities):	0
	Three Year: Total number of fatal-and-injury angle and pedestrian crashes:	0
	Adequate trial of alternatives have failed to reduce crash frequency?	Yes
	Crash history exceeds thresholds?	No
	Traffic volumes or pedestrian volumes exceed 80% thresholds?	No

SIGNAL WARRANT ANALYSIS

WARRANT 8, ROADWAY NETWORK		
Condition Satisfied?		Warrant not met
Criteria:	Intersection of two or more major routes?*	No
	Intersection has a total existing, or immediately projected, entering volume of at least 1,000vph entering during the peak hour of a typical weekday AND has 5-year projected traffic volumes that meet one or more of Warrants 1,2, and 3 during an average weekday?	No
	Intersection has total existing, or immediately projected, entering volume of at least 1,000vph for each of any 5 hours of a non-normal business day (Saturday or Sunday)?	No

*Major route defined as:

- Part of the street or highway system that serves as the principal roadway network for through traffic flow
- Rural or suburban highways outside, entering, or transversing a city
- Appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study

WARRANT 9, INTERSECTION NEAR A GRADE CROSSING		
Condition Satisfied?		Warrant not applicable
Criteria:	Adequate trial of alternatives have failed to alleviate safety concerns?	N/A
	Railroad exists on an approach controlled by a STOP or YIELD sign?	N/A
	The center of the nearest track is within 140 feet of stop or yield line?	N/A
	Clear storage distance, D in feet, between near edge of tracks and stop or yield line?	
	One or two approach lanes at railroad crossing?	N/A
	Adjustment Factor for Daily Frequency of Rail Traffic	
	Adjustment Factor for Percentage of High-Occupancy Buses	
	Adjustment Factor for Percentage of Tractor-Trailer Trucks	
	Combined Adjustment Factor	0
	Minor Crossing Approach Volume, vph (with adjustment factor applied):	
	Major Street Volume, vph (total both approaches):	
	Above Figure 4C-9 or 4C-10 threshold?	N/A

ALL-WAY STOP CONTROL WARRANTS				
Condition Satisfied?		Warrants not applicable		
Warrant A	Number of Legs	4	Threshold	Met?
	Number of Crashes in 12 month Period	0	5	No
	Number of Crashes in 36 month Period	0	6	No
	Criteria met?	No		
Warrant B	Does the minor-road approaches have inadequate sight distance?	No		
	Criteria met?	No		
Warrant C	Is the all-way stop an interim measure?	No		
	Criteria met?	No		
Warrant D	Is the 85% speed > 40mph?	No	Hours Met	Threshold
	Major Street 8-hour Volume, vph:	0	8	Met?
	Criteria met?	No		
Warrant E	Are there other factors to justify stop (high left-turns, 2 residential collectors, significant pedestrian or bicycle activity, etc.)	No		
	Criteria met?	No		

BG CONSULTANTS - TRAFFIC ANALYSIS

BASIC INFORMATION	
Project No.	25-1160
Project Description	Emporia Teap Study
Intersection Location	Commercial St & 8th Ave
Analysis Date	8/30/2025
Additional Notes	
Exist. signal?	Yes
<10,000 people?	No
No. of approaches	4

MAJOR STREET INFORMATION	
Street Name	Commercial Street
Direction	NB SB
Number of Thru Lanes	1
Speed Limit	20
NB Adjacent Parking?	Yes
SB Adjacent Parking?	Yes

MINOR STREET INFORMATION	
Street Name	8th Avenue
Direction	EB WB
Number of Thru Lanes	1
Speed Limit	20
EB Adjacent Parking?	Yes
WB Adjacent Parking?	Yes
EB Rt Turn to Exclude	0%
WB Rt Turn to Exclude	0%
Stop Sign?	No

TRAFFIC WARRANTS		
	Appl?	Result
Warrant 1, 8-Hour	Yes	Warrant not met
Warrant 2, 4-hour	Yes	Warrant not met
Warrant 3, Peak Hour	No	Warrant 3 not appl.
Warrant 4, Pedestrian	Yes	Warrant not met
Warrant 5, School	No	Warrant 5 not appl.
Warrant 6, Coord. Sig.	Yes	Warrant not met
Warrant 7, Crash	Yes	Warrant not met
Warrant 8, Road Net.	Yes	Warrant not met
Warrant 9, RR Cross.	No	Warrant 9 not appl.
All-Way Stop Warrants	Yes	Warrants not met

CRASH SUMMARY				
	PDO	Injury	Fatal	Total
Angle	0	0	0	0
Rear-end	1	0	0	1
Ped/Bike	0	0	0	0
Other	1	0	0	1
TOTAL	2	0	0	2
CR _{int} =	0.22			
C.I. =	0.13			

TURN LANE INFORMATION				
EB/WB Analysis		2-Lane		
NB/SB Analysis		2-Lane		
	Exist?	Len. (ft.)	Taper Analysis	Turn Lane Analysis
NB Rt	No		Criteria N/A	Criteria N/A
NB Lt	Yes	100	---	Criteria not met
SB Rt	No		Criteria N/A	Criteria N/A
SB Lt	Yes	100	---	Criteria not met
EB Rt	No		Criteria N/A	Criteria N/A
EB Lt	No		---	Criteria not met
WB Rt	No		Criteria N/A	Criteria N/A
WB Lt	No		---	Criteria not met
Notes:	The analysis presented applies KDOT's Access Management Criteria for highways to assess whether speed and traffic volumes meet the thresholds to justify a turn lane. For locations with posted speeds below 40 mph, the 40-mph criteria were applied. It is important to note that these criteria are intended for highway conditions and are used here only as supplemental information. The actual determination of whether a turn lane is warranted should not rely on this analysis alone but should also consider engineering judgment and other contributing factors, such as site geometry, intersection capacity, level of service (LOS), and crash history.			

PEAK HOUR SUMMARY			
AM Peak	10:30 AM	to	11:30 AM
	322 veh.		
Mid Day Peak	1:00 PM	to	2:00 PM
	426 veh.		
PM Peak	3:15 PM	to	4:15 PM
	434 veh.		
Peak Hour	3:15 PM	to	4:15 PM
	434 veh.		
24-hour Total	5,045 veh.		

CRITICAL CRASH RATE		
N =	5	Years
r =	1	c/mev
$tmev = \frac{AADT \times N \times 365 \frac{days}{year}}{10^6}$ $= 9.21$ $CCR_{int} = r + p \times \sqrt{\frac{r}{mev}} + \frac{1}{2 \times mev}$ $= 1.70$		

PEAK HOUR TURNING MOVEMENTS

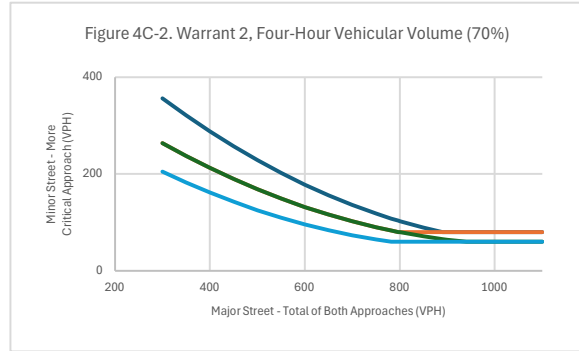
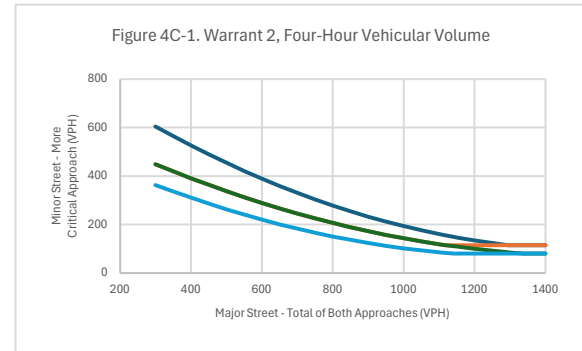
	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
	(West Leg)			(East Leg)			(South Leg)			(North Leg)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM												
10:30 AM	1	25	9	3	14	11	19	101	3	16	104	16
322 veh.		35			28			123			136	
PEDS		7			10			1			3	
BIKES			0			1			0			1
10:30 AM	0	5	0	1	3	3	5	24	0	2	17	5
10:45 AM	0	5	3	0	2	3	5	26	1	5	30	5
11:00 AM	1	7	3	2	5	3	5	18	2	6	28	4
11:15 AM	0	8	3	0	4	2	4	33	0	3	29	2
Max:		11			10			37			40	
Total:		35			28			123			136	
PHF		0.8			0.7			0.83			0.85	
Trucks	0	1	1	0	1	0	1	5	0	0	5	0
Truck %	0.0%	4.0%	11.1%	0.0%	7.1%	0.0%	5.3%	5.0%	0.0%	0.0%	4.8%	0.0%
Adjacent Parking?		Yes			Yes			Yes			Yes	
MID												
1:00 PM	2	39	16	2	16	9	25	133	8	23	135	18
426 veh.		57			27			166			176	
PEDS		19			5			4			2	
BIKES			1			1			1			0
1:00 PM	0	9	3	0	4	1	10	37	1	5	29	1
1:15 PM	1	8	3	0	4	0	5	41	2	5	38	7
1:30 PM	0	8	6	1	2	4	7	20	2	6	33	4
1:45 PM	1	14	4	1	6	4	3	35	3	7	35	6
Max:		19			11			48			50	
Total:		57			27			166			176	
PHF		0.75			0.61			0.86			0.88	
Trucks	0	1	0	1	0	0	2	5	1	1	6	0
Truck %	0.0%	2.6%	0.0%	50.0%	0.0%	0.0%	8.0%	3.8%	12.5%	4.3%	4.4%	0.0%
Adjacent Parking?		Yes			Yes			Yes			Yes	
PM												
3:15 PM	2	44	11	6	29	9	22	119	6	20	139	27
434 veh.		57			44			147			186	
PEDS		25			10			7			0	
BIKES			2			2			1			0
3:15 PM	0	11	4	2	4	4	2	36	1	2	38	5
3:30 PM	0	11	2	1	5	2	9	34	3	12	36	6
3:45 PM	0	10	4	2	11	2	3	24	0	2	36	8
4:00 PM	2	12	1	1	9	1	8	25	2	4	29	8
Max:		15			15			46			54	
Total:		57			44			147			186	
PHF		0.95			0.73			0.8			0.86	
Trucks	0	4	0	0	0	0	0	4	0	1	3	0
Truck %	0.0%	9.1%	0.0%	0.0%	0.0%	0.0%	0.0%	3.4%	0.0%	5.0%	2.2%	0.0%
Adjacent Parking?		Yes			Yes			Yes			Yes	

SIGNAL WARRANT ANALYSIS

WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME			
	CONDITION A (100%)	CONDITION B (100%)	CONDITION A/B (80%)*
Condition Satisfied?	NO	NO	NO
Criteria Threshold	8	8	8
Hours met:	0	0	0
Notes:			

*May only be used after adequate trial of other remedial measures.

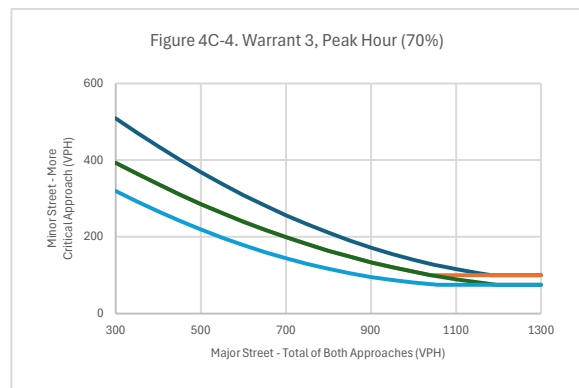
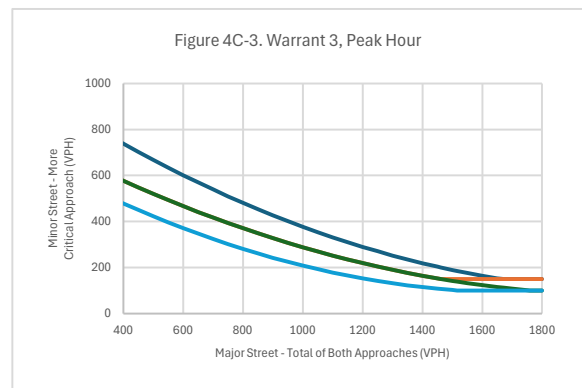
WARRANT 2, FOUR-HOUR VEHICULAR VOLUME		
	Four-Hour Vehicular Volume (100%)	Four-Hour Vehicular Volume (70%)
Warrant Satisfied?	NO	N/A
Criteria Threshold	4	N/A
Hours met:	0	N/A
Notes:		



Legend

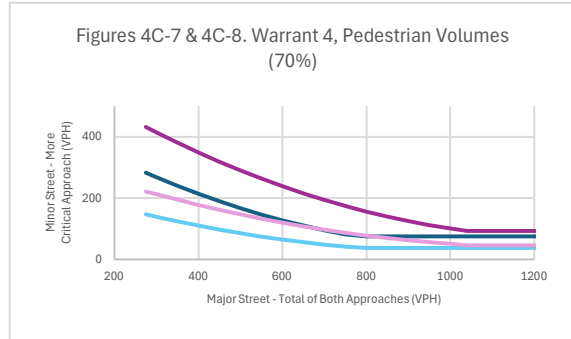
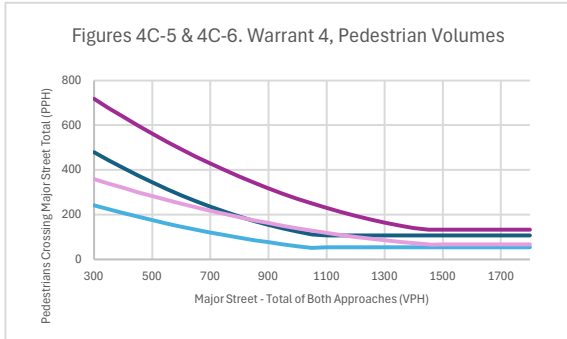
— 2+ Major / 2+ Minor
 — 1 Major / 2+ Minor
 — 2+ Major / 1 Minor
 — 1 Major / 1 Minor

WARRANT 3, PEAK HOUR				
Is the intersection near a facility that attracts or discharges large numbers of vehicles over a short time?				No
Notes:	Warrant 3 is not applicable based on a lack of nearby shift change facilities.			
Criteria A Information		Threshold	Peak Hour	3:15 PM
Is Criteria A applicable?	No		Minor VPH	57
Total stopped-time Delay (hours):			Total VPH	N/A
1. Does delay exceed threshold?	N/A	N/A	Criteria B Information	
2. Does minor exceed VPH threshold?	N/A	N/A	Criteria Satisfied?	NO
3. Does total exceed VPH threshold?	N/A	N/A	Notes (see charts below):	N/A
Criteria Satisfied?	N/A	N/A		
Notes:	Warrant not met			



SIGNAL WARRANT ANALYSIS

WARRANT 4, PEDESTRIAN VOLUME	
Crossing speed < 3.5 feet per second?	No
Major street have a median or refuge island?	No
Nearby signal/stop sign within 300'?	No
Warrant Satisfied?	No
Notes:	



Legend

- Condition A: Four-Hour Volume
- Condition B: Peak Hour Volume
- Condition A: Four-Hour Volume * 3.5fps
- Condition B: Peak Hour Volume * 3.5 Speed

WARRANT 5, SCHOOL CROSSING		
Condition Satisfied?	Warrant not applicable	
Criteria:	School children crossing the major street?	N/A
	Consideration given to alternative measures?	N/A
	300 feet or more to nearest signal or stop sign?	N/A
	If no, will new signal restrict progressive movement?*	N/A
	Minimum of 20 children crossing in peak hour?	N/A
	Engineering study shows inadequate gaps in traffic?*	N/A
*Include supporting documentation		

WARRANT 6, COORDINATED SIGNAL SYSTEM		
Condition Satisfied?	Warrant not met	
Criteria:	One-way or Two-way traffic?	Two-Way
	Would a proposed signal, working with the adjacent signals, enable progressive operation?	Yes
	Would the resultant signal spacing would be greater than 1,000 feet?	No

WARRANT 7, CRASH EXPERIENCE		
Condition Satisfied?	Warrant not met	
Criteria:	One Year: Total number of angle and pedestrian crashes (all severities):	0
	One Year: Total number of fatal-and-injury angle and pedestrian crashes:	0
	Three Year: Total number of angle and pedestrian crashes (all severities):	0
	Three Year: Total number of fatal-and-injury angle and pedestrian crashes:	0
	Adequate trial of alternatives have failed to reduce crash frequency?	Yes
	Crash history exceeds thresholds?	No
	Traffic volumes or pedestrian volumes exceed 80% thresholds?	No

SIGNAL WARRANT ANALYSIS

WARRANT 8, ROADWAY NETWORK		
Condition Satisfied?		Warrant not met
Criteria:	Intersection of two or more major routes?*	No
	Intersection has a total existing, or immediately projected, entering volume of at least 1,000vph entering during the peak hour of a typical weekday AND has 5-year projected traffic volumes that meet one or more of Warrants 1,2, and 3 during an average weekday?	No
	Intersection has total existing, or immediately projected, entering volume of at least 1,000vph for each of any 5 hours of a non-normal business day (Saturday or Sunday)?	No

*Major route defined as:

- Part of the street or highway system that serves as the principal roadway network for through traffic flow
- Rural or suburban highways outside, entering, or transverseing a city
- Appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study

WARRANT 9, INTERSECTION NEAR A GRADE CROSSING		
Condition Satisfied?		Warrant not applicable
Criteria:	Adequate trial of alternatives have failed to alleviate safety concerns?	N/A
	Railroad exists on an approach controlled by a STOP or YIELD sign?	N/A
	The center of the nearest track is within 140 feet of stop or yield line?	N/A
	Clear storage distance, D in feet, between near edge of tracks and stop or yield line?	
	One or two approach lanes at railroad crossing?	N/A
	Adjustment Factor for Daily Frequency of Rail Traffic	
	Adjustment Factor for Percentage of High-Occupancy Busses	
	Adjustment Factor for Percentage of Tractor-Trailer Trucks	
	Combined Adjustment Factor	0
	Minor Crossing Approach Volume, vph (with adjustment factor applied):	
	Major Street Volume, vph (total both approaches):	
	Above Figure 4C-9 or 4C-10 threshold?	N/A

ALL-WAY STOP CONTROL WARRANTS				
Condition Satisfied?		Warrants not met		
Warrant A	Number of Legs	4	Threshold	Met?
	Number of Crashes in 12 month Period	0	5	No
	Number of Crashes in 36 month Period	0	6	No
	Criteria met?	No		
Warrant B	Does the minor-road approaches have inadequate sight distance?	No		
	Criteria met?	No		
Warrant C	Is the all-way stop an interim measure?	No		
	Criteria met?	No		
Warrant D	Is the 85% speed > 40mph?	No	Hours Met	Threshold
	Major Street 8-hour Volume, vph:	0	8	Met?
	Criteria met?	No		
Warrant E	Are there other factors to justify stop (high left-turns, 2 residential collectors, significant pedestrian or bicycle activity, etc.)	No		
	Criteria met?	No		

BG CONSULTANTS - TRAFFIC ANALYSIS

BASIC INFORMATION	
Project No.	25-1160
Project Description	Emporia Teap Study
Intersection Location	Commercial St & 12th Ave
Analysis Date	8/30/2025
Additional Notes	
Exist. signal?	Yes
<10,000 people?	No
No. of approaches	4

MAJOR STREET INFORMATION	
Street Name	12th Avenue
Direction	EB WB
Number of Thru Lanes	2
Speed Limit	20
EB Adjacent Parking?	No
WB Adjacent Parking?	No

MINOR STREET INFORMATION	
Street Name	Commercial Street
Direction	NB SB
Number of Thru Lanes	1
Speed Limit	30
NB Adjacent Parking?	No
SB Adjacent Parking?	No
NB Rt Turn to Exclude	100%
SB Rt Turn to Exclude	0%
Stop Sign?	No

TRAFFIC WARRANTS		
	Appl?	Result
Warrant 1, 8-Hour	Yes	Warrant not met
Warrant 2, 4-hour	Yes	Warrant not met
Warrant 3, Peak Hour	No	Warrant 3 not appl.
Warrant 4, Pedestrian	Yes	Warrant not met
Warrant 5, School	No	Warrant 5 not appl.
Warrant 6, Coord. Sig.	Yes	Warrant not met
Warrant 7, Crash	Yes	Warrant not met
Warrant 8, Road Net.	Yes	Warrant 8 was met
Warrant 9, RR Cross.	No	Warrant 9 not appl.
All-Way Stop Warrants	No	Warrants not appl.

CRASH SUMMARY				
	PDO	Injury	Fatal	Total
Angle	2	0	0	2
Rear-end	0	0	0	0
Ped/Bike	0	0	0	0
Other	4	0	0	4
TOTAL	6	0	0	6
CR _{int} =	0.28			
C.I. =	0.19			

TURN LANE INFORMATION				
EB/WB Analysis		2-Lane		
NB/SB Analysis		2-Lane		
	Exist?	Len. (ft.)	Taper Analysis	Turn Lane Analysis
NB Rt	Yes	25	Criteria N/A	Criteria N/A
NB Lt	Yes	100	---	Criteria met
SB Rt	No		Criteria N/A	Criteria N/A
SB Lt	No		---	Criteria not met
EB Rt	No		Criteria met	Criteria not met
EB Lt	Yes	75	---	Criteria met
WB Rt	No		Criteria met	Criteria not met
WB Lt	Yes	100	---	Criteria met
Notes:	The analysis presented applies KDOT's Access Management Criteria for highways to assess whether speed and traffic volumes meet the thresholds to justify a turn lane. For locations with posted speeds below 40 mph, the 40-mph criteria were applied. It is important to note that these criteria are intended for highway conditions and are used here only as supplemental information. The actual determination of whether a turn lane is warranted should not rely on this analysis alone but should also consider engineering judgment and other contributing factors, such as site geometry, intersection capacity, level of service (LOS), and crash history.			

PEAK HOUR SUMMARY			
AM Peak	7:30 AM	to	8:30 AM
	720 veh.		
Mid Day Peak	12:30 PM	to	1:30 PM
	876 veh.		
PM Peak	4:30 PM	to	5:30 PM
	1,073 veh.		
Peak Hour	4:30 PM	to	5:30 PM
	1,073 veh.		
24-hour Total	11,756 veh.		

CRITICAL CRASH RATE		
N =	5	Years
r =	1	c/mev
$tmev = \frac{AADT \times N \times 365 \frac{\text{days}}{\text{year}}}{10^6}$ $= 21.45$ $CCR_{int} = r + p \times \sqrt{\frac{r}{mev}} + \frac{1}{2 \times mev}$ $= 1.45$		

PEAK HOUR TURNING MOVEMENTS

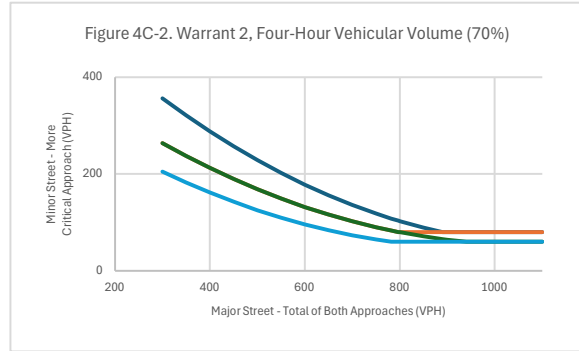
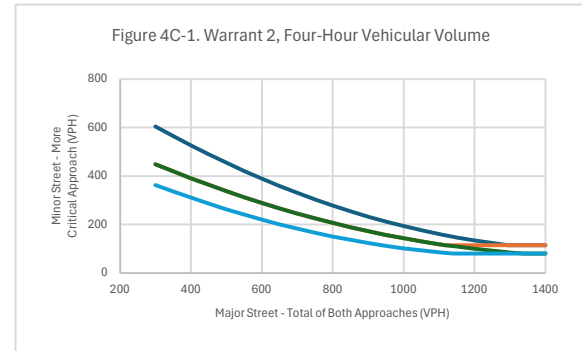
	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
	(West Leg)			(East Leg)			(South Leg)			(North Leg)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM												
7:30 AM	5	180	64	30	358	4	55	1	14	4	1	4
720 veh.		249			392			70			9	
PEDS		1			1			1			1	
BIKES			0			0			0			0
7:30 AM	1	43	14	7	123	2	14	0	2	1	0	2
7:45 AM	2	54	23	13	111	0	19	1	6	0	0	2
8:00 AM	1	48	14	5	66	2	15	0	3	1	0	0
8:15 AM	1	35	13	5	58	0	7	0	3	2	1	0
Max:		79			132			26			3	
Total:		249			392			70			9	
PHF		0.79			0.74			0.67			0.75	
Trucks	1	9	1	0	7	0	2	0	0	2	0	0
Truck %	20.0%	5.0%	1.6%	0.0%	2.0%	0.0%	3.6%	0.0%	0.0%	50.0%	0.0%	0.0%
Adjacent Parking?		No			No			No			No	
MID												
12:30 PM	8	235	91	53	313	6	99	3	39	9	5	15
876 veh.		334			372			141			29	
PEDS		14			11			2			4	
BIKES			0			0			1			0
12:30 PM	2	44	22	17	72	0	24	0	9	1	1	3
12:45 PM	1	66	26	15	76	2	19	2	11	3	0	5
1:00 PM	4	63	18	9	91	2	32	1	5	4	2	4
1:15 PM	1	62	25	12	74	2	24	0	14	1	2	3
Max:		93			102			38			10	
Total:		334			372			141			29	
PHF		0.9			0.91			0.93			0.73	
Trucks	0	6	3	0	8	0	5	0	1	0	0	0
Truck %	0.0%	2.6%	3.3%	0.0%	2.6%	0.0%	5.1%	0.0%	2.6%	0.0%	0.0%	0.0%
Adjacent Parking?		No			No			No			No	
PM												
4:30 PM	4	319	101	63	377	5	92	5	54	20	8	25
1,073 veh.		424			445			151			53	
PEDS		11			11			6			7	
BIKES			3			0			2			1
4:30 PM	1	69	27	19	75	1	24	0	13	4	0	2
4:45 PM	2	74	30	22	91	2	19	1	12	4	1	7
5:00 PM	1	91	17	6	119	2	23	3	13	11	7	10
5:15 PM	0	85	27	16	92	0	26	1	16	1	0	6
Max:		112			127			43			28	
Total:		424			445			151			53	
PHF		0.95			0.88			0.88			0.47	
Trucks	1	3	0	1	1	0	1	0	0	1	0	0
Truck %	25.0%	0.9%	0.0%	1.6%	0.3%	0.0%	1.1%	0.0%	0.0%	5.0%	0.0%	0.0%
Adjacent Parking?		No			No			No			No	

SIGNAL WARRANT ANALYSIS

WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME			
	CONDITION A (100%)	CONDITION B (100%)	CONDITION A/B (80%)*
Condition Satisfied?	NO	NO	NO
Criteria Threshold	8	8	8
Hours met:	0	0	0
Notes:			

*May only be used after adequate trial of other remedial measures.

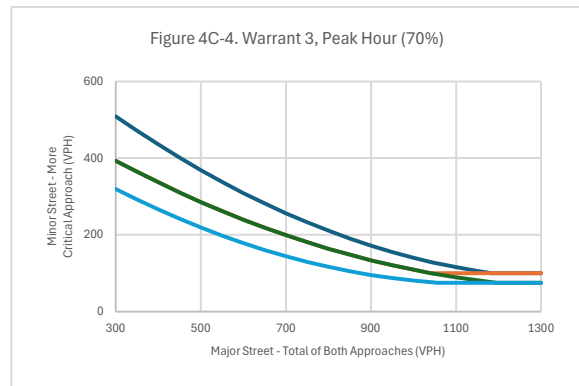
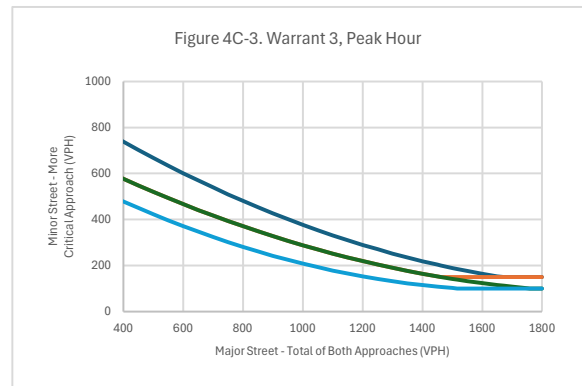
WARRANT 2, FOUR-HOUR VEHICULAR VOLUME		
	Four-Hour Vehicular Volume (100%)	Four-Hour Vehicular Volume (70%)
Warrant Satisfied?	NO	N/A
Criteria Threshold	4	N/A
Hours met:	0	N/A
Notes:		



Legend

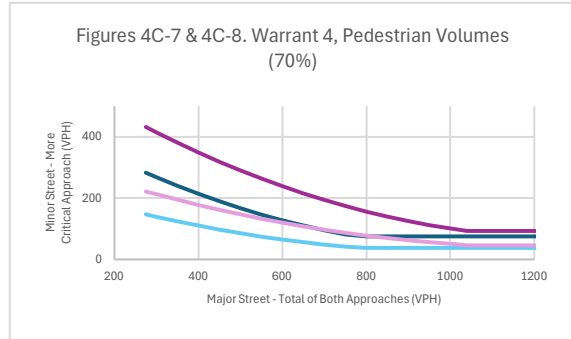
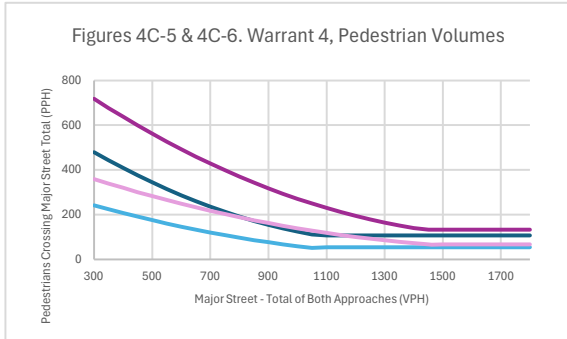
— 2+ Major / 2+ Minor
 — 1 Major / 2+ Minor
 — 2+ Major / 1 Minor
 — 1 Major / 1 Minor

WARRANT 3, PEAK HOUR				
Is the intersection near a facility that attracts or discharges large numbers of vehicles over a short time?				No
Notes:	Warrant 3 is not applicable based on a lack of nearby shift change facilities.			
Criteria A Information		Threshold	Peak Hour	4:30 PM
Is Criteria A applicable?	No		Minor VPH	97
Total stopped-time Delay (hours):			Total VPH	N/A
1. Does delay exceed threshold?	N/A	N/A	Criteria B Information	
2. Does minor exceed VPH threshold?	N/A	N/A	Criteria Satisfied?	NO
3. Does total exceed VPH threshold?	N/A	N/A	Notes (see charts below):	N/A
Criteria Satisfied?	N/A	N/A		
Notes:	Warrant not met			



SIGNAL WARRANT ANALYSIS

WARRANT 4, PEDESTRIAN VOLUME	
Crossing speed < 3.5 feet per second?	No
Major street have a median or refuge island?	No
Nearby signal/stop sign within 300'?	No
Warrant Satisfied?	No
Notes:	



Legend

- Condition A: Four-Hour Volume
- Condition B: Peak Hour Volume
- Condition A: Four-Hour Volume * 3.5fps
- Condition B: Peak Hour Volume * 3.5 Speed

WARRANT 5, SCHOOL CROSSING		
Condition Satisfied?	Warrant not applicable	
Criteria:	School children crossing the major street?	N/A
	Consideration given to alternative measures?	N/A
	300 feet or more to nearest signal or stop sign?	N/A
	If no, will new signal restrict progressive movement?*	N/A
	Minimum of 20 children crossing in peak hour?	N/A
	Engineering study shows inadequate gaps in traffic?*	N/A
*Include supporting documentation		

WARRANT 6, COORDINATED SIGNAL SYSTEM		
Condition Satisfied?	Warrant not met	
Criteria:	One-way or Two-way traffic?	Two-Way
	Would a proposed signal, working with the adjacent signals, enable progressive operation?	Yes
	Would the resultant signal spacing would be greater than 1,000 feet?	No

WARRANT 7, CRASH EXPERIENCE		
Condition Satisfied?	Warrant not met	
Criteria:	One Year: Total number of angle and pedestrian crashes (all severities):	1
	One Year: Total number of fatal-and-injury angle and pedestrian crashes:	0
	Three Year: Total number of angle and pedestrian crashes (all severities):	1
	Three Year: Total number of fatal-and-injury angle and pedestrian crashes:	0
	Adequate trial of alternatives have failed to reduce crash frequency?	Yes
	Crash history exceeds thresholds?	No
	Traffic volumes or pedestrian volumes exceed 80% thresholds?	No

SIGNAL WARRANT ANALYSIS

WARRANT 8, ROADWAY NETWORK		
Condition Satisfied?		Warrant 8 was met
Criteria:	Intersection of two or more major routes?*	Yes
	Intersection has a total existing, or immediately projected, entering volume of at least 1,000vph entering during the peak hour of a typical weekday AND has 5-year projected traffic volumes that meet one or more of Warrants 1,2, and 3 during an average weekday?	Yes
	Intersection has total existing, or immediately projected, entering volume of at least 1,000vph for each of any 5 hours of a non-normal business day (Saturday or Sunday)?	No

*Major route defined as:

- Part of the street or highway system that serves as the principal roadway network for through traffic flow
- Rural or suburban highways outside, entering, or transversing a city
- Appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study

WARRANT 9, INTERSECTION NEAR A GRADE CROSSING		
Condition Satisfied?		Warrant not applicable
Criteria:	Adequate trial of alternatives have failed to alleviate safety concerns?	N/A
	Railroad exists on an approach controlled by a STOP or YIELD sign?	N/A
	The center of the nearest track is within 140 feet of stop or yield line?	N/A
	Clear storage distance, D in feet, between near edge of tracks and stop or yield line?	
	One or two approach lanes at railroad crossing?	N/A
	Adjustment Factor for Daily Frequency of Rail Traffic	
	Adjustment Factor for Percentage of High-Occupancy Busses	
	Adjustment Factor for Percentage of Tractor-Trailer Trucks	
	Combined Adjustment Factor	0
	Minor Crossing Approach Volume, vph (with adjustment factor applied):	
	Major Street Volume, vph (total both approaches):	
Above Figure 4C-9 or 4C-10 threshold?	N/A	

ALL-WAY STOP CONTROL WARRANTS				
Condition Satisfied?		Warrants not applicable		
Warrant A	Number of Legs	4	Threshold	Met?
	Number of Crashes in 12 month Period	1	5	No
	Number of Crashes in 36 month Period	1	6	No
	Criteria met?	No		
Warrant B	Does the minor-road approaches have inadequate sight distance?	No		
	Criteria met?	No		
Warrant C	Is the all-way stop an interim measure?	No		
	Criteria met?	No		
Warrant D	Is the 85% speed > 40mph?	No	Hours Met	Threshold
	Major Street 8-hour Volume, vph:	0	8	Met?
	Criteria met?	No		
Warrant E	Are there other factors to justify stop (high left-turns, 2 residential collectors, significant pedestrian or bicycle activity, etc.)	No		
	Criteria met?	No		

BG CONSULTANTS - TRAFFIC ANALYSIS

BASIC INFORMATION	
Project No.	25-1160
Project Description	Emporia Teap Study
Intersection Location	6th Ave & Rural St
Analysis Date	8/30/2025
Additional Notes	
Exist. signal?	Yes
<10,000 people?	No
No. of approaches	4

MAJOR STREET INFORMATION	
Street Name	6th Avenue
Direction	EB WB
Number of Thru Lanes	2
Speed Limit	30
EB Adjacent Parking?	No
WB Adjacent Parking?	No

MINOR STREET INFORMATION	
Street Name	Rural Street
Direction	NB SB
Number of Thru Lanes	1
Speed Limit	30
NB Adjacent Parking?	Yes
SB Adjacent Parking?	Yes
NB Rt Turn to Exclude	0%
SB Rt Turn to Exclude	0%
Stop Sign?	No

TRAFFIC WARRANTS		
	Appl?	Result
Warrant 1, 8-Hour	Yes	Warrant not met
Warrant 2, 4-hour	Yes	Warrant not met
Warrant 3, Peak Hour	No	Warrant 3 not appl.
Warrant 4, Pedestrian	Yes	Warrant not met
Warrant 5, School	No	Warrant 5 not appl.
Warrant 6, Coord. Sig.	Yes	Warrant 6 was met
Warrant 7, Crash	Yes	Warrant 7 was met
Warrant 8, Road Net.	Yes	Warrant not met
Warrant 9, RR Cross.	No	Warrant 9 not appl.
All-Way Stop Warrants	No	Warrants not appl.

CRASH SUMMARY				
	PDO	Injury	Fatal	Total
Angle	7	5	0	12
Rear-end	5	0	0	5
Ped/Bike	1	2	0	3
Other	3	1	0	4
TOTAL	16	8	0	24
CR _{int} =	0.77			
C.I. =	0.56			

TURN LANE INFORMATION				
EB/WB Analysis		2-Lane		
NB/SB Analysis		2-Lane		
	Exist?	Len. (ft.)	Taper Analysis	Turn Lane Analysis
NB Rt	No		Criteria N/A	Criteria N/A
NB Lt	No		---	Criteria not met
SB Rt	No		Criteria N/A	Criteria N/A
SB Lt	No		---	Criteria met
EB Rt	No		Criteria met	Criteria not met
EB Lt	Yes	100	---	Criteria met
WB Rt	No		Criteria met	Criteria not met
WB Lt	Yes	100	---	Criteria met
Notes:	The analysis presented applies KDOT's Access Management Criteria for highways to assess whether speed and traffic volumes meet the thresholds to justify a turn lane. For locations with posted speeds below 40 mph, the 40-mph criteria were applied. It is important to note that these criteria are intended for highway conditions and are used here only as supplemental information. The actual determination of whether a turn lane is warranted should not rely on this analysis alone but should also consider engineering judgment and other contributing factors, such as site geometry, intersection capacity, level of service (LOS), and crash history.			

PEAK HOUR SUMMARY			
AM Peak	10:30 AM	to	11:30 AM
	991 veh.		
Mid Day Peak	11:45 AM	to	12:45 PM
	1,288 veh.		
PM Peak	4:45 PM	to	5:45 PM
	1,483 veh.		
Peak Hour	4:45 PM	to	5:45 PM
	1,483 veh.		
24-hour Total	17,157 veh.		

CRITICAL CRASH RATE		
N =	5	Years
r =	1	c/mev
$tmev = \frac{AADT \times N \times 365 \frac{\text{days}}{\text{year}}}{10^6}$ $= 31.31$ $CCR_{int} = r + p \times \sqrt{\frac{r}{mev}} + \frac{1}{2 \times mev}$ $= 1.37$		

PEAK HOUR TURNING MOVEMENTS

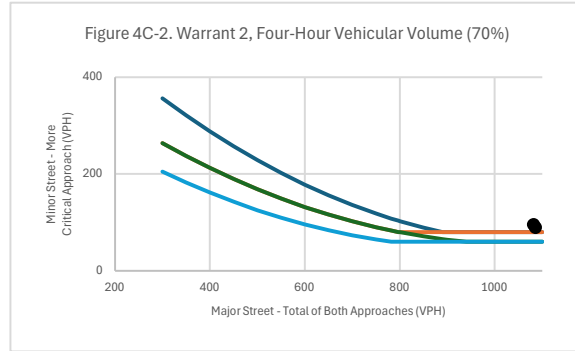
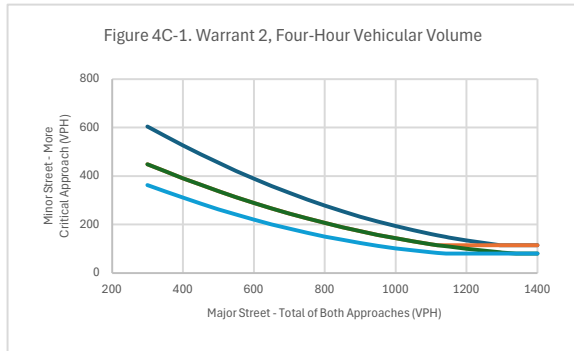
	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
	(West Leg)			(East Leg)			(South Leg)			(North Leg)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM												
10:30 AM	6	384	14	4	439	18	25	25	7	25	13	31
991 veh.		404			461			57			69	
PEDS		1			0			2			3	
BIKES			0			0			0			3
10:30 AM	1	80	1	2	88	4	5	6	1	5	0	9
10:45 AM	0	107	0	0	121	5	3	8	1	10	5	6
11:00 AM	4	89	3	1	113	3	8	3	3	3	4	11
11:15 AM	1	108	10	1	117	6	9	8	2	7	4	5
Max:		119			126			19			21	
Total:		404			461			57			69	
PHF		0.85			0.91			0.75			0.82	
Trucks	0	20	0	1	22	0	1	2	1	2	1	2
Truck %	0.0%	5.2%	0.0%	25.0%	5.0%	0.0%	4.0%	8.0%	14.3%	8.0%	7.7%	6.5%
Adjacent Parking?		No			No			Yes			Yes	
MID												
11:45 AM	15	535	11	5	569	18	30	16	6	32	18	33
1,288 veh.		561			592			52			83	
PEDS		1			0			5			2	
BIKES			0			0			1			1
11:45 AM	3	141	2	0	155	4	8	5	1	9	7	7
12:00 PM	3	130	4	3	157	7	7	0	1	7	2	9
12:15 PM	4	129	3	1	137	6	5	5	1	11	4	6
12:30 PM	5	135	2	1	120	1	10	6	3	5	5	11
Max:		146			167			19			23	
Total:		561			592			52			83	
PHF		0.96			0.89			0.68			0.9	
Trucks	0	33	0	0	24	0	0	1	2	1	0	1
Truck %	0.0%	6.2%	0.0%	0.0%	4.2%	0.0%	0.0%	6.3%	33.3%	3.1%	0.0%	3.0%
Adjacent Parking?		No			No			Yes			Yes	
PM												
4:45 PM	20	580	18	5	649	25	43	19	5	46	27	46
1,483 veh.		618			679			67			119	
PEDS		1			0			2			4	
BIKES			0			3			0			1
4:45 PM	3	133	4	1	131	9	9	6	2	17	6	16
5:00 PM	6	166	8	1	192	8	13	6	0	9	8	10
5:15 PM	6	139	2	1	174	4	9	3	1	14	7	13
5:30 PM	5	142	4	2	152	4	12	4	2	6	6	7
Max:		180			201			19			39	
Total:		618			679			67			119	
PHF		0.86			0.84			0.88			0.76	
Trucks	0	11	0	0	14	0	1	0	1	0	1	2
Truck %	0.0%	1.9%	0.0%	0.0%	2.2%	0.0%	2.3%	0.0%	20.0%	0.0%	3.7%	4.3%
Adjacent Parking?		No			No			Yes			Yes	

SIGNAL WARRANT ANALYSIS

WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME			
	CONDITION A (100%)	CONDITION B (100%)	CONDITION A/B (80%)*
Condition Satisfied?	NO	NO	NO
Criteria Threshold	8	8	8
Hours met:	0	7	0
Notes:			

*May only be used after adequate trial of other remedial measures.

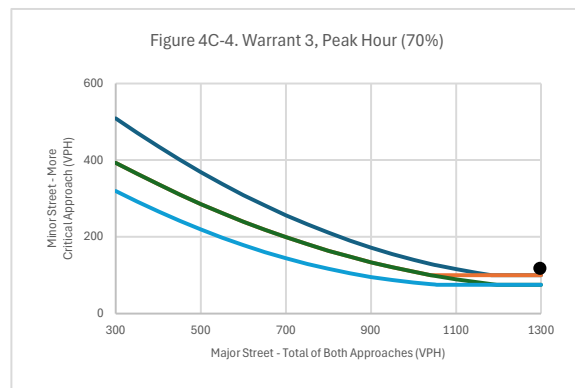
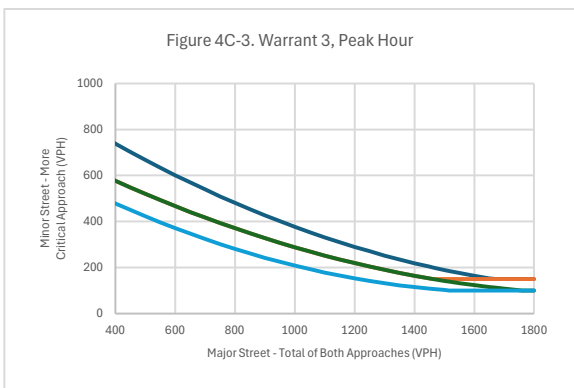
WARRANT 2, FOUR-HOUR VEHICULAR VOLUME		
	Four-Hour Vehicular Volume (100%)	Four-Hour Vehicular Volume (70%)
Warrant Satisfied?	NO	N/A
Criteria Threshold	4	N/A
Hours met:	2	N/A
Notes:		



Legend

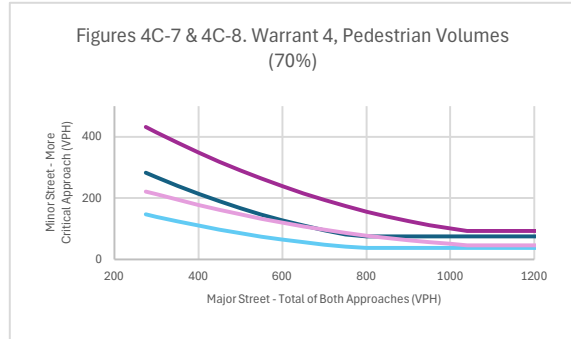
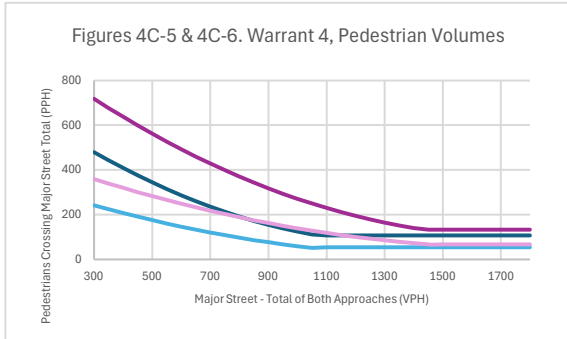
— 2+ Major / 2+ Minor
 — 1 Major / 2+ Minor
 — 2+ Major / 1 Minor
 — 1 Major / 1 Minor

WARRANT 3, PEAK HOUR				
Is the intersection near a facility that attracts or discharges large numbers of vehicles over a short time?				No
Notes:	Warrant 3 is not applicable based on a lack of nearby shift change facilities.			
Criteria A Information		Threshold	Peak Hour	4:45 PM
Is Criteria A applicable?	No		Minor VPH	119
Total stopped-time Delay (hours):			Total VPH	N/A
1. Does delay exceed threshold?		N/A	Criteria B Information	
2. Does minor exceed VPH threshold?		N/A	Criteria Satisfied?	NO
3. Does total exceed VPH threshold?		N/A	Notes (see charts below):	N/A
Criteria Satisfied?	N/A	N/A		
Notes:	Warrant not met			



SIGNAL WARRANT ANALYSIS

WARRANT 4, PEDESTRIAN VOLUME	
Crossing speed < 3.5 feet per second?	No
Major street have a median or refuge island?	No
Nearby signal/stop sign within 300'?	No
Warrant Satisfied?	No
Notes:	



Legend

- Condition A: Four-Hour Volume
- Condition B: Peak Hour Volume
- Condition A: Four-Hour Volume * 3.5fps
- Condition B: Peak Hour Volume * 3.5 Speed

WARRANT 5, SCHOOL CROSSING		
Condition Satisfied?	Warrant not applicable	
Criteria:	School children crossing the major street?	N/A
	Consideration given to alternative measures?	N/A
	300 feet or more to nearest signal or stop sign?	N/A
	If no, will new signal restrict progressive movement?*	N/A
	Minimum of 20 children crossing in peak hour?	N/A
	Engineering study shows inadequate gaps in traffic?*	N/A
*Include supporting documentation		

WARRANT 6, COORDINATED SIGNAL SYSTEM		
Condition Satisfied?	Warrant 6 was met	
Criteria:	One-way or Two-way traffic?	Two-Way
	Would a proposed signal, working with the adjacent signals, enable progressive operation?	Yes
	Would the resultant signal spacing would be greater than 1,000 feet?	Yes

WARRANT 7, CRASH EXPERIENCE		
Condition Satisfied?	Warrant 7 was met	
Criteria:	One Year: Total number of angle and pedestrian crashes (all severities):	0
	One Year: Total number of fatal-and-injury angle and pedestrian crashes:	0
	Three Year: Total number of angle and pedestrian crashes (all severities):	7
	Three Year: Total number of fatal-and-injury angle and pedestrian crashes:	2
	Adequate trial of alternatives have failed to reduce crash frequency?	Yes
	Crash history exceeds thresholds?	Yes
	Traffic volumes or pedestrian volumes exceed 80% thresholds?	Yes

SIGNAL WARRANT ANALYSIS

WARRANT 8, ROADWAY NETWORK		
Condition Satisfied?		Warrant not met
Criteria:	Intersection of two or more major routes?*	No
	Intersection has a total existing, or immediately projected, entering volume of at least 1,000vph entering during the peak hour of a typical weekday AND has 5-year projected traffic volumes that meet one or more of Warrants 1,2, and 3 during an average weekday?	Yes
	Intersection has total existing, or immediately projected, entering volume of at least 1,000vph for each of any 5 hours of a non-normal business day (Saturday or Sunday)?	No

*Major route defined as:

- Part of the street or highway system that serves as the principal roadway network for through traffic flow
- Rural or suburban highways outside, entering, or transverseing a city
- Appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study

WARRANT 9, INTERSECTION NEAR A GRADE CROSSING		
Condition Satisfied?		Warrant not applicable
Criteria:	Adequate trial of alternatives have failed to alleviate safety concerns?	N/A
	Railroad exists on an approach controlled by a STOP or YIELD sign?	N/A
	The center of the nearest track is within 140 feet of stop or yield line?	N/A
	Clear storage distance, D in feet, between near edge of tracks and stop or yield line?	
	One or two approach lanes at railroad crossing?	N/A
	Adjustment Factor for Daily Frequency of Rail Traffic	
	Adjustment Factor for Percentage of High-Occupancy Busses	
	Adjustment Factor for Percentage of Tractor-Trailer Trucks	
	Combined Adjustment Factor	0
	Minor Crossing Approach Volume, vph (with adjustment factor applied):	
	Major Street Volume, vph (total both approaches):	
Above Figure 4C-9 or 4C-10 threshold?	N/A	

ALL-WAY STOP CONTROL WARRANTS				
Condition Satisfied?		Warrants not applicable		
Warrant A	Number of Legs	4	Threshold	Met?
	Number of Crashes in 12 month Period	0	5	No
	Number of Crashes in 36 month Period	7	6	Yes
	Criteria met?	Yes		
Warrant B	Does the minor-road approaches have inadequate sight distance?	No		
	Criteria met?	No		
Warrant C	Is the all-way stop an interim measure?	No		
	Criteria met?	No		
Warrant D	Is the 85% speed > 40mph?	No	Hours Met	Threshold
	Major Street 8-hour Volume, vph:	0	8	No
	Criteria met?	No		
Warrant E	Are there other factors to justify stop (high left-turns, 2 residential collectors, significant pedestrian or bicycle activity, etc.)	No		
	Criteria met?	No		

BG CONSULTANTS - TRAFFIC ANALYSIS

BASIC INFORMATION	
Project No.	25-1160
Project Description	Emporia Teap Study
Intersection Location	6th Ave & Congress St
Analysis Date	8/30/2025
Additional Notes	
Exist. signal?	Yes
<10,000 people?	No
No. of approaches	4

MAJOR STREET INFORMATION	
Street Name	6th Avenue
Direction	EB WB
Number of Thru Lanes	2
Speed Limit	30
EB Adjacent Parking?	No
WB Adjacent Parking?	No

MINOR STREET INFORMATION	
Street Name	Congress Street
Direction	NB SB
Number of Thru Lanes	1
Speed Limit	30
NB Adjacent Parking?	Yes
SB Adjacent Parking?	Yes
NB Rt Turn to Exclude	0%
SB Rt Turn to Exclude	0%
Stop Sign?	No

TRAFFIC WARRANTS		
	Appl?	Result
Warrant 1, 8-Hour	Yes	Warrant not met
Warrant 2, 4-hour	Yes	Warrant not met
Warrant 3, Peak Hour	No	Warrant 3 not appl.
Warrant 4, Pedestrian	Yes	Warrant not met
Warrant 5, School	No	Warrant 5 not appl.
Warrant 6, Coord. Sig.	Yes	Warrant not met
Warrant 7, Crash	Yes	Warrant not met
Warrant 8, Road Net.	Yes	Warrant not met
Warrant 9, RR Cross.	No	Warrant 9 not appl.
All-Way Stop Warrants	No	Warrants not appl.

CRASH SUMMARY				
	PDO	Injury	Fatal	Total
Angle	3	0	0	3
Rear-end	2	0	0	2
Ped/Bike	0	0	0	0
Other	1	0	0	1
TOTAL	6	0	0	6
CR _{int} =	0.24			
C.I. =	0.17			

TURN LANE INFORMATION				
EB/WB Analysis		2-Lane		
NB/SB Analysis		2-Lane		
	Exist?	Len. (ft.)	Taper Analysis	Turn Lane Analysis
NB Rt	No		Criteria N/A	Criteria N/A
NB Lt	No		---	Criteria met
SB Rt	No		Criteria N/A	Criteria N/A
SB Lt	No		---	Criteria not met
EB Rt	No		Criteria met	Criteria not met
EB Lt	Yes	100	---	Criteria met
WB Rt	No		Criteria met	Criteria not met
WB Lt	Yes	100	---	Criteria met
Notes:	The analysis presented applies KDOT's Access Management Criteria for highways to assess whether speed and traffic volumes meet the thresholds to justify a turn lane. For locations with posted speeds below 40 mph, the 40-mph criteria were applied. It is important to note that these criteria are intended for highway conditions and are used here only as supplemental information. The actual determination of whether a turn lane is warranted should not rely on this analysis alone but should also consider engineering judgment and other contributing factors, such as site geometry, intersection capacity, level of service (LOS), and crash history.			

PEAK HOUR SUMMARY			
AM Peak	10:30 AM	to	11:30 AM
	860 veh.		
Mid Day Peak	12:00 PM	to	1:00 PM
	1,096 veh.		
PM Peak	4:45 PM	to	5:45 PM
	1,209 veh.		
Peak Hour	4:45 PM	to	5:45 PM
	1,209 veh.		
24-hour Total	13,892 veh.		

CRITICAL CRASH RATE		
N =	5	Years
r =	1	c/mev
$mev = \frac{AADT \times N \times 365 \frac{\text{days}}{\text{year}}}{10^6}$ $= 25.35$ $CCR_{int} = r + p \times \sqrt{\frac{r}{mev}} + \frac{1}{2 \times mev}$ $= 1.41$		

PEAK HOUR TURNING MOVEMENTS

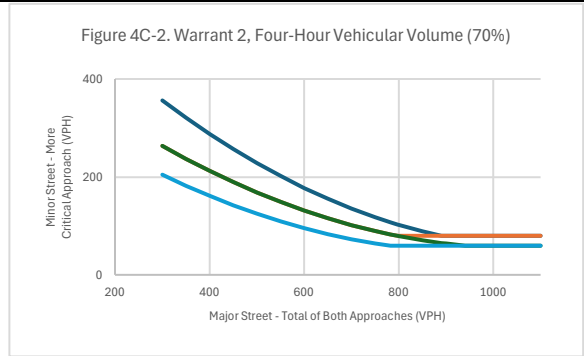
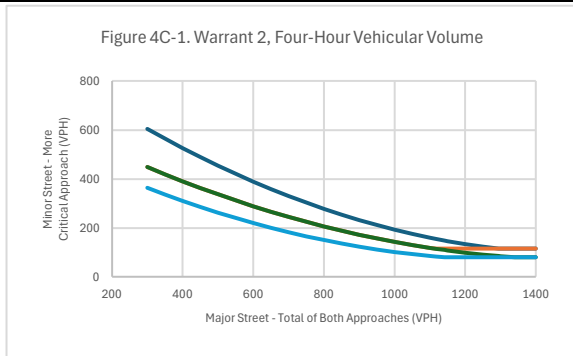
	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
	(West Leg)			(East Leg)			(South Leg)			(North Leg)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM												
10:30 AM	7	354	17	8	408	2	26	12	11	4	6	5
860 veh.		378			418			49			15	
PEDS		0			3			1			4	
BIKES			1			0			0			2
10:30 AM	1	71	3	0	84	0	6	4	1	1	1	1
10:45 AM	4	96	6	1	110	0	7	3	4	0	3	2
11:00 AM	2	79	4	4	110	0	7	3	2	3	0	1
11:15 AM	0	108	4	3	104	2	6	2	4	0	2	1
Max:		112			114			14			5	
Total:		378			418			49			15	
PHF		0.84			0.92			0.88			0.75	
Trucks	1	25	1	1	23	0	0	0	0	0	0	0
Truck %	14.3%	7.1%	5.9%	12.5%	5.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Adjacent Parking?		No			No			Yes			Yes	
MID												
12:00 PM	16	485	29	4	504	2	17	11	10	2	6	10
1,096 veh.		530			510			38			18	
PEDS		2			2			2			4	
BIKES			0			0			1			1
12:00 PM	7	115	9	1	153	0	5	2	1	0	0	2
12:15 PM	1	118	6	1	129	2	7	4	5	0	1	2
12:30 PM	5	111	6	0	108	0	2	2	3	1	1	2
12:45 PM	3	141	8	2	114	0	3	3	1	1	4	4
Max:		152			154			16			9	
Total:		530			510			38			18	
PHF		0.87			0.83			0.59			0.5	
Trucks	1	42	3	0	25	0	0	0	1	0	0	1
Truck %	6.3%	8.7%	10.3%	0.0%	5.0%	0.0%	0.0%	0.0%	10.0%	0.0%	0.0%	10.0%
Adjacent Parking?		No			No			Yes			Yes	
PM												
4:45 PM	8	495	34	9	594	2	20	13	18	1	10	5
1,209 veh.		537			605			51			16	
PEDS		0			2			1			3	
BIKES			0			0			0			8
4:45 PM	4	114	8	2	133	0	5	3	4	0	2	1
5:00 PM	3	141	11	4	184	0	4	0	4	0	5	2
5:15 PM	0	121	5	3	140	1	4	9	7	1	1	0
5:30 PM	1	119	10	0	137	1	7	1	3	0	2	2
Max:		155			188			20			7	
Total:		537			605			51			16	
PHF		0.87			0.8			0.64			0.57	
Trucks	0	12	0	0	11	0	0	0	1	0	0	0
Truck %	0.0%	2.4%	0.0%	0.0%	1.9%	0.0%	0.0%	0.0%	5.6%	0.0%	0.0%	0.0%
Adjacent Parking?		No			No			Yes			Yes	

SIGNAL WARRANT ANALYSIS

WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME			
	CONDITION A (100%)	CONDITION B (100%)	CONDITION A/B (80%)*
Condition Satisfied?	NO	NO	NO
Criteria Threshold	8	8	8
Hours met:	0	0	0
Notes:			

*May only be used after adequate trial of other remedial measures.

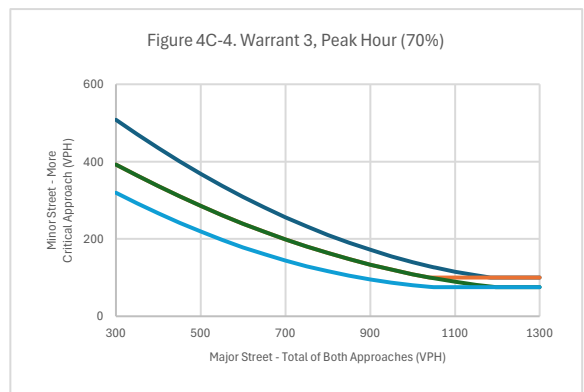
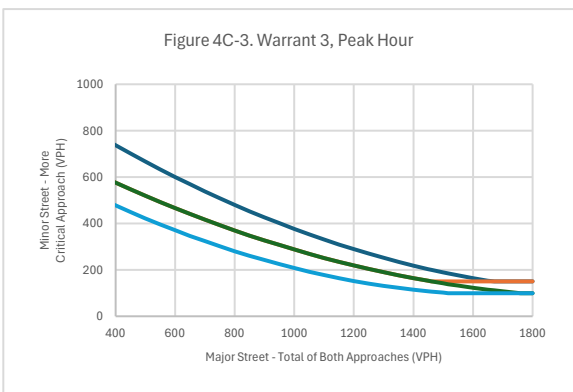
WARRANT 2, FOUR-HOUR VEHICULAR VOLUME		
	Four-Hour Vehicular Volume (100%)	Four-Hour Vehicular Volume (70%)
Warrant Satisfied?	NO	N/A
Criteria Threshold	4	N/A
Hours met:	0	N/A
Notes:		



Legend

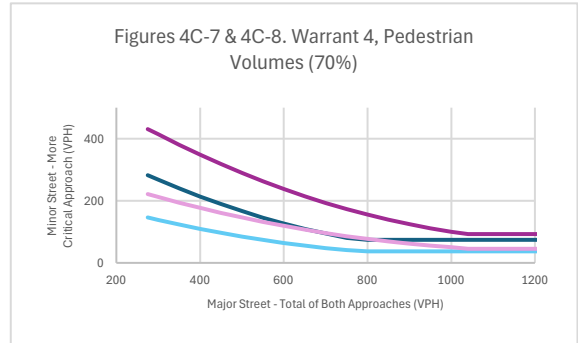
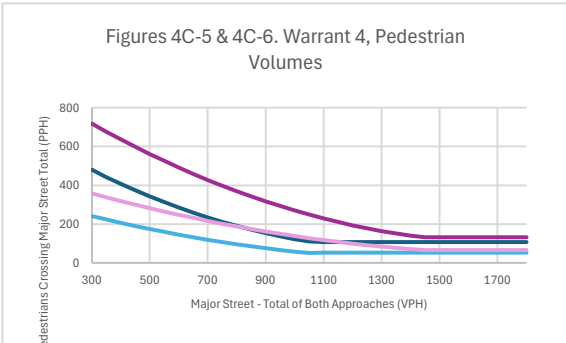
— 2+ Major / 2+ Minor
 — 1 Major / 2+ Minor
 — 2+ Major / 1 Minor
 — 1 Major / 1 Minor

WARRANT 3, PEAK HOUR				
Is the intersection near a facility that attracts or discharges large numbers of vehicles over a short time?				No
Notes:		Warrant 3 is not applicable based on a lack of nearby shift change facilities.		
Criteria A Information		Threshold	Peak Hour	4:45 PM
Is Criteria A applicable?	No		Minor VPH	51
Total stopped-time Delay (hours):			Total VPH	N/A
1. Does delay exceed threshold?	N/A	N/A	Criteria B Information	
2. Does minor exceed VPH threshold?	N/A	N/A	Criteria Satisfied?	NO
3. Does total exceed VPH threshold?	N/A	N/A	Notes (see charts below):	N/A
Criteria Satisfied?	N/A	N/A		
Notes:	Warrant not met			



SIGNAL WARRANT ANALYSIS

WARRANT 4, PEDESTRIAN VOLUME	
Crossing speed < 3.5 feet per second?	No
Major street have a median or refuge island?	No
Nearby signal/stop sign within 300'?	No
Warrant Satisfied?	No
Notes:	



Legend

- Condition A: Four-Hour Volume
- Condition B: Peak Hour Volume
- Condition A: Four-Hour Volume* 3.5fps
- Condition B: Peak Hour Volume* 3.5 Speed

WARRANT 5, SCHOOL CROSSING		
Condition Satisfied?	Warrant not applicable	
Criteria:	School children crossing the major street?	N/A
	Consideration given to alternative measures?	N/A
	300 feet or more to nearest signal or stop sign?	N/A
	If no, will new signal restrict progressive movement?*	N/A
	Minimum of 20 children crossing in peak hour?	N/A
	Engineering study shows inadequate gaps in traffic?*	N/A
*Include supporting documentation		

WARRANT 6, COORDINATED SIGNAL SYSTEM		
Condition Satisfied?	Warrant not met	
Criteria:	One-way or Two-way traffic?	Two-Way
	Would a proposed signal, working with the adjacent signals, enable progressive operation?	Yes
	Would the resultant signal spacing would be greater than 1,000 feet?	No

WARRANT 7, CRASH EXPERIENCE		
Condition Satisfied?	Warrant not met	
Criteria:	One Year: Total number of angle and pedestrian crashes (all severities):	0
	One Year: Total number of fatal-and-injury angle and pedestrian crashes:	0
	Three Year: Total number of angle and pedestrian crashes (all severities):	1
	Three Year: Total number of fatal-and-injury angle and pedestrian crashes:	0
	Adequate trial of alternatives have failed to reduce crash frequency?	Yes
	Crash history exceeds thresholds?	No
	Traffic volumes or pedestrian volumes exceed 80% thresholds?	No

SIGNAL WARRANT ANALYSIS

WARRANT 8, ROADWAY NETWORK		
Condition Satisfied?	Warrant not met	
Criteria:	Intersection of two or more major routes?*	No
	Intersection has a total existing, or immediately projected, entering volume of at least 1,000vph entering during the peak hour of a typical weekday AND has 5-year projected traffic volumes that meet one or more of Warrants 1,2, and 3 during an average weekday?	Yes
	Intersection has total existing, or immediately projected, entering volume of at least 1,000vph for each of any 5 hours of a non-normal business day (Saturday or Sunday)?	No

*Major route defined as:

- Part of the street or highway system that serves as the principal roadway network for through traffic flow
- Rural or suburban highways outside, entering, or transversing a city
- Appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study

WARRANT 9, INTERSECTION NEAR A GRADE CROSSING		
Condition Satisfied?	Warrant not applicable	
Criteria:	Adequate trial of alternatives have failed to alleviate safety concerns?	N/A
	Railroad exists on an approach controlled by a STOP or YIELD sign?	N/A
	The center of the nearest track is within 140 feet of stop or yield line?	N/A
	Clear storage distance, D in feet, between near edge of tracks and stop or yield line?	
	One or two approach lanes at railroad crossing?	N/A
	Adjustment Factor for Daily Frequency of Rail Traffic	
	Adjustment Factor for Percentage of High-Occupancy Busses	
	Adjustment Factor for Percentage of Tractor-Trailer Trucks	
	Combined Adjustment Factor	0
	Minor Crossing Approach Volume, vph (with adjustment factor applied):	
	Major Street Volume, vph (total both approaches):	
	Above Figure 4C-9 or 4C-10 threshold?	N/A

ALL-WAY STOP CONTROL WARRANTS				
Condition Satisfied?		Warrants not applicable		
Warrant A	Number of Legs	4	Threshold	Met?
	Number of Crashes in 12 month Period	0	5	No
	Number of Crashes in 36 month Period	1	6	No
	Criteria met?	No		
Warrant B	Does the minor-road approaches have inadequate sight distance?	No		
	Criteria met?	No		
Warrant C	Is the all-way stop an interim measure?	No		
	Criteria met?	No		
Warrant D	Is the 85% speed > 40mph?	No	Hours Met	Threshold
	Major Street 8-hour Volume, vph:	0	8	No
	Criteria met?	No		
Warrant E	Are there other factors to justify stop (high left-turns, 2 residential collectors, significant pedestrian or bicycle activity, etc.)	No		
	Criteria met?	No		

BG CONSULTANTS - TRAFFIC ANALYSIS

BASIC INFORMATION	
Project No.	25-1160
Project Description	Emporia Teap Study
Intersection Location	6th Ave & Constitution St
Analysis Date	8/30/2025
Additional Notes	
Exist. signal?	Yes
<10,000 people?	No
No. of approaches	4

MAJOR STREET INFORMATION	
Street Name	6th Avenue
Direction	EB WB
Number of Thru Lanes	2
Speed Limit	30
EB Adjacent Parking?	No
WB Adjacent Parking?	No

MINOR STREET INFORMATION	
Street Name	Constitution Street
Direction	NB SB
Number of Thru Lanes	1
Speed Limit	30
NB Adjacent Parking?	Yes
SB Adjacent Parking?	Yes
NB Rt Turn to Exclude	0%
SB Rt Turn to Exclude	0%
Stop Sign?	No

TRAFFIC WARRANTS		
	Appl?	Result
Warrant 1, 8-Hour	Yes	Warrant not met
Warrant 2, 4-hour	Yes	Warrant not met
Warrant 3, Peak Hour	No	Warrant 3 not appl.
Warrant 4, Pedestrian	Yes	Warrant not met
Warrant 5, School	No	Warrant 5 not appl.
Warrant 6, Coord. Sig.	Yes	Warrant not met
Warrant 7, Crash	Yes	Warrant not met
Warrant 8, Road Net.	Yes	Warrant not met
Warrant 9, RR Cross.	No	Warrant 9 not appl.
All-Way Stop Warrants	No	Warrants not appl.

CRASH SUMMARY				
	PDO	Injury	Fatal	Total
Angle	8	2	0	10
Rear-end	2	1	0	3
Ped/Bike	0	0	1	1
Other	3	0	0	3
TOTAL	13	3	1	17
CR _{int} =	0.70			
C.I. =	0.49			

TURN LANE INFORMATION				
EB/WB Analysis		2-Lane		
NB/SB Analysis		2-Lane		
	Exist?	Len. (ft.)	Taper Analysis	Turn Lane Analysis
NB Rt	No		Criteria N/A	Criteria N/A
NB Lt	No		---	Criteria not met
SB Rt	No		Criteria N/A	Criteria N/A
SB Lt	No		---	Criteria not met
EB Rt	No		Criteria met	Criteria not met
EB Lt	Yes	100	---	Criteria met
WB Rt	No		Criteria met	Criteria not met
WB Lt	Yes	100	---	Criteria met
Notes:	The analysis presented applies KDOT's Access Management Criteria for highways to assess whether speed and traffic volumes meet the thresholds to justify a turn lane. For locations with posted speeds below 40 mph, the 40-mph criteria were applied. It is important to note that these criteria are intended for highway conditions and are used here only as supplemental information. The actual determination of whether a turn lane is warranted should not rely on this analysis alone but should also consider engineering judgment and other contributing factors, such as site geometry, intersection capacity, level of service (LOS), and crash history.			

PEAK HOUR SUMMARY			
AM Peak	10:30 AM	to	11:30 AM
	847 veh.		
Mid Day Peak	12:00 PM	to	1:00 PM
	1,071 veh.		
PM Peak	4:45 PM	to	5:45 PM
	1,194 veh.		
Peak Hour	4:45 PM	to	5:45 PM
	1,194 veh.		
24-hour Total	13,401 veh.		

CRITICAL CRASH RATE		
N =	5	Years
r =	1	c/mev
$tmev = \frac{AADT \times N \times 365 \frac{days}{year}}{10^6}$ $= 24.46$ $CCR_{int} = r + p \times \sqrt{\frac{r}{mev}} + \frac{1}{2 \times mev}$ $= 1.42$		

PEAK HOUR TURNING MOVEMENTS

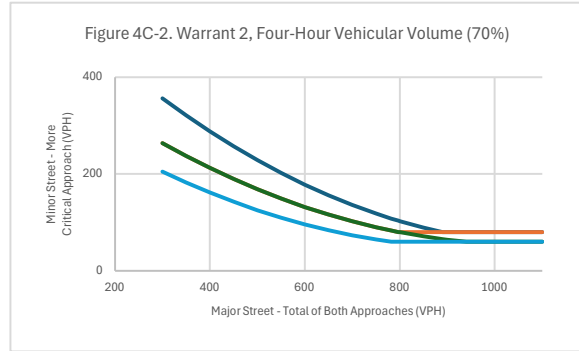
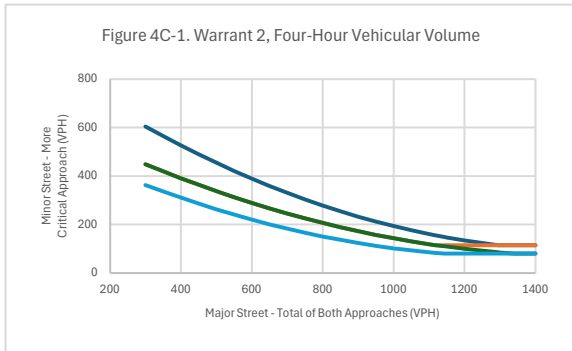
	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
	(West Leg)			(East Leg)			(South Leg)			(North Leg)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM												
10:30 AM	27	325	20	8	378	19	12	7	12	7	3	29
847 veh.		372			405			31			39	
PEDS		0			1			1			3	
BIKES			0			0			2			2
10:30 AM	3	70	3	0	72	0	4	1	2	2	2	7
10:45 AM	10	83	7	3	102	6	3	2	2	2	1	8
11:00 AM	3	75	5	2	103	7	1	3	4	2	0	8
11:15 AM	11	97	5	3	101	6	4	1	4	1	0	6
Max:		113			112			9			11	
Total:		372			405			31			39	
PHF		0.82			0.9			0.86			0.89	
Trucks	1	25	1	0	21	0	1	0	0	0	0	1
Truck %	3.7%	7.7%	5.0%	0.0%	5.6%	0.0%	8.3%	0.0%	0.0%	0.0%	0.0%	3.4%
Adjacent Parking?		No			No			Yes			Yes	
MID												
12:00 PM	23	463	13	10	468	20	11	2	12	4	11	34
1,071 veh.		499			498			25			49	
PEDS		1			2			3			2	
BIKES			0			0			0			1
12:00 PM	7	110	1	2	141	3	1	2	1	1	3	10
12:15 PM	5	116	3	1	115	3	7	0	5	1	1	11
12:30 PM	3	108	3	3	105	5	1	0	2	1	3	5
12:45 PM	8	129	6	4	107	9	2	0	4	1	4	8
Max:		143			146			12			14	
Total:		499			498			25			49	
PHF		0.87			0.85			0.52			0.88	
Trucks	0	32	2	1	23	0	0	0	0	0	0	0
Truck %	0.0%	6.9%	15.4%	10.0%	4.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Adjacent Parking?		No			No			Yes			Yes	
PM												
4:45 PM	19	480	14	13	559	29	12	5	11	4	7	41
1,194 veh.		513			601			28			52	
PEDS		0			1			5			3	
BIKES			0			0			1			2
4:45 PM	3	109	5	4	126	8	1	0	1	0	1	8
5:00 PM	5	137	3	6	175	10	5	3	4	0	4	14
5:15 PM	7	122	3	2	133	6	4	2	5	1	2	8
5:30 PM	4	112	3	1	125	5	2	0	1	3	0	11
Max:		145			191			12			18	
Total:		513			601			28			52	
PHF		0.88			0.79			0.58			0.72	
Trucks	0	11	0	1	9	0	0	0	0	0	0	0
Truck %	0.0%	2.3%	0.0%	7.7%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Adjacent Parking?		No			No			Yes			Yes	

SIGNAL WARRANT ANALYSIS

WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME			
	CONDITION A (100%)	CONDITION B (100%)	CONDITION A/B (80%)*
Condition Satisfied?	NO	NO	NO
Criteria Threshold	8	8	8
Hours met:	0	0	0
Notes:			

*May only be used after adequate trial of other remedial measures.

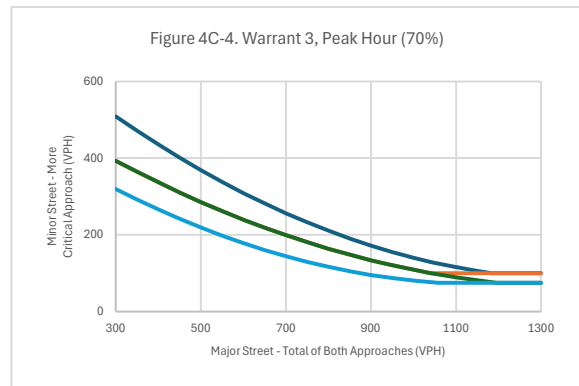
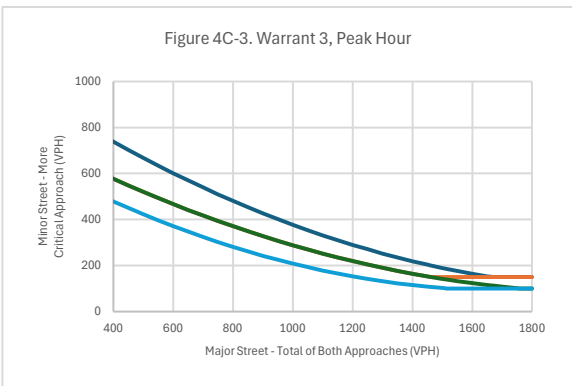
WARRANT 2, FOUR-HOUR VEHICULAR VOLUME		
	Four-Hour Vehicular Volume (100%)	Four-Hour Vehicular Volume (70%)
Warrant Satisfied?	NO	N/A
Criteria Threshold	4	N/A
Hours met:	0	N/A
Notes:		



Legend

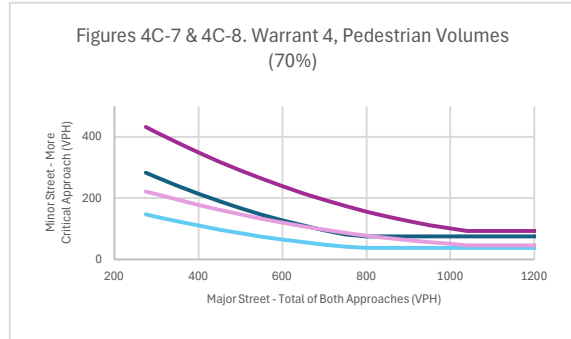
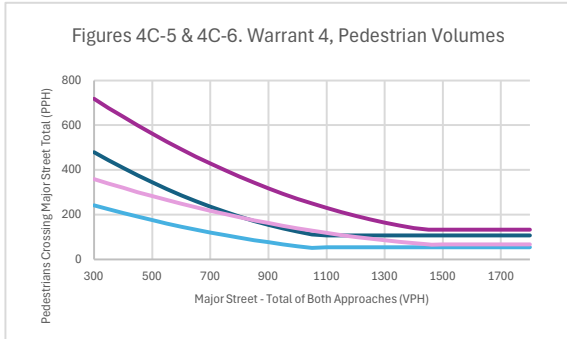
— 2+ Major / 2+ Minor
 — 1 Major / 2+ Minor
 — 2+ Major / 1 Minor
 — 1 Major / 1 Minor

WARRANT 3, PEAK HOUR				
Is the intersection near a facility that attracts or discharges large numbers of vehicles over a short time?				No
Notes:	Warrant 3 is not applicable based on a lack of nearby shift change facilities.			
Criteria A Information		Threshold	Peak Hour	4:45 PM
Is Criteria A applicable?	No		Minor VPH	52
Total stopped-time Delay (hours):			Total VPH	N/A
1. Does delay exceed threshold?	N/A	N/A	Criteria B Information	
2. Does minor exceed VPH threshold?	N/A	N/A	Criteria Satisfied?	NO
3. Does total exceed VPH threshold?	N/A	N/A	Notes (see charts below):	N/A
Criteria Satisfied?	N/A	N/A		
Notes:	Warrant not met			



SIGNAL WARRANT ANALYSIS

WARRANT 4, PEDESTRIAN VOLUME	
Crossing speed < 3.5 feet per second?	No
Major street have a median or refuge island?	No
Nearby signal/stop sign within 300'?	No
Warrant Satisfied?	No
Notes:	



Legend

- Condition A: Four-Hour Volume
- Condition B: Peak Hour Volume
- Condition A: Four-Hour Volume * 3.5fps
- Condition B: Peak Hour Volume * 3.5 Speed

WARRANT 5, SCHOOL CROSSING		
Condition Satisfied?	Warrant not applicable	
Criteria:	School children crossing the major street?	N/A
	Consideration given to alternative measures?	N/A
	300 feet or more to nearest signal or stop sign?	N/A
	If no, will new signal restrict progressive movement?*	N/A
	Minimum of 20 children crossing in peak hour?	N/A
	Engineering study shows inadequate gaps in traffic?*	N/A
*Include supporting documentation		

WARRANT 6, COORDINATED SIGNAL SYSTEM		
Condition Satisfied?	Warrant not met	
Criteria:	One-way or Two-way traffic?	Two-Way
	Would a proposed signal, working with the adjacent signals, enable progressive operation?	Yes
	Would the resultant signal spacing would be greater than 1,000 feet?	No

WARRANT 7, CRASH EXPERIENCE		
Condition Satisfied?	Warrant not met	
Criteria:	One Year: Total number of angle and pedestrian crashes (all severities):	1
	One Year: Total number of fatal-and-injury angle and pedestrian crashes:	0
	Three Year: Total number of angle and pedestrian crashes (all severities):	3
	Three Year: Total number of fatal-and-injury angle and pedestrian crashes:	0
	Adequate trial of alternatives have failed to reduce crash frequency?	Yes
	Crash history exceeds thresholds?	No
	Traffic volumes or pedestrian volumes exceed 80% thresholds?	No

SIGNAL WARRANT ANALYSIS

WARRANT 8, ROADWAY NETWORK		
Condition Satisfied?		Warrant not met
Criteria:	Intersection of two or more major routes?*	No
	Intersection has a total existing, or immediately projected, entering volume of at least 1,000vph entering during the peak hour of a typical weekday AND has 5-year projected traffic volumes that meet one or more of Warrants 1,2, and 3 during an average weekday?	Yes
	Intersection has total existing, or immediately projected, entering volume of at least 1,000vph for each of any 5 hours of a non-normal business day (Saturday or Sunday)?	No

*Major route defined as:

- Part of the street or highway system that serves as the principal roadway network for through traffic flow
- Rural or suburban highways outside, entering, or transverseing a city
- Appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study

WARRANT 9, INTERSECTION NEAR A GRADE CROSSING		
Condition Satisfied?		Warrant not applicable
Criteria:	Adequate trial of alternatives have failed to alleviate safety concerns?	N/A
	Railroad exists on an approach controlled by a STOP or YIELD sign?	N/A
	The center of the nearest track is within 140 feet of stop or yield line?	N/A
	Clear storage distance, D in feet, between near edge of tracks and stop or yield line?	
	One or two approach lanes at railroad crossing?	N/A
	Adjustment Factor for Daily Frequency of Rail Traffic	
	Adjustment Factor for Percentage of High-Occupancy Busses	
	Adjustment Factor for Percentage of Tractor-Trailer Trucks	
	Combined Adjustment Factor	0
	Minor Crossing Approach Volume, vph (with adjustment factor applied):	
	Major Street Volume, vph (total both approaches):	
Above Figure 4C-9 or 4C-10 threshold?	N/A	

ALL-WAY STOP CONTROL WARRANTS				
Condition Satisfied?		Warrants not applicable		
Warrant A	Number of Legs	4	Threshold	Met?
	Number of Crashes in 12 month Period	1	5	No
	Number of Crashes in 36 month Period	3	6	No
	Criteria met?	No		
Warrant B	Does the minor-road approaches have inadequate sight distance?	No		
	Criteria met?	No		
Warrant C	Is the all-way stop an interim measure?	No		
	Criteria met?	No		
Warrant D	Is the 85% speed > 40mph?	No	Hours Met	Threshold
	Major Street 8-hour Volume, vph:	0	8	Met?
	Criteria met?	No		
Warrant E	Are there other factors to justify stop (high left-turns, 2 residential collectors, significant pedestrian or bicycle activity, etc.)	No		
	Criteria met?	No		

BG CONSULTANTS - TRAFFIC ANALYSIS

BASIC INFORMATION	
Project No.	25-1160
Project Description	Emporia Teap Study
Intersection Location	6th Ave & Merchant St
Analysis Date	8/30/2025
Additional Notes	
Exist. signal?	Yes
<10,000 people?	No
No. of approaches	4

MAJOR STREET INFORMATION	
Street Name	6th Avenue
Direction	EB WB
Number of Thru Lanes	2
Speed Limit	30
EB Adjacent Parking?	No
WB Adjacent Parking?	No

MINOR STREET INFORMATION	
Street Name	Merchant Street
Direction	NB SB
Number of Thru Lanes	1
Speed Limit	30
NB Adjacent Parking?	Yes
SB Adjacent Parking?	Yes
NB Rt Turn to Exclude	0%
SB Rt Turn to Exclude	0%
Stop Sign?	No

TRAFFIC WARRANTS		
	Appl?	Result
Warrant 1, 8-Hour	Yes	Warrant 1 was met
Warrant 2, 4-hour	Yes	Warrant 2 was met
Warrant 3, Peak Hour	No	Warrant 3 not appl.
Warrant 4, Pedestrian	Yes	Warrant not met
Warrant 5, School	No	Warrant 5 not appl.
Warrant 6, Coord. Sig.	Yes	Warrant not met
Warrant 7, Crash	Yes	Warrant 7 was met
Warrant 8, Road Net.	Yes	Warrant not met
Warrant 9, RR Cross.	No	Warrant 9 not appl.
All-Way Stop Warrants	No	Warrants not appl.

CRASH SUMMARY				
	PDO	Injury	Fatal	Total
Angle	5	4	0	9
Rear-end	3	0	0	3
Ped/Bike	0	1	0	1
Other	3	0	0	3
TOTAL	11	5	0	16
CR _{int} =	0.57			
C.I. =	0.41			

TURN LANE INFORMATION				
EB/WB Analysis		2-Lane		
NB/SB Analysis		2-Lane		
	Exist?	Len. (ft.)	Taper Analysis	Turn Lane Analysis
NB Rt	No		Criteria N/A	Criteria N/A
NB Lt	No		---	Criteria met
SB Rt	No		Criteria N/A	Criteria N/A
SB Lt	No		---	Criteria not met
EB Rt	No		Criteria met	Criteria not met
EB Lt	Yes	100	---	Criteria met
WB Rt	No		Criteria met	Criteria not met
WB Lt	Yes	100	---	Criteria met
Notes:	The analysis presented applies KDOT's Access Management Criteria for highways to assess whether speed and traffic volumes meet the thresholds to justify a turn lane. For locations with posted speeds below 40 mph, the 40-mph criteria were applied. It is important to note that these criteria are intended for highway conditions and are used here only as supplemental information. The actual determination of whether a turn lane is warranted should not rely on this analysis alone but should also consider engineering judgment and other contributing factors, such as site geometry, intersection capacity, level of service (LOS), and crash history.			

PEAK HOUR SUMMARY			
AM Peak	10:30 AM	to	11:30 AM
	957 veh.		
Mid Day Peak	12:00 PM	to	1:00 PM
	1,239 veh.		
PM Peak	4:45 PM	to	5:45 PM
	1,401 veh.		
Peak Hour	4:45 PM	to	5:45 PM
	1,401 veh.		
24-hour Total	15,503 veh.		

CRITICAL CRASH RATE		
N =	5	Years
r =	1	c/mev
$tmev = \frac{AADT \times N \times 365 \frac{days}{year}}{10^6}$ $= 28.29$ $CCR_{int} = r + p \times \sqrt{\frac{r}{mev}} + \frac{1}{2 \times mev}$ $= 1.39$		

PEAK HOUR TURNING MOVEMENTS

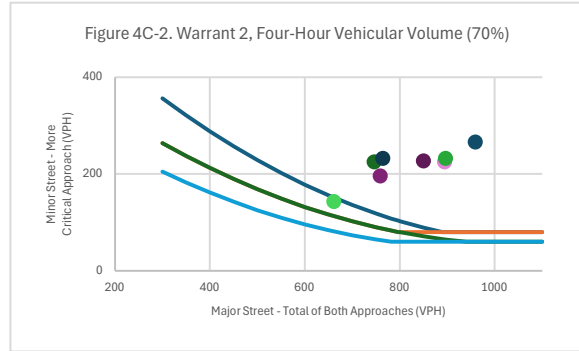
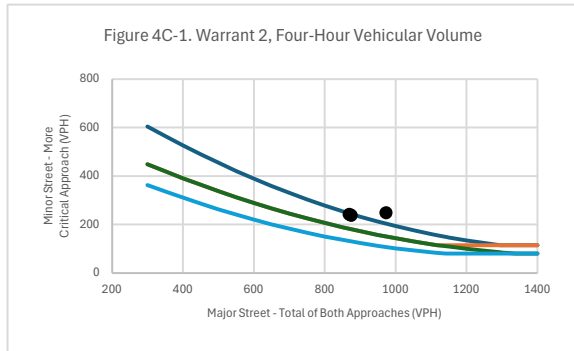
	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
	(West Leg)			(East Leg)			(South Leg)			(North Leg)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM												
10:30 AM	51	251	41	13	276	35	24	51	13	38	85	79
957 veh.		343			324			88			202	
PEDS		4			1			6			11	
BIKES			0			0			0			1
10:30 AM	8	54	8	1	50	7	6	18	4	5	21	14
10:45 AM	12	61	10	5	79	7	6	11	2	11	18	15
11:00 AM	13	61	9	4	72	10	5	8	3	15	28	30
11:15 AM	18	75	14	3	75	11	7	14	4	7	18	20
Max:		107			91			28			73	
Total:		343			324			88			202	
PHF		0.8			0.89			0.79			0.69	
Trucks	1	18	1	0	17	2	3	2	1	1	4	2
Truck %	2.0%	7.2%	2.4%	0.0%	6.2%	5.7%	12.5%	3.9%	7.7%	2.6%	4.7%	2.5%
Adjacent Parking?		No			No			Yes			Yes	
MID												
12:00 PM	69	350	55	10	348	62	45	62	12	45	103	78
1,239 veh.		474			420			119			226	
PEDS		5			7			1			13	
BIKES			0			0			0			0
12:00 PM	17	78	11	3	106	19	13	28	0	9	38	17
12:15 PM	17	94	14	3	75	11	13	10	4	12	25	25
12:30 PM	14	73	11	2	73	9	12	14	1	11	14	21
12:45 PM	21	105	19	2	94	23	7	10	7	13	26	15
Max:		145			128			41			64	
Total:		474			420			119			226	
PHF		0.82			0.82			0.73			0.88	
Trucks	3	27	5	0	14	2	5	2	0	4	2	2
Truck %	4.3%	7.7%	9.1%	0.0%	4.0%	3.2%	11.1%	3.2%	0.0%	8.9%	1.9%	2.6%
Adjacent Parking?		No			No			Yes			Yes	
PM												
4:45 PM	72	376	44	12	405	59	48	97	19	37	117	115
1,401 veh.		492			476			164			269	
PEDS		5			4			3			7	
BIKES			1			2			0			2
4:45 PM	16	75	11	3	104	14	10	21	5	10	29	17
5:00 PM	23	113	11	6	120	20	22	31	8	9	36	37
5:15 PM	18	93	11	0	87	14	9	23	1	9	31	31
5:30 PM	15	95	11	3	94	11	7	22	5	9	21	30
Max:		147			146			61			82	
Total:		492			476			164			269	
PHF		0.84			0.82			0.67			0.82	
Trucks	1	8	2	0	10	0	0	0	0	1	3	0
Truck %	1.4%	2.1%	4.5%	0.0%	2.5%	0.0%	0.0%	0.0%	0.0%	2.7%	2.6%	0.0%
Adjacent Parking?		No			No			Yes			Yes	

SIGNAL WARRANT ANALYSIS

WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME			
	CONDITION A (100%)	CONDITION B (100%)	CONDITION A/B (80%)*
Condition Satisfied?	YES	NO	NO
Criteria Threshold	8	8	8
Hours met:	9	1	7
Notes:	Condition A (100%) was met.		

*May only be used after adequate trial of other remedial measures.

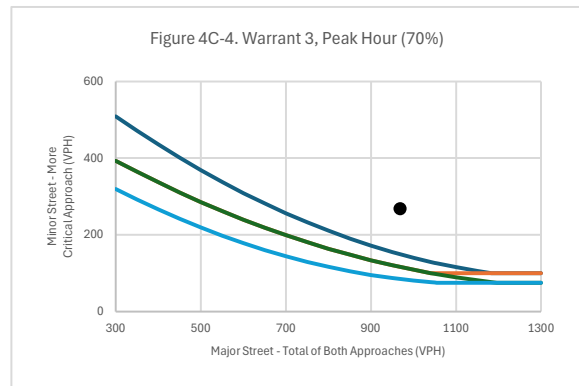
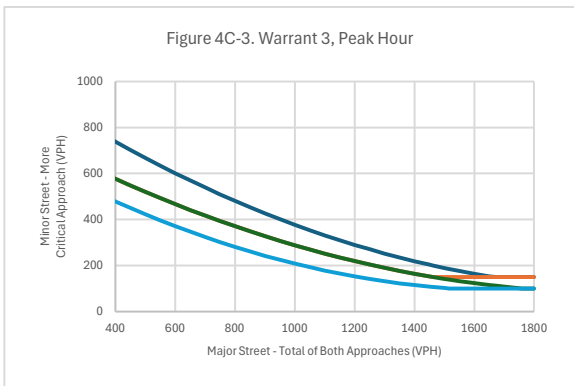
WARRANT 2, FOUR-HOUR VEHICULAR VOLUME		
	Four-Hour Vehicular Volume (100%)	Four-Hour Vehicular Volume (70%)
Warrant Satisfied?	YES	N/A
Criteria Threshold	4	N/A
Hours met:	6	N/A
Notes:	4-Hour Criteria (100%) was met.	



Legend

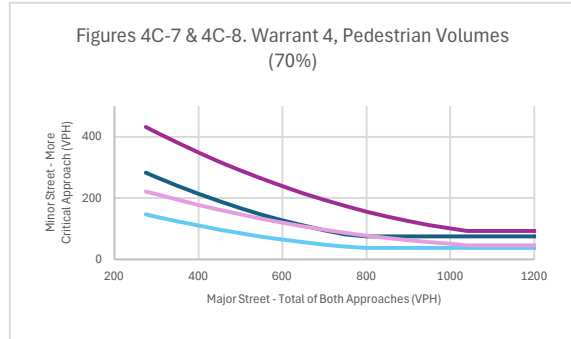
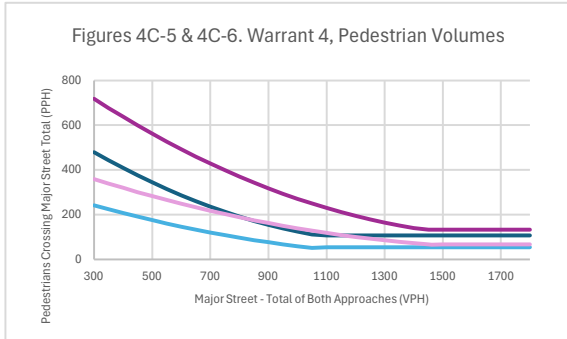
— 2+ Major / 2+ Minor
 — 1 Major / 2+ Minor
 — 2+ Major / 1 Minor
 — 1 Major / 1 Minor

WARRANT 3, PEAK HOUR				
Is the intersection near a facility that attracts or discharges large numbers of vehicles over a short time?				No
Notes:	Warrant 3 is not applicable based on a lack of nearby shift change facilities.			
Criteria A Information		Threshold	Peak Hour	4:45 PM
Is Criteria A applicable?	No		Minor VPH	269
Total stopped-time Delay (hours):			Total VPH	N/A
1. Does delay exceed threshold?	N/A	N/A	Criteria B Information	
2. Does minor exceed VPH threshold?	N/A	N/A	Criteria Satisfied?	NO
3. Does total exceed VPH threshold?	N/A	N/A	Notes (see charts below):	N/A
Criteria Satisfied?	N/A	N/A		
Notes:	Warrant not met			



SIGNAL WARRANT ANALYSIS

WARRANT 4, PEDESTRIAN VOLUME	
Crossing speed < 3.5 feet per second?	No
Major street have a median or refuge island?	No
Nearby signal/stop sign within 300'?	No
Warrant Satisfied?	No
Notes:	



Legend

- Condition A: Four-Hour Volume
- Condition B: Peak Hour Volume
- Condition A: Four-Hour Volume * 3.5fps
- Condition B: Peak Hour Volume * 3.5 Speed

WARRANT 5, SCHOOL CROSSING		
Condition Satisfied?	Warrant not applicable	
Criteria:	School children crossing the major street?	N/A
	Consideration given to alternative measures?	N/A
	300 feet or more to nearest signal or stop sign?	N/A
	If no, will new signal restrict progressive movement?*	N/A
	Minimum of 20 children crossing in peak hour?	N/A
	Engineering study shows inadequate gaps in traffic?*	N/A
*Include supporting documentation		

WARRANT 6, COORDINATED SIGNAL SYSTEM		
Condition Satisfied?	Warrant not met	
Criteria:	One-way or Two-way traffic?	Two-Way
	Would a proposed signal, working with the adjacent signals, enable progressive operation?	Yes
	Would the resultant signal spacing would be greater than 1,000 feet?	No

WARRANT 7, CRASH EXPERIENCE		
Condition Satisfied?	Warrant 7 was met	
Criteria:	One Year: Total number of angle and pedestrian crashes (all severities):	5
	One Year: Total number of fatal-and-injury angle and pedestrian crashes:	4
	Three Year: Total number of angle and pedestrian crashes (all severities):	7
	Three Year: Total number of fatal-and-injury angle and pedestrian crashes:	5
	Adequate trial of alternatives have failed to reduce crash frequency?	Yes
	Crash history exceeds thresholds?	Yes
	Traffic volumes or pedestrian volumes exceed 80% thresholds?	Yes

SIGNAL WARRANT ANALYSIS

WARRANT 8, ROADWAY NETWORK		
Condition Satisfied?		Warrant not met
Criteria:	Intersection of two or more major routes?*	No
	Intersection has a total existing, or immediately projected, entering volume of at least 1,000vph entering during the peak hour of a typical weekday AND has 5-year projected traffic volumes that meet one or more of Warrants 1,2, and 3 during an average weekday?	Yes
	Intersection has total existing, or immediately projected, entering volume of at least 1,000vph for each of any 5 hours of a non-normal business day (Saturday or Sunday)?	No

*Major route defined as:

- Part of the street or highway system that serves as the principal roadway network for through traffic flow
- Rural or suburban highways outside, entering, or transversing a city
- Appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study

WARRANT 9, INTERSECTION NEAR A GRADE CROSSING		
Condition Satisfied?		Warrant not applicable
Criteria:	Adequate trial of alternatives have failed to alleviate safety concerns?	N/A
	Railroad exists on an approach controlled by a STOP or YIELD sign?	N/A
	The center of the nearest track is within 140 feet of stop or yield line?	N/A
	Clear storage distance, D in feet, between near edge of tracks and stop or yield line?	
	One or two approach lanes at railroad crossing?	N/A
	Adjustment Factor for Daily Frequency of Rail Traffic	
	Adjustment Factor for Percentage of High-Occupancy Busses	
	Adjustment Factor for Percentage of Tractor-Trailer Trucks	
	Combined Adjustment Factor	0
	Minor Crossing Approach Volume, vph (with adjustment factor applied):	
	Major Street Volume, vph (total both approaches):	
Above Figure 4C-9 or 4C-10 threshold?	N/A	

ALL-WAY STOP CONTROL WARRANTS				
Condition Satisfied?		Warrants not applicable		
Warrant A	Number of Legs	4	Threshold	Met?
	Number of Crashes in 12 month Period	5	5	Yes
	Number of Crashes in 36 month Period	7	6	Yes
	Criteria met?	Yes		
Warrant B	Does the minor-road approaches have inadequate sight distance?	No		
	Criteria met?	No		
Warrant C	Is the all-way stop an interim measure?	No		
	Criteria met?	No		
Warrant D	Is the 85% speed > 40mph?	No	Hours Met	Threshold
	Major Street 8-hour Volume, vph:	12.25	8	Met?
	Criteria met?	Yes		
Warrant E	Are there other factors to justify stop (high left-turns, 2 residential collectors, significant pedestrian or bicycle activity, etc.)	No		
	Criteria met?	No		

BG CONSULTANTS - TRAFFIC ANALYSIS

BASIC INFORMATION	
Project No.	25-1160
Project Description	Emporia Teap Study
Intersection Location	6th Ave & Mechanic St
Analysis Date	8/30/2025
Additional Notes	
Exist. signal?	Yes
<10,000 people?	No
No. of approaches	4

MAJOR STREET INFORMATION	
Street Name	6th Avenue
Direction	EB WB
Number of Thru Lanes	2
Speed Limit	30
EB Adjacent Parking?	No
WB Adjacent Parking?	No

MINOR STREET INFORMATION	
Street Name	Mechanic Street
Direction	NB SB
Number of Thru Lanes	1
Speed Limit	30
NB Adjacent Parking?	Yes
SB Adjacent Parking?	Yes
NB Rt Turn to Exclude	0%
SB Rt Turn to Exclude	0%
Stop Sign?	No

TRAFFIC WARRANTS		
	Appl?	Result
Warrant 1, 8-Hour	Yes	Warrant not met
Warrant 2, 4-hour	Yes	Warrant not met
Warrant 3, Peak Hour	No	Warrant 3 not appl.
Warrant 4, Pedestrian	Yes	Warrant not met
Warrant 5, School	No	Warrant 5 not appl.
Warrant 6, Coord. Sig.	Yes	Warrant not met
Warrant 7, Crash	Yes	Warrant not met
Warrant 8, Road Net.	Yes	Warrant not met
Warrant 9, RR Cross.	No	Warrant 9 not appl.
All-Way Stop Warrants	Yes	Warrants not met

CRASH SUMMARY				
	PDO	Injury	Fatal	Total
Angle	2	2	0	4
Rear-end	7	1	0	8
Ped/Bike	0	0	0	0
Other	4	0	0	4
TOTAL	13	3	0	16
CR _{int} =	0.72			
C.I. =	0.50			

TURN LANE INFORMATION				
EB/WB Analysis		2-Lane		
NB/SB Analysis		2-Lane		
	Exist?	Len. (ft.)	Taper Analysis	Turn Lane Analysis
NB Rt	No		Criteria N/A	Criteria N/A
NB Lt	No		---	Criteria met
SB Rt	No		Criteria N/A	Criteria N/A
SB Lt	No		---	Criteria not met
EB Rt	No		Criteria met	Criteria not met
EB Lt	Yes	100	---	Criteria met
WB Rt	No		Criteria N/A	Criteria N/A
WB Lt	Yes	100	---	Criteria met
Notes:	The analysis presented applies KDOT's Access Management Criteria for highways to assess whether speed and traffic volumes meet the thresholds to justify a turn lane. For locations with posted speeds below 40 mph, the 40-mph criteria were applied. It is important to note that these criteria are intended for highway conditions and are used here only as supplemental information. The actual determination of whether a turn lane is warranted should not rely on this analysis alone but should also consider engineering judgment and other contributing factors, such as site geometry, intersection capacity, level of service (LOS), and crash history.			

PEAK HOUR SUMMARY			
AM Peak	7:15 AM	to	8:15 AM
	841 veh.		
Mid Day Peak	12:00 PM	to	1:00 PM
	874 veh.		
PM Peak	4:15 PM	to	5:15 PM
	1,057 veh.		
Peak Hour	4:15 PM	to	5:15 PM
	1,057 veh.		
24-hour Total	12,095 veh.		

CRITICAL CRASH RATE		
N =	5	Years
r =	1	c/mev
$tmev = \frac{AADT \times N \times 365 \frac{days}{year}}{10^6}$ $= 22.07$ $CCR_{int} = r + p \times \sqrt{\frac{r}{mev}} + \frac{1}{2 \times mev}$ $= 1.44$		

PEAK HOUR TURNING MOVEMENTS

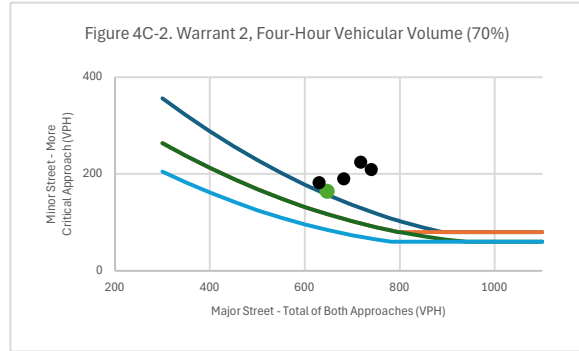
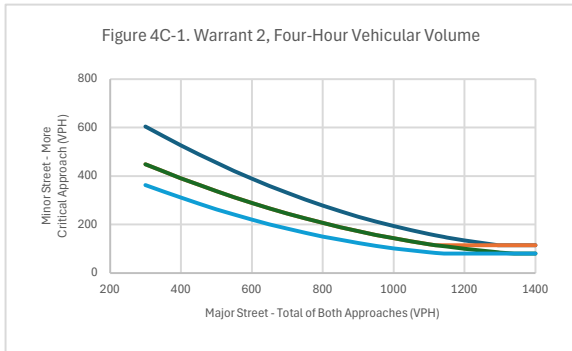
	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
	(West Leg)			(East Leg)			(South Leg)			(North Leg)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM												
7:15 AM	18	121	81	76	219	32	43	128	68	10	36	9
841 veh.		220			327			239			55	
PEDS		1			1			1			3	
BIKES			1			0			0			1
7:15 AM	1	25	18	18	47	4	9	25	20	3	6	1
7:30 AM	6	32	16	29	71	8	13	37	26	1	9	3
7:45 AM	5	31	37	19	57	12	15	46	10	4	15	3
8:00 AM	6	33	10	10	44	8	6	20	12	2	6	2
Max:		73			108			76			22	
Total:		220			327			239			55	
PHF		0.75			0.76			0.79			0.63	
Trucks	1	16	1	3	12	1	1	2	1	1	0	1
Truck %	5.6%	13.2%	1.2%	3.9%	5.5%	3.1%	2.3%	1.6%	1.5%	10.0%	0.0%	11.1%
Adjacent Parking?		No			No			Yes			Yes	
MID												
12:00 PM	29	263	55	50	241	19	54	64	41	12	26	20
874 veh.		347			310			159			58	
PEDS		3			4			1			2	
BIKES			0			1			0			0
12:00 PM	4	58	16	19	72	7	13	22	13	8	4	3
12:15 PM	9	81	8	6	51	7	12	20	7	2	6	5
12:30 PM	7	51	10	10	58	3	13	11	12	0	10	4
12:45 PM	9	73	21	15	60	2	16	11	9	2	6	8
Max:		103			98			48			16	
Total:		347			310			159			58	
PHF		0.84			0.79			0.83			0.91	
Trucks	1	26	4	5	21	1	0	3	0	1	0	0
Truck %	3.4%	9.9%	7.3%	10.0%	8.7%	5.3%	0.0%	4.7%	0.0%	8.3%	0.0%	0.0%
Adjacent Parking?		No			No			Yes			Yes	
PM												
4:15 PM	31	314	61	46	293	25	71	96	56	7	40	17
1,057 veh.		406			364			223			64	
PEDS		2			1			1			3	
BIKES			1			3			2			0
4:15 PM	6	67	19	12	70	8	11	29	12	0	6	6
4:30 PM	10	78	15	14	74	3	14	21	15	0	9	1
4:45 PM	8	69	14	7	68	7	19	22	12	2	9	3
5:00 PM	7	100	13	13	81	7	27	24	17	5	16	7
Max:		120			101			68			28	
Total:		406			364			223			64	
PHF		0.85			0.9			0.82			0.57	
Trucks	0	11	1	1	8	0	0	3	1	0	3	1
Truck %	0.0%	3.5%	1.6%	2.2%	2.7%	0.0%	0.0%	3.1%	1.8%	0.0%	7.5%	5.9%
Adjacent Parking?		No			No			Yes			Yes	

SIGNAL WARRANT ANALYSIS

WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME			
	CONDITION A (100%)	CONDITION B (100%)	CONDITION A/B (80%)*
Condition Satisfied?	NO	NO	NO
Criteria Threshold	8	8	8
Hours met:	6	0	1
Notes:			

*May only be used after adequate trial of other remedial measures.

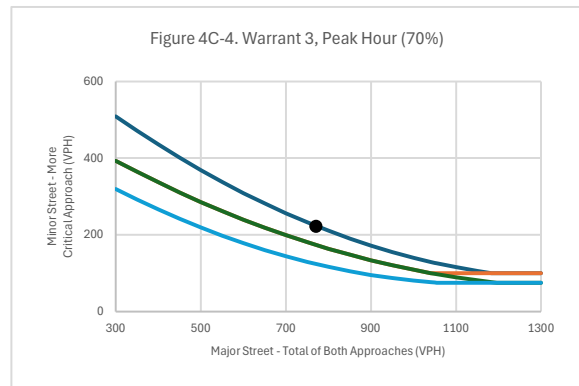
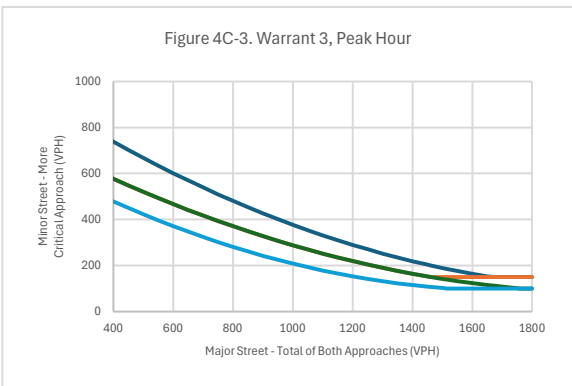
WARRANT 2, FOUR-HOUR VEHICULAR VOLUME		
	Four-Hour Vehicular Volume (100%)	Four-Hour Vehicular Volume (70%)
Warrant Satisfied?	NO	N/A
Criteria Threshold	4	N/A
Hours met:	0	N/A
Notes:		



Legend

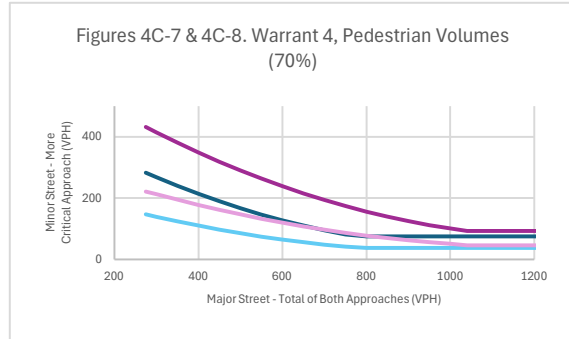
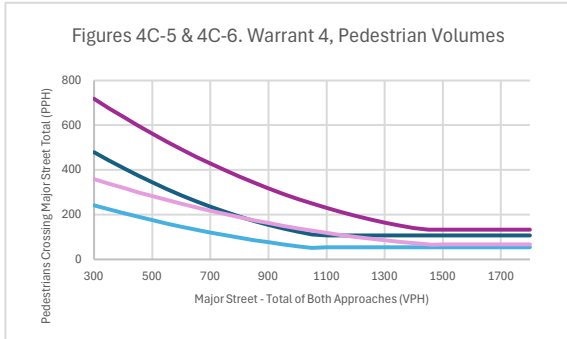
— 2+ Major / 2+ Minor
 — 1 Major / 2+ Minor
 — 2+ Major / 1 Minor
 — 1 Major / 1 Minor

WARRANT 3, PEAK HOUR				
Is the intersection near a facility that attracts or discharges large numbers of vehicles over a short time?				No
Notes:	Warrant 3 is not applicable based on a lack of nearby shift change facilities.			
Criteria A Information		Threshold	Peak Hour	4:15 PM
Is Criteria A applicable?	No		Minor VPH	223
Total stopped-time Delay (hours):			Total VPH	N/A
1. Does delay exceed threshold?	N/A	N/A	Criteria B Information	
2. Does minor exceed VPH threshold?	N/A	N/A	Criteria Satisfied?	NO
3. Does total exceed VPH threshold?	N/A	N/A	Notes (see charts below):	N/A
Criteria Satisfied?	N/A	N/A		
Notes:	Warrant not met			



SIGNAL WARRANT ANALYSIS

WARRANT 4, PEDESTRIAN VOLUME	
Crossing speed < 3.5 feet per second?	No
Major street have a median or refuge island?	No
Nearby signal/stop sign within 300'?	No
Warrant Satisfied?	No
Notes:	



Legend

- Condition A: Four-Hour Volume
- Condition B: Peak Hour Volume
- Condition A: Four-Hour Volume * 3.5fps
- Condition B: Peak Hour Volume * 3.5 Speed

WARRANT 5, SCHOOL CROSSING		
Condition Satisfied?	Warrant not applicable	
Criteria:	School children crossing the major street?	N/A
	Consideration given to alternative measures?	N/A
	300 feet or more to nearest signal or stop sign?	N/A
	If no, will new signal restrict progressive movement?*	N/A
	Minimum of 20 children crossing in peak hour?	N/A
	Engineering study shows inadequate gaps in traffic?*	N/A
*Include supporting documentation		

WARRANT 6, COORDINATED SIGNAL SYSTEM		
Condition Satisfied?	Warrant not met	
Criteria:	One-way or Two-way traffic?	Two-Way
	Would a proposed signal, working with the adjacent signals, enable progressive operation?	Yes
	Would the resultant signal spacing would be greater than 1,000 feet?	No

WARRANT 7, CRASH EXPERIENCE		
Condition Satisfied?	Warrant not met	
Criteria:	One Year: Total number of angle and pedestrian crashes (all severities):	0
	One Year: Total number of fatal-and-injury angle and pedestrian crashes:	0
	Three Year: Total number of angle and pedestrian crashes (all severities):	2
	Three Year: Total number of fatal-and-injury angle and pedestrian crashes:	1
	Adequate trial of alternatives have failed to reduce crash frequency?	Yes
	Crash history exceeds thresholds?	No
	Traffic volumes or pedestrian volumes exceed 80% thresholds?	Yes

SIGNAL WARRANT ANALYSIS

WARRANT 8, ROADWAY NETWORK		
Condition Satisfied?		Warrant not met
Criteria:	Intersection of two or more major routes?*	No
	Intersection has a total existing, or immediately projected, entering volume of at least 1,000vph entering during the peak hour of a typical weekday AND has 5-year projected traffic volumes that meet one or more of Warrants 1,2, and 3 during an average weekday?	Yes
	Intersection has total existing, or immediately projected, entering volume of at least 1,000vph for each of any 5 hours of a non-normal business day (Saturday or Sunday)?	No

*Major route defined as:

- Part of the street or highway system that serves as the principal roadway network for through traffic flow
- Rural or suburban highways outside, entering, or transversing a city
- Appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study

WARRANT 9, INTERSECTION NEAR A GRADE CROSSING		
Condition Satisfied?		Warrant not applicable
Criteria:	Adequate trial of alternatives have failed to alleviate safety concerns?	N/A
	Railroad exists on an approach controlled by a STOP or YIELD sign?	N/A
	The center of the nearest track is within 140 feet of stop or yield line?	N/A
	Clear storage distance, D in feet, between near edge of tracks and stop or yield line?	
	One or two approach lanes at railroad crossing?	N/A
	Adjustment Factor for Daily Frequency of Rail Traffic	
	Adjustment Factor for Percentage of High-Occupancy Busses	
	Adjustment Factor for Percentage of Tractor-Trailer Trucks	
	Combined Adjustment Factor	0
	Minor Crossing Approach Volume, vph (with adjustment factor applied):	
	Major Street Volume, vph (total both approaches):	
Above Figure 4C-9 or 4C-10 threshold?	N/A	

ALL-WAY STOP CONTROL WARRANTS				
Condition Satisfied?		Warrants not met		
Warrant A	Number of Legs	4	Threshold	Met?
	Number of Crashes in 12 month Period	0	5	No
	Number of Crashes in 36 month Period	2	6	No
	Criteria met?	No		
Warrant B	Does the minor-road approaches have inadequate sight distance?	No		
	Criteria met?	No		
Warrant C	Is the all-way stop an interim measure?	No		
	Criteria met?	No		
Warrant D	Is the 85% speed > 40mph?	No	Hours Met	Threshold
	Major Street 8-hour Volume, vph:	7.75	8	Met?
	Criteria met?	No		
Warrant E	Are there other factors to justify stop (high left-turns, 2 residential collectors, significant pedestrian or bicycle activity, etc.)	No		
	Criteria met?	No		

BG CONSULTANTS - TRAFFIC ANALYSIS

BASIC INFORMATION	
Project No.	25-1160
Project Description	Emporia Teap Study
Intersection Location	Merchant St & 7th Ave
Analysis Date	8/30/2025
Additional Notes	
Exist. signal?	Yes
<10,000 people?	No
No. of approaches	4

MAJOR STREET INFORMATION	
Street Name	Merchant Street
Direction	NB SB
Number of Thru Lanes	1
Speed Limit	20
NB Adjacent Parking?	Yes
SB Adjacent Parking?	Yes

MINOR STREET INFORMATION	
Street Name	7th Avenue
Direction	EB WB
Number of Thru Lanes	1
Speed Limit	20
EB Adjacent Parking?	Yes
WB Adjacent Parking?	Yes
EB Rt Turn to Exclude	0%
WB Rt Turn to Exclude	0%
Stop Sign?	No

TRAFFIC WARRANTS		
	Appl?	Result
Warrant 1, 8-Hour	Yes	Warrant not met
Warrant 2, 4-hour	Yes	Warrant not met
Warrant 3, Peak Hour	No	Warrant 3 not appl.
Warrant 4, Pedestrian	Yes	Warrant not met
Warrant 5, School	No	Warrant 5 not appl.
Warrant 6, Coord. Sig.	Yes	Warrant not met
Warrant 7, Crash	Yes	Warrant not met
Warrant 8, Road Net.	Yes	Warrant not met
Warrant 9, RR Cross.	No	Warrant 9 not appl.
All-Way Stop Warrants	Yes	Warrants not met

CRASH SUMMARY				
	PDO	Injury	Fatal	Total
Angle	1	0	0	1
Rear-end	2	1	0	3
Ped/Bike	0	0	0	0
Other	0	0	0	0
TOTAL	3	1	0	4
CR _{int} =	0.36			
C.I. =	0.22			

TURN LANE INFORMATION				
EB/WB Analysis		2-Lane		
NB/SB Analysis		2-Lane		
	Exist?	Len. (ft.)	Taper Analysis	Turn Lane Analysis
NB Rt	No		Criteria N/A	Criteria N/A
NB Lt	No		---	Criteria not met
SB Rt	No		Criteria N/A	Criteria N/A
SB Lt	No		---	Criteria not met
EB Rt	No		Criteria N/A	Criteria N/A
EB Lt	No		---	Criteria not met
WB Rt	No		Criteria N/A	Criteria N/A
WB Lt	No		---	Criteria not met
Notes:	The analysis presented applies KDOT's Access Management Criteria for highways to assess whether speed and traffic volumes meet the thresholds to justify a turn lane. For locations with posted speeds below 40 mph, the 40-mph criteria were applied. It is important to note that these criteria are intended for highway conditions and are used here only as supplemental information. The actual determination of whether a turn lane is warranted should not rely on this analysis alone but should also consider engineering judgment and other contributing factors, such as site geometry, intersection capacity, level of service (LOS), and crash history.			

PEAK HOUR SUMMARY			
AM Peak	10:30 AM	to	11:30 AM
	394 veh.		
Mid Day Peak	11:30 AM	to	12:30 PM
	501 veh.		
PM Peak	4:45 PM	to	5:45 PM
	578 veh.		
Peak Hour	4:45 PM	to	5:45 PM
	578 veh.		
24-hour Total	6,054 veh.		

CRITICAL CRASH RATE		
N =	5	Years
r =	1	c/mev
$tmev = \frac{AADT \times N \times 365 \frac{\text{days}}{\text{year}}}{10^6}$ $= 11.05$ $CCR_{int} = r + p \times \sqrt{\frac{r}{mev}} + \frac{1}{2 \times mev}$ $= 1.63$		

PEAK HOUR TURNING MOVEMENTS

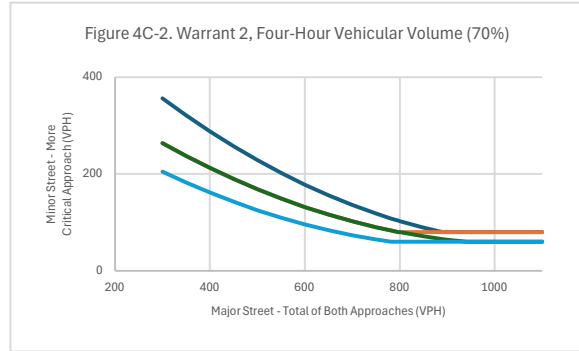
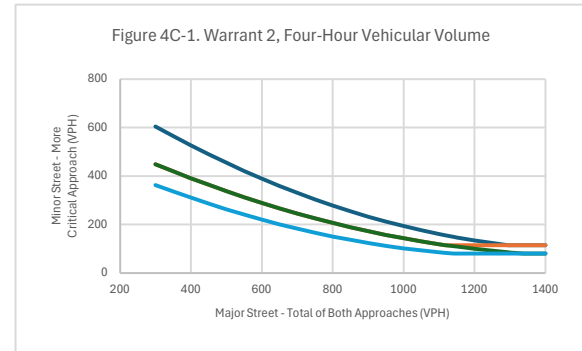
	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
	(West Leg)			(East Leg)			(South Leg)			(North Leg)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM												
10:30 AM	7	4	22	4	0	7	9	110	11	11	190	19
394 veh.		33			11			130			220	
PEDS		0			0			0			0	
BIKES			0			0			1			0
10:30 AM	3	0	4	0	0	1	4	29	1	0	39	3
10:45 AM	1	1	4	0	0	1	1	24	3	5	45	7
11:00 AM	2	1	7	2	0	2	3	20	4	1	61	4
11:15 AM	1	2	7	2	0	3	1	37	3	5	45	5
Max:		10			5			41			66	
Total:		33			11			130			220	
PHF		0.83			0.55			0.79			0.83	
Trucks	0	0	2	0	0	1	0	6	0	1	5	1
Truck %	0.0%	0.0%	9.1%	0.0%	0.0%	14.3%	0.0%	5.5%	0.0%	9.1%	2.6%	5.3%
Adjacent Parking?		Yes			Yes			Yes			Yes	
MID												
11:30 AM	10	1	18	4	2	8	12	152	31	16	225	22
501 veh.		29			14			195			263	
PEDS		0			0			0			0	
BIKES			2			0			1			0
11:30 AM	2	1	3	1	0	3	6	34	3	6	43	1
11:45 AM	5	0	3	0	1	2	4	30	8	4	63	8
12:00 PM	0	0	5	2	1	1	1	54	13	4	62	7
12:15 PM	3	0	7	1	0	2	1	34	7	2	57	6
Max:		10			4			68			75	
Total:		29			14			195			263	
PHF		0.73			0.88			0.72			0.88	
Trucks	0	0	1	0	0	0	0	9	0	0	7	0
Truck %	0.0%	0.0%	5.6%	0.0%	0.0%	0.0%	0.0%	5.9%	0.0%	0.0%	3.1%	0.0%
Adjacent Parking?		Yes			Yes			Yes			Yes	
PM												
4:45 PM	12	5	19	3	4	17	11	189	20	18	264	16
578 veh.		36			24			220			298	
PEDS		0			0			0			0	
BIKES			2			4			0			1
4:45 PM	2	3	3	1	1	6	3	39	4	9	56	1
5:00 PM	4	1	8	2	2	1	2	57	5	2	72	4
5:15 PM	3	1	2	0	0	4	4	50	8	4	77	7
5:30 PM	3	0	6	0	1	6	2	43	3	3	59	4
Max:		13			8			64			88	
Total:		36			24			220			298	
PHF		0.69			0.75			0.86			0.85	
Trucks	0	0	0	0	0	0	0	3	0	0	3	0
Truck %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	0.0%	1.1%	0.0%
Adjacent Parking?		Yes			Yes			Yes			Yes	

SIGNAL WARRANT ANALYSIS

WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME			
	CONDITION A (100%)	CONDITION B (100%)	CONDITION A/B (80%)*
Condition Satisfied?	NO	NO	NO
Criteria Threshold	8	8	8
Hours met:	0	0	0
Notes:			

*May only be used after adequate trial of other remedial measures.

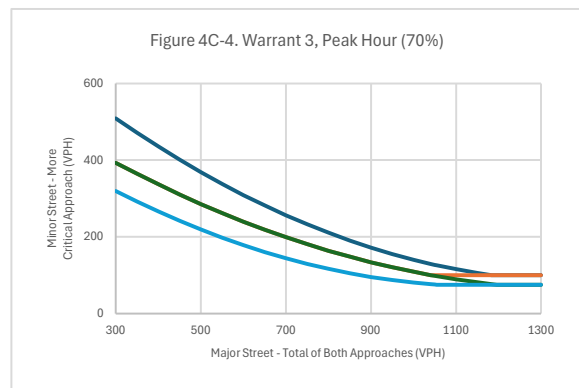
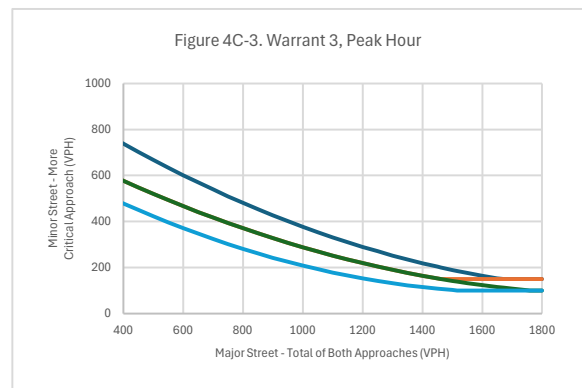
WARRANT 2, FOUR-HOUR VEHICULAR VOLUME		
	Four-Hour Vehicular Volume (100%)	Four-Hour Vehicular Volume (70%)
Warrant Satisfied?	NO	N/A
Criteria Threshold	4	N/A
Hours met:	0	N/A
Notes:		



Legend

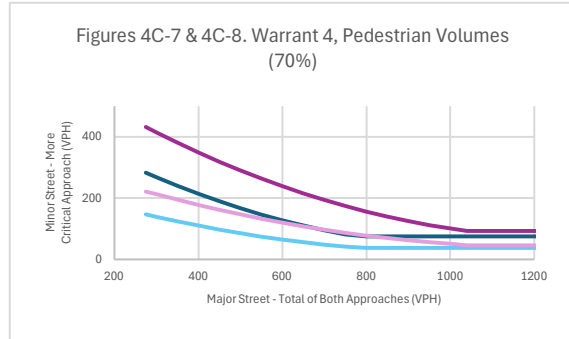
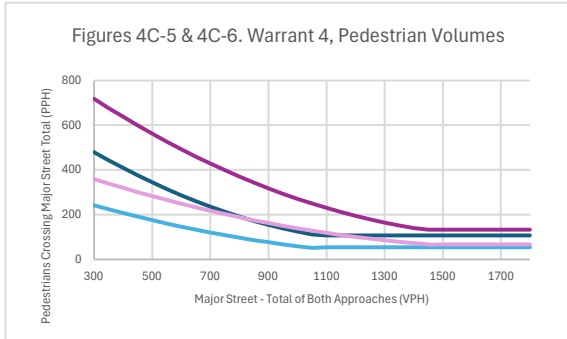
— 2+ Major / 2+ Minor
 — 1 Major / 2+ Minor
 — 2+ Major / 1 Minor
 — 1 Major / 1 Minor

WARRANT 3, PEAK HOUR				
Is the intersection near a facility that attracts or discharges large numbers of vehicles over a short time?				No
Notes:	Warrant 3 is not applicable based on a lack of nearby shift change facilities.			
Criteria A Information		Threshold	Peak Hour	4:45 PM
Is Criteria A applicable?	No		Minor VPH	36
Total stopped-time Delay (hours):			Total VPH	N/A
1. Does delay exceed threshold?	N/A	N/A	Criteria B Information	
2. Does minor exceed VPH threshold?	N/A	N/A	Criteria Satisfied?	NO
3. Does total exceed VPH threshold?	N/A	N/A	Notes (see charts below):	N/A
Criteria Satisfied?	N/A	N/A		
Notes:	Warrant not met			



SIGNAL WARRANT ANALYSIS

WARRANT 4, PEDESTRIAN VOLUME	
Crossing speed < 3.5 feet per second?	No
Major street have a median or refuge island?	No
Nearby signal/stop sign within 300'?	No
Warrant Satisfied?	No
Notes:	



Legend

- Condition A: Four-Hour Volume
- Condition B: Peak Hour Volume
- Condition A: Four-Hour Volume * 3.5fps
- Condition B: Peak Hour Volume * 3.5 Speed

WARRANT 5, SCHOOL CROSSING		
Condition Satisfied?	Warrant not applicable	
Criteria:	School children crossing the major street?	N/A
	Consideration given to alternative measures?	N/A
	300 feet or more to nearest signal or stop sign?	N/A
	If no, will new signal restrict progressive movement?*	N/A
	Minimum of 20 children crossing in peak hour?	N/A
	Engineering study shows inadequate gaps in traffic?*	N/A
*Include supporting documentation		

WARRANT 6, COORDINATED SIGNAL SYSTEM		
Condition Satisfied?	Warrant not met	
Criteria:	One-way or Two-way traffic?	Two-Way
	Would a proposed signal, working with the adjacent signals, enable progressive operation?	Yes
	Would the resultant signal spacing would be greater than 1,000 feet?	No

WARRANT 7, CRASH EXPERIENCE		
Condition Satisfied?	Warrant not met	
Criteria:	One Year: Total number of angle and pedestrian crashes (all severities):	0
	One Year: Total number of fatal-and-injury angle and pedestrian crashes:	0
	Three Year: Total number of angle and pedestrian crashes (all severities):	1
	Three Year: Total number of fatal-and-injury angle and pedestrian crashes:	0
	Adequate trial of alternatives have failed to reduce crash frequency?	Yes
	Crash history exceeds thresholds?	No
	Traffic volumes or pedestrian volumes exceed 80% thresholds?	No

SIGNAL WARRANT ANALYSIS

WARRANT 8, ROADWAY NETWORK		
Condition Satisfied?		Warrant not met
Criteria:	Intersection of two or more major routes?*	No
	Intersection has a total existing, or immediately projected, entering volume of at least 1,000vph entering during the peak hour of a typical weekday AND has 5-year projected traffic volumes that meet one or more of Warrants 1,2, and 3 during an average weekday?	Yes
	Intersection has total existing, or immediately projected, entering volume of at least 1,000vph for each of any 5 hours of a non-normal business day (Saturday or Sunday)?	No

*Major route defined as:

- Part of the street or highway system that serves as the principal roadway network for through traffic flow
- Rural or suburban highways outside, entering, or transversing a city
- Appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study

WARRANT 9, INTERSECTION NEAR A GRADE CROSSING		
Condition Satisfied?		Warrant not applicable
Criteria:	Adequate trial of alternatives have failed to alleviate safety concerns?	N/A
	Railroad exists on an approach controlled by a STOP or YIELD sign?	N/A
	The center of the nearest track is within 140 feet of stop or yield line?	N/A
	Clear storage distance, D in feet, between near edge of tracks and stop or yield line?	
	One or two approach lanes at railroad crossing?	N/A
	Adjustment Factor for Daily Frequency of Rail Traffic	
	Adjustment Factor for Percentage of High-Occupancy Buses	
	Adjustment Factor for Percentage of Tractor-Trailer Trucks	
	Combined Adjustment Factor	0
	Minor Crossing Approach Volume, vph (with adjustment factor applied):	
	Major Street Volume, vph (total both approaches):	
Above Figure 4C-9 or 4C-10 threshold?	N/A	

ALL-WAY STOP CONTROL WARRANTS				
Condition Satisfied?		Warrants not met		
Warrant A	Number of Legs	4	Threshold	Met?
	Number of Crashes in 12 month Period	0	5	No
	Number of Crashes in 36 month Period	1	6	No
	Criteria met?	No		
Warrant B	Does the minor-road approaches have inadequate sight distance?	No		
	Criteria met?	No		
Warrant C	Is the all-way stop an interim measure?	No		
	Criteria met?	No		
Warrant D	Is the 85% speed > 40mph?	No	Hours Met	Threshold
	Major Street 8-hour Volume, vph:	0	8	Met?
	Criteria met?	No		
Warrant E	Are there other factors to justify stop (high left-turns, 2 residential collectors, significant pedestrian or bicycle activity, etc.)	No		
	Criteria met?	No		

BG CONSULTANTS - TRAFFIC ANALYSIS

BASIC INFORMATION	
Project No.	25-1160
Project Description	Emporia Teap Study
Intersection Location	Merchant St & 7th Ave
Analysis Date	8/30/2025
Additional Notes	
Exist. signal?	Yes
<10,000 people?	No
No. of approaches	4

MAJOR STREET INFORMATION	
Street Name	12th Avenue
Direction	EB WB
Number of Thru Lanes	1
Speed Limit	25
EB Adjacent Parking?	No
WB Adjacent Parking?	No

MINOR STREET INFORMATION	
Street Name	Merchant Street
Direction	NB SB
Number of Thru Lanes	1
Speed Limit	30
NB Adjacent Parking?	No
SB Adjacent Parking?	No
NB Rt Turn to Exclude	0%
SB Rt Turn to Exclude	100%
Stop Sign?	No

TRAFFIC WARRANTS		
	Appl?	Result
Warrant 1, 8-Hour	Yes	Warrant 1 was met
Warrant 2, 4-hour	Yes	Warrant 2 was met
Warrant 3, Peak Hour	No	Warrant 3 not appl.
Warrant 4, Pedestrian	Yes	Warrant not met
Warrant 5, School	No	Warrant 5 not appl.
Warrant 6, Coord. Sig.	Yes	Warrant not met
Warrant 7, Crash	Yes	Warrant not met
Warrant 8, Road Net.	Yes	Warrant 8 was met
Warrant 9, RR Cross.	No	Warrant 9 not appl.
All-Way Stop Warrants	No	Warrants not appl.

CRASH SUMMARY				
	PDO	Injury	Fatal	Total
Angle	2	0	0	2
Rear-end	9	1	0	10
Ped/Bike	0	2	0	2
Other	4	0	0	4
TOTAL	15	3	0	18
CR _{int} =	0.57			
C.I. =	0.42			

TURN LANE INFORMATION				
EB/WB Analysis		2-Lane		
NB/SB Analysis		2-Lane		
	Exist?	Len. (ft.)	Taper Analysis	Turn Lane Analysis
NB Rt	No		Criteria N/A	Criteria N/A
NB Lt	Yes	85	---	Criteria met
SB Rt	Yes	185	Criteria met	Criteria not met
SB Lt	Yes	125	---	Criteria met
EB Rt	No		Criteria N/A	Criteria N/A
EB Lt	Yes	115	---	Criteria met
WB Rt	Yes	110	Criteria met	Criteria met
WB Lt	Yes	90	---	Criteria met
Notes:	The analysis presented applies KDOT's Access Management Criteria for highways to assess whether speed and traffic volumes meet the thresholds to justify a turn lane. For locations with posted speeds below 40 mph, the 40-mph criteria were applied. It is important to note that these criteria are intended for highway conditions and are used here only as supplemental information. The actual determination of whether a turn lane is warranted should not rely on this analysis alone but should also consider engineering judgment and other contributing factors, such as site geometry, intersection capacity, level of service (LOS), and crash history.			

PEAK HOUR SUMMARY			
AM Peak	7:30 AM	to	8:30 AM
	1,153 veh.		
Mid Day Peak	12:00 PM	to	1:00 PM
	1,297 veh.		
PM Peak	4:45 PM	to	5:45 PM
	1,607 veh.		
Peak Hour	4:45 PM	to	5:45 PM
	1,607 veh.		
24-hour Total	17,433 veh.		

CRITICAL CRASH RATE		
N =	5	Years
r =	1	c/mev
$tmev = \frac{AADT \times N \times 365 \frac{\text{days}}{\text{year}}}{10^6}$ $= 31.82$ $CCR_{int} = r + p \times \sqrt{\frac{r}{mev}} + \frac{1}{2 \times mev}$ $= 1.36$		

PEAK HOUR TURNING MOVEMENTS

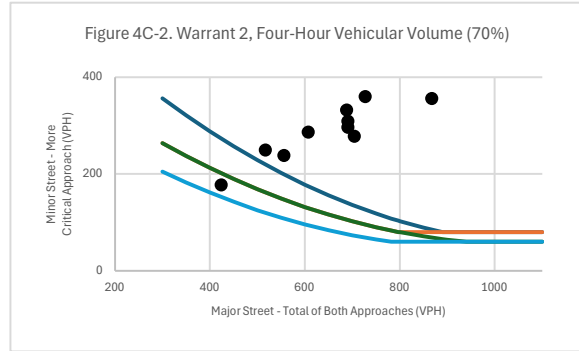
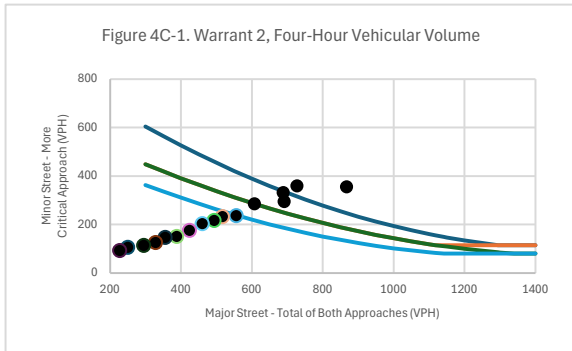
	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
	(West Leg)			(East Leg)			(South Leg)			(North Leg)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM												
7:30 AM	77	142	39	14	209	194	23	93	19	90	156	97
1,153 veh.		258			417			135			343	
PEDS		1			5			2			1	
BIKES			0			0			1			1
7:30 AM	11	30	7	4	68	64	4	19	3	23	36	30
7:45 AM	35	46	12	4	65	66	9	39	1	32	52	26
8:00 AM	13	43	10	0	44	36	6	23	8	17	39	24
8:15 AM	18	23	10	6	32	28	4	12	7	18	29	17
Max:		93			136			49			110	
Total:		258			417			135			343	
PHF		0.69			0.77			0.69			0.78	
Trucks	2	6	0	2	2	8	0	2	3	1	2	5
Truck %	2.6%	4.2%	0.0%	14.3%	1.0%	4.1%	0.0%	2.2%	15.8%	1.1%	1.3%	5.2%
Adjacent Parking?		No			No			No			No	
MID												
12:00 PM	51	164	56	35	194	194	40	156	29	126	178	74
1,297 veh.		271			423			225			378	
PEDS		3			24			5			6	
BIKES			0			0			0			0
12:00 PM	12	38	14	11	55	57	17	44	3	38	47	20
11:45 AM	16	46	7	11	47	46	9	32	8	32	62	19
12:00 PM	12	38	14	11	55	57	17	44	3	38	47	20
12:15 PM	13	41	14	9	41	52	8	34	8	28	47	22
Max:		69			123			64			113	
Total:		265			452			227			420	
PHF		0.96			0.92			0.89			0.93	
Trucks	1	1	0	1	2	2	2	7	0	1	9	3
Truck %	2.0%	0.6%	0.0%	2.9%	1.0%	1.0%	5.0%	4.5%	0.0%	0.8%	5.1%	4.1%
Adjacent Parking?		No			No			No			No	
PM												
4:45 PM	58	242	70	57	221	208	46	194	36	151	225	99
1,607 veh.		370			486			276			475	
PEDS		12			17			8			10	
BIKES			0			0			1			2
4:45 PM	18	59	15	12	57	48	7	44	7	37	55	29
5:00 PM	19	70	18	26	67	60	13	51	9	32	55	30
5:15 PM	11	62	24	9	61	56	15	56	10	39	70	24
5:30 PM	10	51	13	10	36	44	11	43	10	43	45	16
Max:		107			153			81			133	
Total:		370			486			276			475	
PHF		0.86			0.79			0.85			0.89	
Trucks	0	0	0	0	0	0	0	4	0	2	3	2
Truck %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	0.0%	1.3%	1.3%	2.0%
Adjacent Parking?		No			No			No			No	

SIGNAL WARRANT ANALYSIS

WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME			
	CONDITION A (100%)	CONDITION B (100%)	CONDITION A/B (80%)*
Condition Satisfied?	YES	NO	YES
Criteria Threshold	8	8	8
Hours met:	11	1	8
Notes:	Condition A (100%) was met. Combination of A/B (80%) was met.		

*May only be used after adequate trial of other remedial measures.

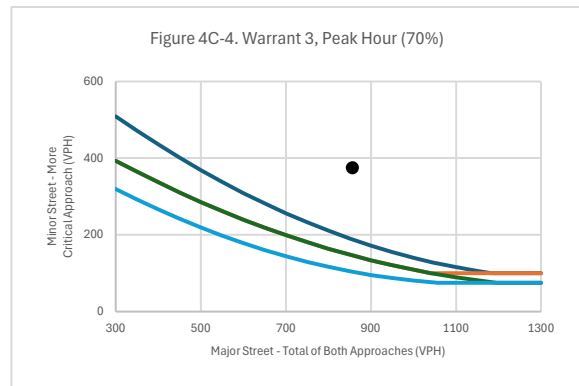
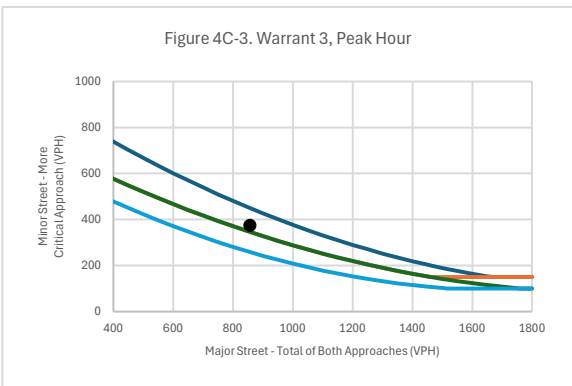
WARRANT 2, FOUR-HOUR VEHICULAR VOLUME		
	Four-Hour Vehicular Volume (100%)	Four-Hour Vehicular Volume (70%)
Warrant Satisfied?	YES	N/A
Criteria Threshold	4	N/A
Hours met:	9	N/A
Notes:	4-Hour Criteria (100%) was met.	



Legend

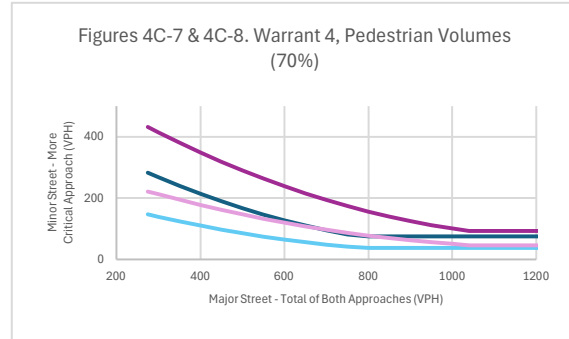
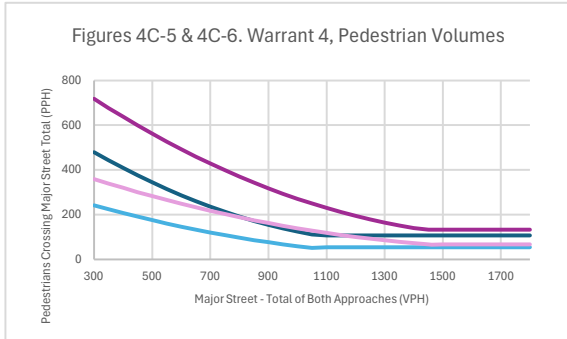
— 2+ Major / 2+ Minor
 — 1 Major / 2+ Minor
 — 2+ Major / 1 Minor
 — 1 Major / 1 Minor

WARRANT 3, PEAK HOUR				
Is the intersection near a facility that attracts or discharges large numbers of vehicles over a short time?				No
Notes:	Warrant 3 is not applicable based on a lack of nearby shift change facilities.			
Criteria A Information		Threshold	Peak Hour	4:45 PM
Is Criteria A applicable?	No		Minor VPH	376
Total stopped-time Delay (hours):			Total VPH	N/A
1. Does delay exceed threshold?	N/A	N/A	Criteria B Information	
2. Does minor exceed VPH threshold?	N/A	N/A	Criteria Satisfied?	YES
3. Does total exceed VPH threshold?	N/A	N/A	Notes (see charts below):	N/A
Criteria Satisfied?	N/A	N/A		
Notes:	Warrant 3 was met			



SIGNAL WARRANT ANALYSIS

WARRANT 4, PEDESTRIAN VOLUME	
Crossing speed < 3.5 feet per second?	No
Major street have a median or refuge island?	No
Nearby signal/stop sign within 300'?	No
Warrant Satisfied?	No
Notes:	



Legend

- Condition A: Four-Hour Volume
- Condition B: Peak Hour Volume
- Condition A: Four-Hour Volume * 3.5fps
- Condition B: Peak Hour Volume * 3.5 Speed

WARRANT 5, SCHOOL CROSSING		
Condition Satisfied?	Warrant not applicable	
Criteria:	School children crossing the major street?	N/A
	Consideration given to alternative measures?	N/A
	300 feet or more to nearest signal or stop sign?	N/A
	If no, will new signal restrict progressive movement?*	N/A
	Minimum of 20 children crossing in peak hour?	N/A
	Engineering study shows inadequate gaps in traffic?*	N/A
*Include supporting documentation		

WARRANT 6, COORDINATED SIGNAL SYSTEM		
Condition Satisfied?	Warrant not met	
Criteria:	One-way or Two-way traffic?	Two-Way
	Would a proposed signal, working with the adjacent signals, enable progressive operation?	Yes
	Would the resultant signal spacing would be greater than 1,000 feet?	No

WARRANT 7, CRASH EXPERIENCE		
Condition Satisfied?	Warrant not met	
Criteria:	One Year: Total number of angle and pedestrian crashes (all severities):	0
	One Year: Total number of fatal-and-injury angle and pedestrian crashes:	0
	Three Year: Total number of angle and pedestrian crashes (all severities):	1
	Three Year: Total number of fatal-and-injury angle and pedestrian crashes:	0
	Adequate trial of alternatives have failed to reduce crash frequency?	Yes
	Crash history exceeds thresholds?	No
	Traffic volumes or pedestrian volumes exceed 80% thresholds?	Yes

SIGNAL WARRANT ANALYSIS

WARRANT 8, ROADWAY NETWORK		
Condition Satisfied?		Warrant 8 was met
Criteria:	Intersection of two or more major routes?*	Yes
	Intersection has a total existing, or immediately projected, entering volume of at least 1,000vph entering during the peak hour of a typical weekday AND has 5-year projected traffic volumes that meet one or more of Warrants 1,2, and 3 during an average weekday?	Yes
	Intersection has total existing, or immediately projected, entering volume of at least 1,000vph for each of any 5 hours of a non-normal business day (Saturday or Sunday)?	No

*Major route defined as:

- Part of the street or highway system that serves as the principal roadway network for through traffic flow
- Rural or suburban highways outside, entering, or transverseing a city
- Appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study

WARRANT 9, INTERSECTION NEAR A GRADE CROSSING		
Condition Satisfied?		Warrant not applicable
Criteria:	Adequate trial of alternatives have failed to alleviate safety concerns?	N/A
	Railroad exists on an approach controlled by a STOP or YIELD sign?	N/A
	The center of the nearest track is within 140 feet of stop or yield line?	N/A
	Clear storage distance, D in feet, between near edge of tracks and stop or yield line?	
	One or two approach lanes at railroad crossing?	N/A
	Adjustment Factor for Daily Frequency of Rail Traffic	
	Adjustment Factor for Percentage of High-Occupancy Busses	
	Adjustment Factor for Percentage of Tractor-Trailer Trucks	
	Combined Adjustment Factor	0
	Minor Crossing Approach Volume, vph (with adjustment factor applied):	
	Major Street Volume, vph (total both approaches):	
Above Figure 4C-9 or 4C-10 threshold?	N/A	

ALL-WAY STOP CONTROL WARRANTS				
Condition Satisfied?		Warrants not applicable		
Warrant A	Number of Legs	4	Threshold	Met?
	Number of Crashes in 12 month Period	0	5	No
	Number of Crashes in 36 month Period	1	6	No
	Criteria met?	No		
Warrant B	Does the minor-road approaches have inadequate sight distance?	No		
	Criteria met?	No		
Warrant C	Is the all-way stop an interim measure?	No		
	Criteria met?	No		
Warrant D	Is the 85% speed > 40mph?	No	Hours Met	Threshold
	Major Street 8-hour Volume, vph:	13.75	8	Met?
	Criteria met?	Yes		
Warrant E	Are there other factors to justify stop (high left-turns, 2 residential collectors, significant pedestrian or bicycle activity, etc.)	No		
	Criteria met?	No		

BG CONSULTANTS - TRAFFIC ANALYSIS

BASIC INFORMATION	
Project No.	25-1160
Project Description	Emporia Teap Study
Intersection Location	Merchant St & 18th Ave
Analysis Date	8/30/2025
Additional Notes	
Exist. signal?	Yes
<10,000 people?	No
No. of approaches	4

MAJOR STREET INFORMATION		
Street Name	Merchant Street	
Direction	NB	SB
Number of Thru Lanes	1	
Speed Limit	30	
NB Adjacent Parking?	No	
SB Adjacent Parking?	No	

MINOR STREET INFORMATION		
Street Name	18th Avenue	
Direction	EB	WB
Number of Thru Lanes	1	
Speed Limit	30	
EB Adjacent Parking?	No	
WB Adjacent Parking?	No	
EB Rt Turn to Exclude	0%	
WB Rt Turn to Exclude	0%	
Stop Sign?	Yes	

TRAFFIC WARRANTS		
	Appl?	Result
Warrant 1, 8-Hour	Yes	Warrant not met
Warrant 2, 4-hour	Yes	Warrant not met
Warrant 3, Peak Hour	No	Warrant 3 not appl.
Warrant 4, Pedestrian	Yes	Warrant not met
Warrant 5, School	No	Warrant 5 not appl.
Warrant 6, Coord. Sig.	Yes	Warrant not met
Warrant 7, Crash	No	Warrant 7 not appl.
Warrant 8, Road Net.	Yes	Warrant not met
Warrant 9, RR Cross.	No	Warrant 9 not appl.
All-Way Stop Warrants	No	Warrants not appl.

CRASH SUMMARY				
	PDO	Injury	Fatal	Total
Angle				0
Rear-end				0
Ped/Bike				0
Other				0
TOTAL	0	0	0	0
CR _{int} =	0.00			
C.I. =	0.00			

TURN LANE INFORMATION				
EB/WB Analysis		2-Lane		
NB/SB Analysis		2-Lane		
	Exist?	Len. (ft.)	Taper Analysis	Turn Lane Analysis
NB Rt	No		Criteria met	Criteria not met
NB Lt	Yes	90	---	Criteria met
SB Rt	No		Criteria N/A	Criteria N/A
SB Lt	Yes	100	---	Criteria met
EB Rt	No		Criteria N/A	Criteria N/A
EB Lt	No		---	Criteria met
WB Rt	No		Criteria N/A	Criteria N/A
WB Lt	No		---	Criteria not met
Notes:	The analysis presented applies KDOT's Access Management Criteria for highways to assess whether speed and traffic volumes meet the thresholds to justify a turn lane. For locations with posted speeds below 40 mph, the 40-mph criteria were applied. It is important to note that these criteria are intended for highway conditions and are used here only as supplemental information. The actual determination of whether a turn lane is warranted should not rely on this analysis alone but should also consider engineering judgment and other contributing factors, such as site geometry, intersection capacity, level of service (LOS), and crash history.			

PEAK HOUR SUMMARY			
AM Peak	7:30 AM	to	8:30 AM
	661 veh.		
Mid Day Peak	11:45 AM	to	12:45 PM
	598 veh.		
PM Peak	4:15 PM	to	5:15 PM
	788 veh.		
Peak Hour	4:15 PM	to	5:15 PM
	788 veh.		
24-hour Total	8,483 veh.		

CRITICAL CRASH RATE		
N =	5	Years
r =	1	c/mev
$tmev = \frac{AADT \times N \times 365 \frac{\text{days}}{\text{year}}}{10^6}$ $= 15.48$ $CCR_{int} = r + p \times \sqrt{\frac{r}{mev}} + \frac{1}{2 \times mev}$ $= 1.53$		

PEAK HOUR TURNING MOVEMENTS

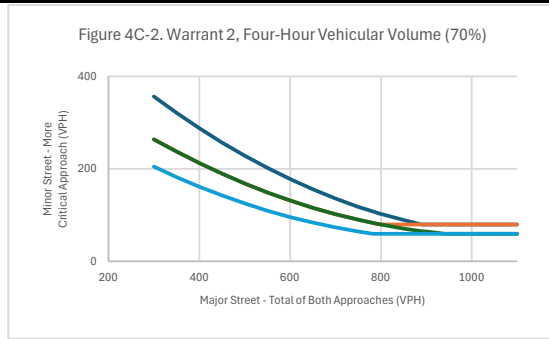
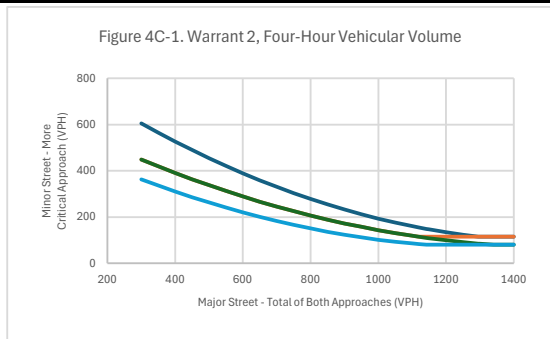
	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
	(West Leg)			(East Leg)			(South Leg)			(North Leg)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM												
7:30 AM	41	14	79	0	1	3	31	159	14	15	266	38
661 veh.		134			4			204			319	
PEDS		2			0			0			0	
BIKES			0			0			0			0
7:30 AM	11	3	19	0	0	1	9	40	1	1	76	8
7:45 AM	8	8	27	0	0	1	6	41	5	7	90	14
8:00 AM	8	2	16	0	1	0	9	41	6	3	61	10
8:15 AM	14	1	17	0	0	1	7	37	2	4	39	6
Max:		43			1			56			111	
Total:		134			4			204			319	
PHF		0.78			1.00			0.91			0.72	
Trucks	1	0	0	0	0	0	0	11	0	2	6	2
Truck %	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.9%	0.0%	13.3%	2.3%	5.3%
Adjacent Parking?		No			No			No			No	
MID												
11:45 AM	45	7	43	9	4	11	72	172	3	9	194	29
598 veh.		95			24			247			232	
PEDS		0			0			0			1	
BIKES			0			0			0			0
11:45 AM	9	2	11	3	1	2	23	41	1	1	51	9
11:45 AM	9	2	11	3	1	2	23	41	1	1	51	9
12:00 PM	16	2	8	0	1	2	27	46	2	2	53	11
12:15 PM	10	2	12	2	1	4	12	37	0	3	38	2
Max:		26			7			75			66	
Total:		94			22			254			231	
PHF		0.9			0.79			0.85			0.88	
Trucks	0	0	0	0	0	0	0	6	0	1	8	0
Truck %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.5%	0.0%	11.1%	4.1%	0.0%
Adjacent Parking?		No			No			No			No	
PM												
4:15 PM	49	2	36	5	5	17	118	291	2	4	204	55
788 veh.		87			27			411			263	
PEDS		2			0			0			0	
BIKES			0			0			1			0
4:15 PM	11	0	11	1	1	7	18	84	0	0	49	10
4:30 PM	7	0	8	1	0	3	21	68	0	2	46	15
4:45 PM	12	0	12	0	1	5	33	55	0	2	50	17
5:00 PM	19	2	5	3	3	2	46	84	2	0	59	13
Max:		26			9			132			72	
Total:		87			27			411			263	
PHF		0.84			0.75			0.78			0.91	
Trucks	1	0	0	0	0	0	0	2	0	0	2	1
Truck %	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	1.0%	1.8%
Adjacent Parking?		No			No			No			No	

SIGNAL WARRANT ANALYSIS

WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME			
	CONDITION A (100%)	CONDITION B (100%)	CONDITION A/B (80%)*
Condition Satisfied?	NO	NO	NO
Criteria Threshold	8	8	8
Hours met:	0	0	0
Notes:			

*May only be used after adequate trial of other remedial measures.

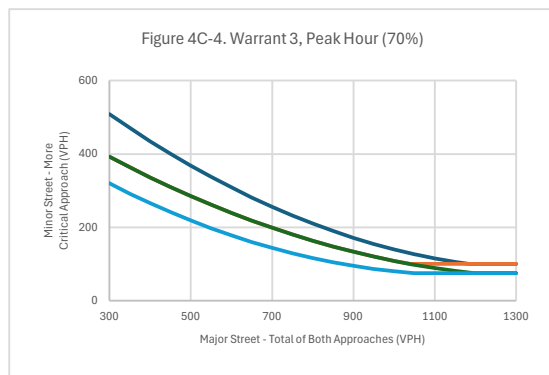
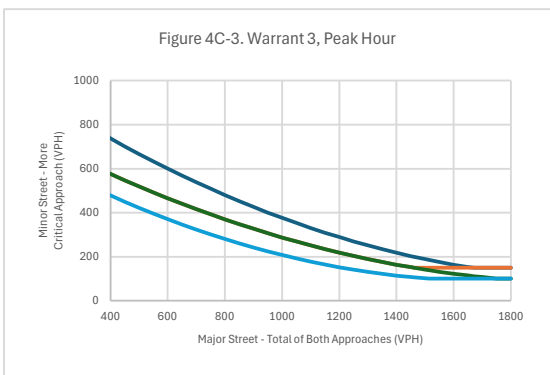
WARRANT 2, FOUR-HOUR VEHICULAR VOLUME		
	Four-Hour Vehicular Volume (100%)	Four-Hour Vehicular Volume (70%)
Warrant Satisfied?	NO	N/A
Criteria Threshold	4	N/A
Hours met:	0	N/A
Notes:		



Legend

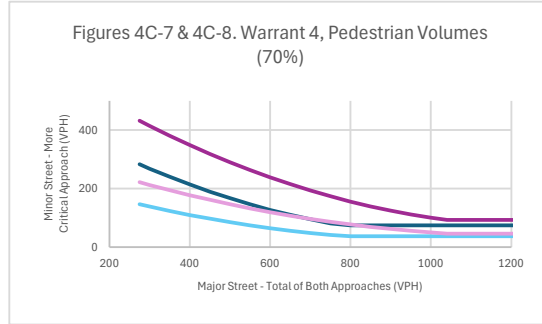
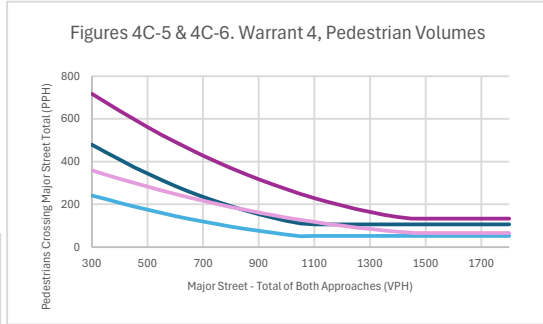
— 2+ Major / 2+ Minor
 — 1 Major / 2+ Minor
 — 2+ Major / 1 Minor
 — 1 Major / 1 Minor

WARRANT 3, PEAK HOUR				
Is the intersection near a facility that attracts or discharges large numbers of vehicles over a short time?				No
Notes: Warrant 3 is not applicable based on a lack of nearby shift change facilities.				
Criteria A Information		Threshold	Peak Hour	4:15 PM
Is Criteria A applicable?	Yes		Minor VPH	87
Total stopped-time Delay (hours):			Total VPH	788
Criteria B Information				
1. Does delay exceed threshold?	Error	4 Hours	Criteria Satisfied?	NO
2. Does minor exceed VPH threshold?	No	100 VPH	Notes (see charts below):	Criteria was not met
3. Does total exceed VPH threshold?	Approach Error	800 VPH		
Criteria Satisfied?	No	Criteria not met.		
Notes: Warrant not met				



SIGNAL WARRANT ANALYSIS

WARRANT 4, PEDESTRIAN VOLUME	
Crossing speed < 3.5 feet per second?	No
Major street have a median or refuge island?	No
Nearby signal/stop sign within 300'?	No
Warrant Satisfied?	No
Notes:	



Legend

- Condition A: Four-Hour Volume
- Condition A: Four-Hour Volume* 3.5tps
- Condition B: Peak Hour Volume
- Condition B: Peak Hour Volume* 3.5 Speed

WARRANT 5, SCHOOL CROSSING		
Condition Satisfied?	Warrant not applicable	
Criteria:	School children crossing the major street?	N/A
	Consideration given to alternative measures?	N/A
	300 feet or more to nearest signal or stop sign?	N/A
	If no, will new signal restrict progressive movement?*	N/A
	Minimum of 20 children crossing in peak hour?	N/A
	Engineering study shows inadequate gaps in traffic?*	N/A
*Include supporting documentation		

WARRANT 6, COORDINATED SIGNAL SYSTEM		
Condition Satisfied?	Warrant not met	
Criteria:	One-way or Two-way traffic?	Two-Way
	Would a proposed signal, working with the adjacent signals, enable progressive operation?	Yes
	Would the resultant signal spacing would be greater than 1,000 feet?	No

WARRANT 7, CRASH EXPERIENCE		
Condition Satisfied?	Warrant not applicable	
Criteria:	One Year: Total number of angle and pedestrian crashes (all severities):	
	One Year: Total number of fatal-and-injury angle and pedestrian crashes:	
	Three Year: Total number of angle and pedestrian crashes (all severities):	
	Three Year: Total number of fatal-and-injury angle and pedestrian crashes:	
	Adequate trial of alternatives have failed to reduce crash frequency?	
	Crash history exceeds thresholds?	No
	Traffic volumes or pedestrian volumes exceed 80% thresholds?	No

SIGNAL WARRANT ANALYSIS

WARRANT 8, ROADWAY NETWORK		
Condition Satisfied?	Warrant not met	
Criteria:	Intersection of two or more major routes?*	No
	Intersection has a total existing, or immediately projected, entering volume of at least 1,000vph entering during the peak hour of a typical weekday AND has 5-year projected traffic volumes that meet one or more of Warrants 1,2, and 3 during an average weekday?	No
	Intersection has total existing, or immediately projected, entering volume of at least 1,000vph for each of any 5 hours of a non-normal business day (Saturday or Sunday)?	No

*Major route defined as:

- Part of the street or highway system that serves as the principal roadway network for through traffic flow
- Rural or suburban highways outside, entering, or transversing a city
- Appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study

WARRANT 9, INTERSECTION NEAR A GRADE CROSSING		
Condition Satisfied?	Warrant not applicable	
Criteria:	Adequate trial of alternatives have failed to alleviate safety concerns?	N/A
	Railroad exists on an approach controlled by a STOP or YIELD sign?	N/A
	The center of the nearest track is within 140 feet of stop or yield line?	N/A
	Clear storage distance, D in feet, between near edge of tracks and stop or yield line?	
	One or two approach lanes at railroad crossing?	N/A
	Adjustment Factor for Daily Frequency of Rail Traffic	
	Adjustment Factor for Percentage of High-Occupancy Busses	
	Adjustment Factor for Percentage of Tractor-Trailer Trucks	
	Combined Adjustment Factor	0
	Minor Crossing Approach Volume, vph (with adjustment factor applied):	
	Major Street Volume, vph (total both approaches):	
Above Figure 4C-9 or 4C-10 threshold?	N/A	

ALL-WAY STOP CONTROL WARRANTS				
Condition Satisfied?	Warrants not applicable			
Warrant A	Number of Legs	4	Threshold	Met?
	Number of Crashes in 12 month Period	0	5	No
	Number of Crashes in 36 month Period	0	6	No
	Criteria met?	No		
Warrant B	Does the minor-road approaches have inadequate sight distance?	No		
	Criteria met?	No		
Warrant C	Is the all-way stop an interim measure?	No		
	Criteria met?	No		
Warrant D	Is the 85% speed > 40mph?	No	Hours Met	Threshold
	Major Street 8-hour Volume, vph:	0	8	No
	Criteria met?	No		
Warrant E	Are there other factors to justify stop (high left-turns, 2 residential collectors, significant pedestrian or bicycle activity, etc.)	No		
	Criteria met?	No		

APPENDIX D: SYNCHRO ANALYSIS

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	22	23	11	0	11	15	9	86	2	9	74	21
Future Vol, veh/h	22	23	11	0	11	15	9	86	2	9	74	21
Conflicting Peds, #/hr	1	0	1	3	0	3	0	0	0	2	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	95	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	72	72	72	81	81	81	76	76	76
Heavy Vehicles, %	5	4	0	0	18	0	0	12	0	0	8	0
Mvmt Flow	28	29	14	0	15	21	11	106	2	12	97	28



















Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	276	270	116	270	282	112	127	0	0	111	0	0
Stage 1	137	137	-	132	132	-	-	-	-	-	-	-
Stage 2	139	133	-	139	151	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.54	6.2	7.1	6.68	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.15	5.54	-	6.1	5.68	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.54	-	6.1	5.68	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.036	3.3	3.5	4.162	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	670	633	941	686	600	946	1472	-	-	1492	-	-
Stage 1	859	779	-	877	758	-	-	-	-	-	-	-
Stage 2	857	783	-	869	743	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	626	621	937	631	589	942	1469	-	-	1489	-	-
Mov Cap-2 Maneuver	626	621	-	631	589	-	-	-	-	-	-	-
Stage 1	851	772	-	868	750	-	-	-	-	-	-	-
Stage 2	812	775	-	814	736	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v11.04			10.03		0.69		0.64	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1469	-	-	667	751	1489	-	-
HCM Lane V/C Ratio	0.008	-	-	0.108	0.048	0.008	-	-
HCM Control Delay (s/veh)	7.5	-	-	11	10	7.4	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.2	0	-	-

HCM 7th Signalized Intersection Summary
AM Peak (Existing)

9: Commercial St & 4th Ave
09/25/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	23	11	0	11	15	9	86	2	9	74	21
Future Volume (veh/h)	22	23	11	0	11	15	9	86	2	9	74	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1841	1900	1900	1633	1900	1900	1722	1900	1900	1781	1900
Adj Flow Rate, veh/h	28	29	14	0	15	21	11	106	2	12	97	28
Peak Hour Factor	0.78	0.78	0.78	0.72	0.72	0.72	0.81	0.81	0.81	0.76	0.76	0.76
Percent Heavy Veh, %	5	4	0	0	18	0	0	12	0	0	8	0
Cap, veh/h	296	277	113	0	218	306	605	606	11	623	478	138
Arrive On Green	0.40	0.40	0.40	0.00	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	460	693	283	0	546	764	1283	1516	29	1306	1195	345
Grp Volume(v), veh/h	71	0	0	0	0	36	11	0	108	12	0	125
Grp Sat Flow(s),veh/h/ln	1436	0	0	0	0	1310	1283	0	1545	1306	0	1540
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.8	0.3	0.0	2.0	0.3	0.0	2.4
Cycle Q Clear(g_c), s	1.3	0.0	0.0	0.0	0.0	0.8	2.6	0.0	2.0	2.3	0.0	2.4
Prop In Lane	0.39		0.20	0.00		0.58	1.00		0.02	1.00		0.22
Lane Grp Cap(c), veh/h	686	0	0	0	0	524	605	0	618	623	0	616
V/C Ratio(X)	0.10	0.00	0.00	0.00	0.00	0.07	0.02	0.00	0.17	0.02	0.00	0.20
Avail Cap(c_a), veh/h	686	0	0	0	0	524	605	0	618	623	0	616
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.5	0.0	0.0	0.0	0.0	8.3	9.7	0.0	8.7	9.5	0.0	8.8
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.6	0.1	0.0	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.7	0.1	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	8.8	0.0	0.0	0.0	0.0	8.6	9.7	0.0	9.3	9.5	0.0	9.6
LnGrp LOS	A					A	A		A	A		A
Approach Vol, veh/h		71			36			119				137
Approach Delay, s/veh		8.8			8.6			9.4				9.6
Approach LOS		A			A			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		4.6		3.3		4.4		2.8				
Green Ext Time (p_c), s		0.4		0.2		0.5		0.1				
Intersection Summary												
HCM 7th Control Delay, s/veh				9.2								
HCM 7th LOS				A								

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	25	40	15	4	26	22	5	128	9	18	121	19
Future Vol, veh/h	25	40	15	4	26	22	5	128	9	18	121	19
Conflicting Peds, #/hr	3	0	3	5	0	5	3	0	3	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	95	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	72	72	72	85	85	85	88	88	88
Heavy Vehicles, %	4	3	0	0	0	0	0	2	0	0	1	0
Mvmt Flow	29	46	17	6	36	31	6	151	11	20	138	22



















Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	378	368	156	377	374	164	162	0	0	164	0	0
Stage 1	192	192	-	171	171	-	-	-	-	-	-	-
Stage 2	185	176	-	206	203	-	-	-	-	-	-	-
Critical Hdwy	7.14	6.53	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.14	5.53	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.14	5.53	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.536	4.027	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	576	559	895	584	560	886	1429	-	-	1427	-	-
Stage 1	805	740	-	836	761	-	-	-	-	-	-	-
Stage 2	812	752	-	800	737	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	507	546	888	512	547	879	1425	-	-	1422	-	-
Mov Cap-2 Maneuver	507	546	-	512	547	-	-	-	-	-	-	-
Stage 1	791	727	-	830	756	-	-	-	-	-	-	-
Stage 2	739	746	-	721	725	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	12.47		11.26		0.27		0.86	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1425	-	-	573	647	1422	-	-
HCM Lane V/C Ratio	0.004	-	-	0.16	0.112	0.014	-	-
HCM Control Delay (s/veh)	7.5	-	-	12.5	11.3	7.6	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0.4	0	-	-

HCM 7th Signalized Intersection Summary
 PM Peak (Existing)

9: Commercial St & 4th Ave
 09/25/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	40	15	4	26	22	5	128	9	18	121	19
Future Volume (veh/h)	25	40	15	4	26	22	5	128	9	18	121	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	0.99		0.97	1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1856	1900	1900	1900	1900	1900	1870	1900	1900	1885	1900
Adj Flow Rate, veh/h	29	46	17	6	36	31	6	151	11	20	138	22
Peak Hour Factor	0.87	0.87	0.87	0.72	0.72	0.72	0.85	0.85	0.85	0.88	0.88	0.88
Percent Heavy Veh, %	4	3	0	0	0	0	0	2	0	0	1	0
Cap, veh/h	243	342	109	103	340	264	628	620	45	576	569	91
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.80	0.80	0.80
Sat Flow, veh/h	345	854	272	42	851	659	1246	1550	113	1240	1423	227
Grp Volume(v), veh/h	92	0	0	73	0	0	6	0	162	20	0	160
Grp Sat Flow(s),veh/h/ln	1471	0	0	1552	0	0	1246	0	1663	1240	0	1650
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	2.9	0.2	0.0	1.1
Cycle Q Clear(g_c), s	1.6	0.0	0.0	1.3	0.0	0.0	1.2	0.0	2.9	3.2	0.0	1.1
Prop In Lane	0.32		0.18	0.08		0.42	1.00		0.07	1.00		0.14
Lane Grp Cap(c), veh/h	694	0	0	707	0	0	628	0	665	576	0	660
V/C Ratio(X)	0.13	0.00	0.00	0.10	0.00	0.00	0.01	0.00	0.24	0.03	0.00	0.24
Avail Cap(c_a), veh/h	694	0	0	707	0	0	628	0	665	576	0	660
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.6	0.0	0.0	8.5	0.0	0.0	8.8	0.0	9.0	3.5	0.0	2.8
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.9	0.1	0.0	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	0.4	0.0	0.0	0.0	0.0	1.0	0.1	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	9.0	0.0	0.0	8.8	0.0	0.0	8.8	0.0	9.8	3.6	0.0	3.7
LnGrp LOS	A			A			A		A	A		A
Approach Vol, veh/h		92			73			168				180
Approach Delay, s/veh		9.0			8.8			9.8				3.7
Approach LOS		A			A			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		4.9		3.6		5.2		3.3				
Green Ext Time (p_c), s		0.7		0.3		0.7		0.3				
Intersection Summary												
HCM 7th Control Delay, s/veh				7.4								
HCM 7th LOS				A								

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↘			↘	
Traffic Vol, veh/h	0	0	22	0	1	12	0	108	4	0	99	17
Future Vol, veh/h	0	0	22	0	1	12	0	108	4	0	99	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	24	0	1	13	0	117	4	0	108	18

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	117	-	246	120	-	0	0	-	-	0
Stage 1	-	-	-	-	120	-	-	-	-	-	-	-
Stage 2	-	-	-	-	126	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	6.52	6.22	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	4.018	3.318	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	935	0	657	932	0	-	-	0	-	-
Stage 1	0	0	-	0	797	-	0	-	-	0	-	-
Stage 2	0	0	-	0	792	-	0	-	-	0	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	935	-	657	932	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	657	-	-	-	-	-	-	-
Stage 1	-	-	-	-	797	-	-	-	-	-	-	-
Stage 2	-	-	-	-	792	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	8.95		8.92		0		0	
HCM LOS	A		A					

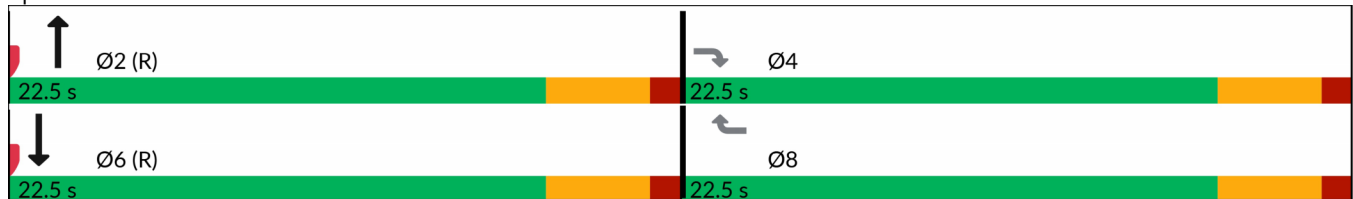
Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	935	932	-	-
HCM Lane V/C Ratio	-	-	0.026	0.014	-	-
HCM Control Delay (s/veh)	-	-	9	8.9	-	-
HCM Lane LOS	-	-	A	A	-	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-	-

Timings
AM Peak (Existing)

	↙	↘	↑	↓
Lane Group	EBR	WBR	NBT	SBT
Lane Configurations	↗	↗	↗	↗
Traffic Volume (vph)	22	12	108	99
Future Volume (vph)	22	12	108	99
Turn Type	Perm	Perm	NA	NA
Protected Phases			2	6
Permitted Phases	4	8		
Detector Phase	4	8	2	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	Max	Max	Max	Max
Act Effct Green (s)	18.0	18.0	18.0	18.0
Actuated g/C Ratio	0.40	0.40	0.40	0.40
v/c Ratio	0.03	0.02	0.21	0.21
Control Delay (s/veh)	0.0	0.0	7.1	8.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	0.0	0.0	7.1	8.8
LOS	A	A	A	A
Approach Delay (s/veh)			7.1	8.8
Approach LOS			A	A

Intersection Summary	
Cycle Length: 45	
Actuated Cycle Length: 45	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 45	
Control Type: Pretimed	
Maximum v/c Ratio: 0.21	
Intersection Signal Delay (s/veh): 6.8	Intersection LOS: A
Intersection Capacity Utilization 30.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 21: 5th Ave



Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↘			↘	
Traffic Vol, veh/h	0	0	13	0	0	23	0	173	15	0	142	13
Future Vol, veh/h	0	0	13	0	0	23	0	173	15	0	142	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	14	0	0	25	0	188	16	0	154	14

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	161	-	-	196	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	-	6.22	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	-	3.318	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	884	0	0	845	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	884	-	-	845	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	9.1		9.4		0		0	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	884	845	-	-
HCM Lane V/C Ratio	-	-	0.016	0.03	-	-
HCM Control Delay (s/veh)	-	-	9.1	9.4	-	-
HCM Lane LOS	-	-	A	A	-	-
HCM 95th %tile Q (veh)	-	-	0	0.1	-	-

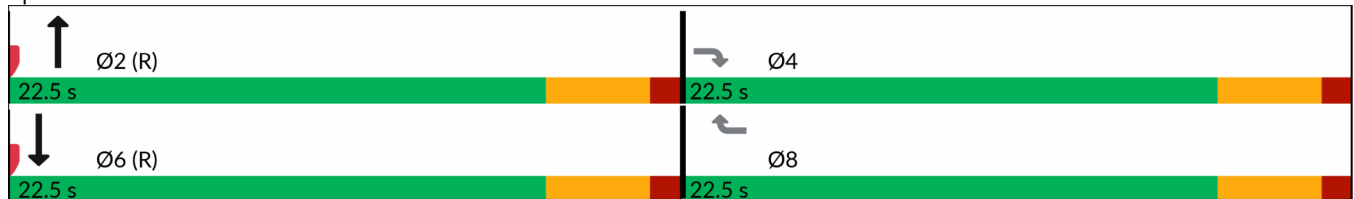
Timings
PM Peak (Existing)

	↙	↘	↑	↓
Lane Group	EBR	WBR	NBT	SBT
Lane Configurations	↗	↗	↖	↖
Traffic Volume (vph)	13	23	173	142
Future Volume (vph)	13	23	173	142
Turn Type	Perm	Perm	NA	NA
Protected Phases			2	6
Permitted Phases	4	8		
Detector Phase	4	8	2	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	Max	Max	Max	Max
Act Effect Green (s)	18.0	18.0	18.0	18.0
Actuated g/C Ratio	0.40	0.40	0.40	0.40
v/c Ratio	0.02	0.04	0.32	0.26
Control Delay (s/veh)	0.0	0.1	7.5	9.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	0.0	0.1	7.5	9.7
LOS	A	A	A	A
Approach Delay (s/veh)			7.5	9.7
Approach LOS			A	A

Intersection Summary

Cycle Length: 45
 Actuated Cycle Length: 45
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 45
 Control Type: Pretimed
 Maximum v/c Ratio: 0.32
 Intersection Signal Delay (s/veh): 7.6
 Intersection LOS: A
 Intersection Capacity Utilization 32.9%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 21: 5th Ave



HCM 7th Signalized Intersection Summary
AM Peak (Existing)

Commercial St & 6th Ave
10/10/2025

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	222	39	17	240	25	51	52	19	29	59	35
Future Volume (veh/h)	43	222	39	17	240	25	51	52	19	29	59	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1781	1900	1722	1811	1900	1752	1752	1826	1693	1826	1900
Adj Flow Rate, veh/h	49	252	44	19	270	28	67	68	25	35	71	42
Peak Hour Factor	0.88	0.88	0.88	0.89	0.89	0.89	0.76	0.76	0.76	0.83	0.83	0.83
Percent Heavy Veh, %	2	8	0	12	6	0	10	10	5	14	5	0
Cap, veh/h	567	1096	188	497	1195	123	582	440	162	585	387	229
Arrive On Green	0.40	0.40	0.40	0.80	0.80	0.80	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1077	2739	471	996	2986	307	1198	1099	404	1178	967	572
Grp Volume(v), veh/h	49	154	142	19	154	144	67	0	93	35	0	113
Grp Sat Flow(s),veh/h/ln	1077	1692	1517	996	1721	1572	1198	0	1503	1178	0	1540
Q Serve(g_s), s	1.3	2.7	2.8	0.3	1.0	1.0	1.7	0.0	1.8	0.9	0.0	2.1
Cycle Q Clear(g_c), s	2.3	2.7	2.8	3.1	1.0	1.0	3.9	0.0	1.8	2.7	0.0	2.1
Prop In Lane	1.00		0.31	1.00		0.20	1.00		0.27	1.00		0.37
Lane Grp Cap(c), veh/h	567	677	607	497	688	629	582	0	601	585	0	616
V/C Ratio(X)	0.09	0.23	0.23	0.04	0.22	0.23	0.12	0.00	0.15	0.06	0.00	0.18
Avail Cap(c_a), veh/h	567	677	607	497	688	629	582	0	601	585	0	616
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.1	8.9	8.9	3.5	2.8	2.8	10.0	0.0	8.6	9.5	0.0	8.7
Incr Delay (d2), s/veh	0.3	0.8	0.9	0.1	0.8	0.8	0.4	0.0	0.5	0.2	0.0	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.9	0.9	0.1	0.4	0.4	0.4	0.0	0.5	0.2	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	9.4	9.7	9.8	3.6	3.6	3.6	10.4	0.0	9.2	9.7	0.0	9.4
LnGrp LOS	A	A	A	A	A	A	B		A	A		A
Approach Vol, veh/h		345			317			160				148
Approach Delay, s/veh		9.7			3.6			9.7				9.5
Approach LOS		A			A			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		5.9		4.8		4.7		5.1				
Green Ext Time (p_c), s		0.5		1.6		0.5		1.4				
Intersection Summary												
HCM 7th Control Delay, s/veh				7.7								
HCM 7th LOS				A								

HCM 7th Signalized Intersection Summary
 PM Peak (Existing)

Commercial St & 6th Ave
 10/10/2025

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	346	64	9	350	22	79	72	26	36	82	50
Future Volume (veh/h)	32	346	64	9	350	22	79	72	26	36	82	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1841	1900	1900	1870	1900	1900	1900	1781	1900	1885	1870
Adj Flow Rate, veh/h	37	402	74	11	438	28	95	87	31	40	90	55
Peak Hour Factor	0.86	0.86	0.86	0.80	0.80	0.80	0.83	0.83	0.83	0.91	0.91	0.91
Percent Heavy Veh, %	0	4	0	0	2	0	0	0	8	0	1	2
Cap, veh/h	503	1175	214	496	1354	86	597	533	190	623	436	266
Arrive On Green	0.80	0.80	0.80	0.80	0.80	0.80	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	940	2938	536	929	3386	216	1262	1332	475	1294	1089	665
Grp Volume(v), veh/h	37	238	238	11	229	237	95	0	118	40	0	145
Grp Sat Flow(s),veh/h/ln	940	1749	1725	929	1777	1825	1262	0	1807	1294	0	1754
Q Serve(g_s), s	0.5	1.7	1.7	0.2	1.6	1.6	2.4	0.0	1.9	0.9	0.0	2.4
Cycle Q Clear(g_c), s	2.1	1.7	1.7	1.9	1.6	1.6	4.8	0.0	1.9	2.8	0.0	2.4
Prop In Lane	1.00		0.31	1.00		0.12	1.00		0.26	1.00		0.38
Lane Grp Cap(c), veh/h	503	699	690	496	711	730	597	0	723	623	0	702
V/C Ratio(X)	0.07	0.34	0.35	0.02	0.32	0.32	0.16	0.00	0.16	0.06	0.00	0.21
Avail Cap(c_a), veh/h	503	699	690	496	711	730	597	0	723	623	0	702
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	3.1	2.9	2.9	3.1	2.9	2.9	10.4	0.0	8.7	9.6	0.0	8.8
Incr Delay (d2), s/veh	0.3	1.3	1.4	0.1	1.2	1.2	0.6	0.0	0.5	0.2	0.0	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.6	0.6	0.0	0.6	0.6	0.6	0.0	0.7	0.2	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	3.4	4.2	4.2	3.2	4.1	4.0	11.0	0.0	9.2	9.8	0.0	9.5
LnGrp LOS	A	A	A	A	A	A	B		A	A		A
Approach Vol, veh/h		513			477			213				185
Approach Delay, s/veh		4.2			4.0			10.0				9.6
Approach LOS		A			A			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		6.8		4.1		4.8		3.9				
Green Ext Time (p_c), s		0.7		2.6		0.7		2.4				
Intersection Summary												
HCM 7th Control Delay, s/veh				5.7								
HCM 7th LOS				A								









Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↘			↘	
Traffic Vol, veh/h	0	0	12	0	0	10	0	113	10	0	115	6
Future Vol, veh/h	0	0	12	0	0	10	0	113	10	0	115	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	13	0	0	11	0	123	11	0	125	7

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	128	-	-	128	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	-	6.22	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	-	3.318	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	922	0	0	922	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	922	-	-	922	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	8.96		8.95		0		0	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NBT	NBR	EBLn1WBLn1	SBT	SBR
Capacity (veh/h)	-	-	922	922	-
HCM Lane V/C Ratio	-	-	0.014	0.012	-
HCM Control Delay (s/veh)	-	-	9	9	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

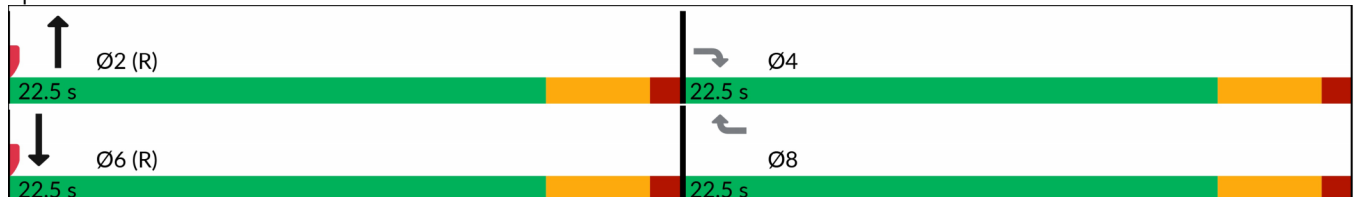
Timings
AM Peak (Existing)

				
Lane Group	EBR	WBR	NBT	SBT
Lane Configurations				
Traffic Volume (vph)	12	10	113	115
Future Volume (vph)	12	10	113	115
Turn Type	Perm	Perm	NA	NA
Protected Phases			2	6
Permitted Phases	4	8		
Detector Phase	4	8	2	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	Max	Max	Max	Max
Act Effect Green (s)	18.0	18.0	18.0	18.0
Actuated g/C Ratio	0.40	0.40	0.40	0.40
v/c Ratio	0.02	0.02	0.24	0.22
Control Delay (s/veh)	0.0	0.0	9.4	9.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	0.0	0.0	9.4	9.6
LOS	A	A	A	A
Approach Delay (s/veh)			9.4	9.6
Approach LOS			A	A

Intersection Summary

Cycle Length: 45
 Actuated Cycle Length: 45
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 45
 Control Type: Pretimed
 Maximum v/c Ratio: 0.24
 Intersection Signal Delay (s/veh): 8.3
 Intersection LOS: A
 Intersection Capacity Utilization 29.7%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 15: Commercial St & 7th Ave



Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↘			↘	
Traffic Vol, veh/h	0	0	31	0	0	7	0	143	6	0	151	11
Future Vol, veh/h	0	0	31	0	0	7	0	143	6	0	151	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	34	0	0	8	0	155	7	0	164	12

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	170	-	-	159	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	-	6.22	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	-	3.318	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	874	0	0	887	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	874	-	-	887	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	9.29		9.1		0		0	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	874	887	-	-
HCM Lane V/C Ratio	-	-	0.039	0.009	-	-
HCM Control Delay (s/veh)	-	-	9.3	9.1	-	-
HCM Lane LOS	-	-	A	A	-	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-	-

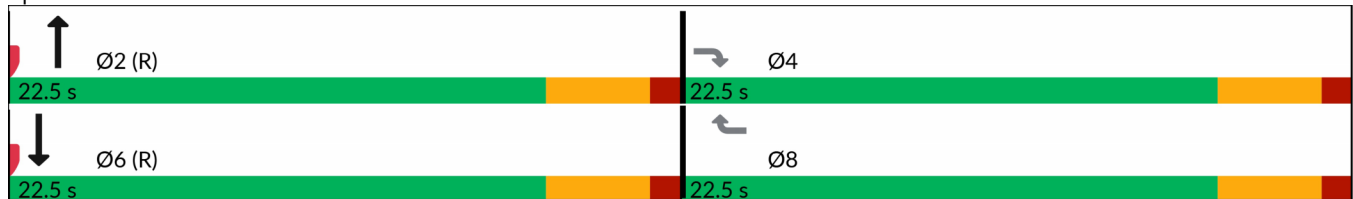
Timings
PM Peak (Existing)

15: Commercial St & 7th Ave
10/13/2025

	↙	↘	↑	↓
Lane Group	EBR	WBR	NBT	SBT
Lane Configurations	↖	↗	↖	↗
Traffic Volume (vph)	31	7	143	151
Future Volume (vph)	31	7	143	151
Turn Type	Perm	Perm	NA	NA
Protected Phases			2	6
Permitted Phases	4	8		
Detector Phase	4	8	2	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	Max	Max	Max	Max
Act Effect Green (s)	18.0	18.0	18.0	18.0
Actuated g/C Ratio	0.40	0.40	0.40	0.40
v/c Ratio	0.05	0.01	0.28	0.27
Control Delay (s/veh)	0.1	0.0	11.0	10.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	0.1	0.0	11.0	10.0
LOS	A	A	B	A
Approach Delay (s/veh)			11.0	10.0
Approach LOS			B	A

Intersection Summary	
Cycle Length: 45	
Actuated Cycle Length: 45	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 45	
Control Type: Pretimed	
Maximum v/c Ratio: 0.28	
Intersection Signal Delay (s/veh): 9.1	Intersection LOS: A
Intersection Capacity Utilization 33.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 15: Commercial St & 7th Ave



Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	1	25	9	3	14	11	19	101	3	16	104	16
Future Vol, veh/h	1	25	9	3	14	11	19	101	3	16	104	16
Conflicting Peds, #/hr	7	0	7	10	0	10	1	0	1	3	0	3
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	70	70	70	83	83	83	85	85	85
Heavy Vehicles, %	0	4	11	0	7	0	5	5	0	0	5	0
Mvmt Flow	1	31	11	4	20	16	23	122	4	19	122	19



















Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	360	346	145	358	354	136	144	0	0	128	0	0
Stage 1	172	172	-	172	172	-	-	-	-	-	-	-
Stage 2	187	174	-	186	182	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.54	6.31	7.1	6.57	6.2	4.15	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.54	-	6.1	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.54	-	6.1	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.036	3.399	3.5	4.063	3.3	2.245	-	-	2.2	-	-
Pot Cap-1 Maneuver	599	574	879	601	563	917	1420	-	-	1470	-	-
Stage 1	834	752	-	834	747	-	-	-	-	-	-	-
Stage 2	819	751	-	821	740	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	545	554	868	538	544	906	1416	-	-	1466	-	-
Mov Cap-2 Maneuver	545	554	-	538	544	-	-	-	-	-	-	-
Stage 1	821	741	-	818	733	-	-	-	-	-	-	-
Stage 2	763	737	-	759	728	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v11.35		10.96	1.17	0.88
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1416	-	-	610	644	1466	-	-
HCM Lane V/C Ratio	0.016	-	-	0.072	0.062	0.013	-	-
HCM Control Delay (s/veh)	7.6	-	-	11.4	11	7.5	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.2	0	-	-

HCM 7th Signalized Intersection Summary
AM Peak (Existing)

12: Commercial St & 8th Ave
10/13/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	25	9	3	14	11	19	101	3	16	104	16
Future Volume (veh/h)	1	25	9	3	14	11	19	101	3	16	104	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1	31	11	4	20	16	23	122	4	19	122	19
Peak Hour Factor	0.80	0.80	0.80	0.70	0.70	0.70	0.83	0.83	0.83	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	85	527	182	114	381	271	595	720	24	610	630	98
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	7	1319	456	64	953	678	1244	1801	59	1263	1574	245
Grp Volume(v), veh/h	43	0	0	40	0	0	23	0	126	19	0	141
Grp Sat Flow(s),veh/h/ln	1781	0	0	1696	0	0	1244	0	1860	1263	0	1819
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	2.0	0.4	0.0	2.3
Cycle Q Clear(g_c), s	0.7	0.0	0.0	0.6	0.0	0.0	2.8	0.0	2.0	2.4	0.0	2.3
Prop In Lane	0.02		0.26	0.10		0.40	1.00		0.03	1.00		0.13
Lane Grp Cap(c), veh/h	794	0	0	766	0	0	595	0	744	610	0	728
V/C Ratio(X)	0.05	0.00	0.00	0.05	0.00	0.00	0.04	0.00	0.17	0.03	0.00	0.19
Avail Cap(c_a), veh/h	794	0	0	766	0	0	595	0	744	610	0	728
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.3	0.0	0.0	8.3	0.0	0.0	9.7	0.0	8.7	9.5	0.0	8.8
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.5	0.1	0.0	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.8	0.1	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	8.4	0.0	0.0	8.4	0.0	0.0	9.8	0.0	9.2	9.6	0.0	9.4
LnGrp LOS	A			A			A		A	A		A
Approach Vol, veh/h		43			40			149				160
Approach Delay, s/veh		8.4			8.4			9.3				9.4
Approach LOS		A			A			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		4.8		2.7		4.4		2.6				
Green Ext Time (p_c), s		0.6		0.1		0.6		0.1				
Intersection Summary												
HCM 7th Control Delay, s/veh			9.1									
HCM 7th LOS			A									

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	2	44	11	6	29	9	22	119	6	20	139	27
Future Vol, veh/h	2	44	11	6	29	9	22	119	6	20	139	27
Conflicting Peds, #/hr	25	0	25	10	0	10	7	0	7	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	73	73	73	80	80	80	86	86	86
Heavy Vehicles, %	0	9	0	0	0	0	0	3	0	5	2	0
Mvmt Flow	2	46	12	8	40	12	28	149	8	23	162	31



















Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	479	449	209	471	461	185	200	0	0	163	0	0
Stage 1	231	231	-	215	215	-	-	-	-	-	-	-
Stage 2	249	218	-	256	247	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.59	6.2	7.1	6.5	6.2	4.1	-	-	4.15	-	-
Critical Hdwy Stg 1	6.1	5.59	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.59	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.081	3.3	3.5	4	3.3	2.2	-	-	2.245	-	-
Pot Cap-1 Maneuver	500	495	836	507	500	863	1384	-	-	1397	-	-
Stage 1	777	701	-	792	729	-	-	-	-	-	-	-
Stage 2	760	710	-	753	706	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	423	470	811	422	476	837	1375	-	-	1388	-	-
Mov Cap-2 Maneuver	423	470	-	422	476	-	-	-	-	-	-	-
Stage 1	758	684	-	771	710	-	-	-	-	-	-	-
Stage 2	676	691	-	664	690	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	13	12.97	1.15	0.82
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1375	-	-	510	512	1388	-	-
HCM Lane V/C Ratio	0.02	-	-	0.118	0.118	0.017	-	-
HCM Control Delay (s/veh)	7.7	-	-	13	13	7.6	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.4	0.1	-	-

HCM 7th Signalized Intersection Summary
 PM Peak (Existing)

12: Commercial St & 8th Ave
 10/13/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	44	11	6	29	9	22	119	6	20	139	27
Future Volume (veh/h)	2	44	11	6	29	9	22	119	6	20	139	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	0.99		0.95	0.97		0.97	1.00		0.97	0.99		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1767	1900	1900	1900	1900	1900	1856	1900	1826	1870	1900
Adj Flow Rate, veh/h	2	46	12	8	40	12	28	149	8	23	162	31
Peak Hour Factor	0.95	0.95	0.95	0.73	0.73	0.73	0.80	0.80	0.80	0.86	0.86	0.86
Percent Heavy Veh, %	0	9	0	0	0	0	0	3	0	5	2	0
Cap, veh/h	87	533	134	135	524	142	611	697	37	570	610	117
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.80	0.80	0.80
Sat Flow, veh/h	11	1333	336	110	1310	355	1209	1742	94	1193	1526	292
Grp Volume(v), veh/h	60	0	0	60	0	0	28	0	157	23	0	193
Grp Sat Flow(s),veh/h/ln	1680	0	0	1774	0	0	1209	0	1835	1193	0	1818
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	2.5	0.3	0.0	1.2
Cycle Q Clear(g_c), s	1.0	0.0	0.0	0.9	0.0	0.0	1.9	0.0	2.5	2.8	0.0	1.2
Prop In Lane	0.03		0.20	0.13		0.20	1.00		0.05	1.00		0.16
Lane Grp Cap(c), veh/h	755	0	0	800	0	0	611	0	734	570	0	727
V/C Ratio(X)	0.08	0.00	0.00	0.07	0.00	0.00	0.05	0.00	0.21	0.04	0.00	0.27
Avail Cap(c_a), veh/h	755	0	0	800	0	0	611	0	734	570	0	727
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.4	0.0	0.0	8.4	0.0	0.0	9.1	0.0	8.9	3.4	0.0	2.8
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.7	0.1	0.0	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.3	0.0	0.0	0.2	0.0	1.0	0.1	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	8.6	0.0	0.0	8.6	0.0	0.0	9.2	0.0	9.5	3.5	0.0	3.7
LnGrp LOS	A			A			A		A	A		A
Approach Vol, veh/h		60			60			185				216
Approach Delay, s/veh		8.6			8.6			9.5				3.7
Approach LOS		A			A			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		4.5		3.0		4.8		2.9				
Green Ext Time (p_c), s		0.8		0.2		0.9		0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh				6.9								
HCM 7th LOS				A								

HCM 7th Signalized Intersection Summary
AM Peak (Existing)

6: Commercial St & 12th Ave
10/13/2025

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	180	64	30	358	4	55	1	14	4	1	4
Future Volume (veh/h)	5	180	64	30	358	4	55	1	14	4	1	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1604	1826	1870	1900	1870	1900	1841	1900	1900	1159	1900	1900
Adj Flow Rate, veh/h	6	228	81	41	484	5	82	1	21	5	1	5
Peak Hour Factor	0.79	0.79	0.79	0.74	0.74	0.74	0.67	0.67	0.67	0.75	0.75	0.75
Percent Heavy Veh, %	20	5	2	0	2	0	4	0	0	50	0	0
Cap, veh/h	399	1011	349	528	1441	15	716	760	644	358	99	284
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	777	2529	873	1087	3603	37	1387	1900	1609	604	248	710
Grp Volume(v), veh/h	6	154	155	41	239	250	82	1	21	11	0	0
Grp Sat Flow(s),veh/h/ln	777	1735	1667	1087	1777	1864	1387	1900	1609	1562	0	0
Q Serve(g_s), s	0.2	2.6	2.8	1.2	4.2	4.2	1.5	0.0	0.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.4	2.6	2.8	3.9	4.2	4.2	1.6	0.0	0.4	0.2	0.0	0.0
Prop In Lane	1.00		0.52	1.00		0.02	1.00		1.00	0.45		0.45
Lane Grp Cap(c), veh/h	399	694	667	528	711	745	716	760	644	741	0	0
V/C Ratio(X)	0.02	0.22	0.23	0.08	0.34	0.34	0.11	0.00	0.03	0.01	0.00	0.00
Avail Cap(c_a), veh/h	399	694	667	528	711	745	716	760	644	741	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.9	8.9	8.9	10.2	9.4	9.4	8.6	8.1	8.2	8.2	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.7	0.8	0.3	1.3	1.2	0.3	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.0	1.0	0.3	1.6	1.7	0.5	0.0	0.1	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	11.0	9.6	9.7	10.5	10.6	10.6	8.9	8.1	8.3	8.2	0.0	0.0
LnGrp LOS	B	A	A	B	B	B	A	A	A	A		
Approach Vol, veh/h		315			530			104			11	
Approach Delay, s/veh		9.7			10.6			8.8			8.2	
Approach LOS		A			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		3.6		6.4		2.2		6.2				
Green Ext Time (p_c), s		0.2		1.4		0.0		2.5				
Intersection Summary												
HCM 7th Control Delay, s/veh				10.1								
HCM 7th LOS				B								

HCM 7th Signalized Intersection Summary
 PM Peak (Existing)

6: Commercial St & 12th Ave
 10/13/2025

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	319	101	63	377	5	92	5	54	20	8	25
Future Volume (veh/h)	4	319	101	63	377	5	92	5	54	20	8	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1530	1885	1900	1870	1900	1900	1885	1900	1900	1826	1900	1900
Adj Flow Rate, veh/h	4	336	106	72	428	6	105	6	61	43	17	53
Peak Hour Factor	0.95	0.95	0.95	0.88	0.88	0.88	0.88	0.88	0.88	0.47	0.47	0.47
Percent Heavy Veh, %	25	1	0	2	0	0	1	0	0	5	0	0
Cap, veh/h	408	1067	330	504	1458	20	713	760	633	301	141	292
Arrive On Green	0.80	0.80	0.80	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	775	2666	825	941	3644	51	1335	1900	1582	475	352	731
Grp Volume(v), veh/h	4	223	219	72	212	222	105	6	61	113	0	0
Grp Sat Flow(s),veh/h/ln	775	1791	1700	941	1805	1890	1335	1900	1582	1559	0	0
Q Serve(g_s), s	0.1	1.5	1.6	2.4	3.6	3.6	0.0	0.1	1.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.7	1.5	1.6	3.9	3.6	3.6	1.7	0.1	1.1	1.9	0.0	0.0
Prop In Lane	1.00		0.49	1.00		0.03	1.00		1.00	0.38		0.47
Lane Grp Cap(c), veh/h	408	716	680	504	722	756	713	760	633	734	0	0
V/C Ratio(X)	0.01	0.31	0.32	0.14	0.29	0.29	0.15	0.01	0.10	0.15	0.00	0.00
Avail Cap(c_a), veh/h	408	716	680	504	722	756	713	760	633	734	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.7	2.8	2.9	9.8	9.2	9.2	8.6	8.1	8.4	8.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.1	1.2	0.6	1.0	1.0	0.4	0.0	0.3	0.4	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.6	0.6	0.5	1.4	1.4	0.6	0.0	0.3	0.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	3.8	4.0	4.1	10.4	10.2	10.2	9.0	8.1	8.7	9.1	0.0	0.0
LnGrp LOS	A	A	A	B	B	B	A	A	A	A		
Approach Vol, veh/h		446			506			172			113	
Approach Delay, s/veh		4.0			10.2			8.9			9.1	
Approach LOS		A			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		3.7		5.7		3.9		5.9				
Green Ext Time (p_c), s		0.4		2.2		0.5		2.4				
Intersection Summary												
HCM 7th Control Delay, s/veh				7.7								
HCM 7th LOS				A								

HCM 7th Signalized Intersection Summary
AM Peak (Existing)

27: Rural St & 6th Ave
10/13/2025

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	384	14	4	439	18	25	25	7	25	13	31
Future Volume (veh/h)	6	384	14	4	439	18	25	25	7	25	13	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1826	1900	1530	1826	1900	1841	1781	1693	1781	1781	1796
Adj Flow Rate, veh/h	7	452	16	4	482	20	33	33	9	30	16	38
Peak Hour Factor	0.85	0.85	0.85	0.91	0.91	0.91	0.75	0.75	0.75	0.82	0.82	0.82
Percent Heavy Veh, %	0	5	0	25	5	0	4	8	14	8	8	7
Cap, veh/h	406	1367	48	393	1358	56	341	312	73	276	159	270
Arrive On Green	0.40	0.40	0.40	0.13	0.13	0.13	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	911	3418	121	756	3395	141	565	781	183	418	399	675
Grp Volume(v), veh/h	7	229	239	4	246	256	75	0	0	84	0	0
Grp Sat Flow(s),veh/h/ln	911	1735	1804	756	1735	1801	1529	0	0	1491	0	0
Q Serve(g_s), s	0.3	4.1	4.1	0.2	5.8	5.8	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.1	4.1	4.1	4.3	5.8	5.8	1.2	0.0	0.0	1.5	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.08	0.44		0.12	0.36		0.45
Lane Grp Cap(c), veh/h	406	694	722	393	694	720	727	0	0	705	0	0
V/C Ratio(X)	0.02	0.33	0.33	0.01	0.35	0.36	0.10	0.00	0.00	0.12	0.00	0.00
Avail Cap(c_a), veh/h	406	694	722	393	694	720	727	0	0	705	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.1	9.3	9.3	15.5	14.2	14.2	8.5	0.0	0.0	8.5	0.0	0.0
Incr Delay (d2), s/veh	0.1	1.3	1.2	0.0	1.4	1.4	0.3	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.5	1.5	0.0	2.3	2.4	0.4	0.0	0.0	0.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	12.1	10.6	10.6	15.5	15.7	15.6	8.7	0.0	0.0	8.9	0.0	0.0
LnGrp LOS	B	B	B	B	B	B	A			A		
Approach Vol, veh/h		475			506			75				84
Approach Delay, s/veh		10.6			15.6			8.7				8.9
Approach LOS		B			B			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		3.2		8.1		3.5		7.8				
Green Ext Time (p_c), s		0.2		2.0		0.3		2.2				
Intersection Summary												
HCM 7th Control Delay, s/veh				12.6								
HCM 7th LOS				B								

HCM 7th Signalized Intersection Summary
 PM Peak (Existing)

27: Rural St & 6th Ave
 10/13/2025

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	580	18	5	649	25	43	19	5	46	27	46
Future Volume (veh/h)	20	580	18	5	649	25	43	19	5	46	27	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900	1900	1870	1900	1870	1900	1604	1900	1841	1841
Adj Flow Rate, veh/h	23	674	21	6	773	30	49	22	6	61	36	61
Peak Hour Factor	0.86	0.86	0.86	0.84	0.84	0.84	0.88	0.88	0.88	0.76	0.76	0.76
Percent Heavy Veh, %	0	2	0	0	2	0	2	0	20	0	4	4
Cap, veh/h	292	1407	44	356	1394	54	489	205	48	304	187	239
Arrive On Green	0.40	0.40	0.40	0.13	0.13	0.13	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	689	3518	110	761	3484	135	894	511	119	483	468	599
Grp Volume(v), veh/h	23	340	355	6	394	409	77	0	0	158	0	0
Grp Sat Flow(s),veh/h/ln	689	1777	1850	761	1777	1842	1525	0	0	1550	0	0
Q Serve(g_s), s	1.3	6.4	6.4	0.3	9.3	9.4	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	10.6	6.4	6.4	6.7	9.3	9.4	1.2	0.0	0.0	2.7	0.0	0.0
Prop In Lane	1.00		0.06	1.00		0.07	0.64		0.08	0.39		0.39
Lane Grp Cap(c), veh/h	292	711	740	356	711	737	741	0	0	731	0	0
V/C Ratio(X)	0.08	0.48	0.48	0.02	0.55	0.55	0.10	0.00	0.00	0.22	0.00	0.00
Avail Cap(c_a), veh/h	292	711	740	356	711	737	741	0	0	731	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.2	10.0	10.0	17.6	15.8	15.8	8.4	0.0	0.0	8.9	0.0	0.0
Incr Delay (d2), s/veh	0.5	2.3	2.2	0.1	3.1	3.0	0.3	0.0	0.0	0.7	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.4	2.5	0.1	4.5	4.6	0.4	0.0	0.0	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	15.7	12.3	12.2	17.7	18.9	18.8	8.7	0.0	0.0	9.6	0.0	0.0
LnGrp LOS	B	B	B	B	B	B	A			A		
Approach Vol, veh/h		718			809			77				158
Approach Delay, s/veh		12.4			18.8			8.7				9.6
Approach LOS		B			B			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		3.2		12.6		4.7		11.4				
Green Ext Time (p_c), s		0.3		2.1		0.7		2.8				
Intersection Summary												
HCM 7th Control Delay, s/veh				14.9								
HCM 7th LOS				B								

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕		↵	↕			↕			↕	
Traffic Vol, veh/h	7	354	17	8	408	2	26	12	11	4	5	6
Future Vol, veh/h	7	354	17	8	408	2	26	12	11	4	5	6
Conflicting Peds, #/hr	0	0	0	3	0	3	1	0	1	4	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	92	92	92	88	88	88	75	75	75
Heavy Vehicles, %	14	7	6	13	6	0	0	0	0	0	0	0
Mvmt Flow	8	421	20	9	443	2	30	14	13	5	7	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	449	0	0	445	0	0	698	917	228	703	926	230
Stage 1	-	-	-	-	-	-	451	451	-	465	465	-
Stage 2	-	-	-	-	-	-	246	466	-	238	461	-
Critical Hdwy	4.38	-	-	4.36	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.34	-	-	2.33	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1028	-	-	1038	-	-	331	274	781	328	271	779
Stage 1	-	-	-	-	-	-	563	574	-	552	566	-
Stage 2	-	-	-	-	-	-	741	566	-	749	568	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1025	-	-	1035	-	-	312	268	776	300	265	774
Mov Cap-2 Maneuver	-	-	-	-	-	-	312	268	-	300	265	-
Stage 1	-	-	-	-	-	-	556	568	-	546	560	-
Stage 2	-	-	-	-	-	-	716	559	-	711	562	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.16			0.16			17.46			15.14		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	344	1025	-	-	1035	-	-	375
HCM Lane V/C Ratio	0.162	0.008	-	-	0.008	-	-	0.053
HCM Control Delay (s/veh)	17.5	8.5	-	-	8.5	-	-	15.1
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.6	0	-	-	0	-	-	0.2

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕		↵	↕			↕			↕	
Traffic Vol, veh/h	8	495	34	9	594	2	20	13	18	1	10	5
Future Vol, veh/h	8	495	34	9	594	2	20	13	18	1	10	5
Conflicting Peds, #/hr	0	0	0	2	0	2	1	0	1	3	0	3
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	80	80	80	64	64	64	57	57	57
Heavy Vehicles, %	0	2	0	0	2	0	0	0	6	0	0	0
Mvmt Flow	9	569	39	11	743	3	31	20	28	2	18	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	747	0	0	610	0	0	1014	1378	309	1084	1397	378
Stage 1	-	-	-	-	-	-	609	609	-	768	768	-
Stage 2	-	-	-	-	-	-	406	770	-	316	628	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	7.02	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.36	3.5	4	3.3
Pot Cap-1 Maneuver	870	-	-	979	-	-	195	146	675	174	142	626
Stage 1	-	-	-	-	-	-	454	489	-	365	414	-
Stage 2	-	-	-	-	-	-	598	413	-	675	479	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	869	-	-	977	-	-	164	142	672	139	139	623
Mov Cap-2 Maneuver	-	-	-	-	-	-	164	142	-	139	139	-
Stage 1	-	-	-	-	-	-	448	482	-	360	408	-
Stage 2	-	-	-	-	-	-	557	408	-	611	473	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.14			0.13			31.75			28.17		
HCM LOS							D			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	213	869	-	-	977	-	-	183
HCM Lane V/C Ratio	0.375	0.011	-	-	0.012	-	-	0.153
HCM Control Delay (s/veh)	31.7	9.2	-	-	8.7	-	-	28.2
HCM Lane LOS	D	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	1.6	0	-	-	0	-	-	0.5

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕		↵	↕			↕			↕	
Traffic Vol, veh/h	27	325	20	8	378	19	12	7	12	7	3	29
Future Vol, veh/h	27	325	20	8	378	19	12	7	12	7	3	29
Conflicting Peds, #/hr	0	0	0	1	0	1	1	0	1	3	0	3
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	90	90	90	86	86	86	89	89	89
Heavy Vehicles, %	4	8	5	0	6	0	8	0	0	0	0	3
Mvmt Flow	33	396	24	9	420	21	14	8	14	8	3	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	442	0	0	422	0	0	708	935	214	720	937	225
Stage 1	-	-	-	-	-	-	475	475	-	449	449	-
Stage 2	-	-	-	-	-	-	232	460	-	271	488	-
Critical Hdwy	4.18	-	-	4.1	-	-	7.66	6.5	6.9	7.5	6.5	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.66	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.66	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.24	-	-	2.2	-	-	3.58	4	3.3	3.5	4	3.33
Pot Cap-1 Maneuver	1100	-	-	1148	-	-	311	267	797	319	267	776
Stage 1	-	-	-	-	-	-	524	560	-	564	575	-
Stage 2	-	-	-	-	-	-	733	569	-	717	553	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1099	-	-	1147	-	-	282	257	794	291	256	773
Mov Cap-2 Maneuver	-	-	-	-	-	-	282	257	-	291	256	-
Stage 1	-	-	-	-	-	-	508	543	-	559	570	-
Stage 2	-	-	-	-	-	-	690	564	-	671	536	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.61			0.16			15.95			12.37		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	365	1099	-	-	1147	-	-	532
HCM Lane V/C Ratio	0.099	0.03	-	-	0.008	-	-	0.082
HCM Control Delay (s/veh)	15.9	8.4	-	-	8.2	-	-	12.4
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	0.3

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕↗		↵	↕↗			↕↗			↕↗	
Traffic Vol, veh/h	19	480	14	13	559	29	12	5	11	4	7	41
Future Vol, veh/h	19	480	14	13	559	29	12	5	11	4	7	41
Conflicting Peds, #/hr	0	0	0	1	0	1	5	0	5	3	0	3
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	79	79	79	58	58	58	72	72	72
Heavy Vehicles, %	0	2	0	8	2	0	0	0	0	0	0	0
Mvmt Flow	22	545	16	16	708	37	21	9	19	6	10	57

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	745	0	0	562	0	0	994	1376	287	1085	1365	378
Stage 1	-	-	-	-	-	-	598	598	-	760	760	-
Stage 2	-	-	-	-	-	-	397	778	-	325	606	-
Critical Hdwy	4.1	-	-	4.26	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.28	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	872	-	-	965	-	-	202	147	716	174	149	625
Stage 1	-	-	-	-	-	-	461	494	-	369	417	-
Stage 2	-	-	-	-	-	-	606	409	-	667	490	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	871	-	-	964	-	-	164	140	712	152	142	622
Mov Cap-2 Maneuver	-	-	-	-	-	-	164	140	-	152	142	-
Stage 1	-	-	-	-	-	-	449	482	-	362	410	-
Stage 2	-	-	-	-	-	-	526	402	-	619	478	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.34			0.19			25.32			17.18		
HCM LOS							D			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	225	871	-	-	964	-	-	367
HCM Lane V/C Ratio	0.215	0.025	-	-	0.017	-	-	0.197
HCM Control Delay (s/veh)	25.3	9.2	-	-	8.8	-	-	17.2
HCM Lane LOS	D	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.8	0.1	-	-	0.1	-	-	0.7

HCM 7th Signalized Intersection Summary
AM Peak (Existing)

36: Merchant St & 6th Ave
10/15/2025

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	251	41	13	276	35	24	51	13	38	85	79
Future Volume (veh/h)	51	251	41	13	276	35	24	51	13	38	85	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1796	1870	1900	1811	1811	1707	1841	1781	1856	1826	1856
Adj Flow Rate, veh/h	64	314	51	15	310	39	30	65	16	55	123	114
Peak Hour Factor	0.80	0.80	0.80	0.89	0.89	0.89	0.79	0.79	0.79	0.69	0.69	0.69
Percent Heavy Veh, %	2	7	2	0	6	6	13	4	8	3	5	3
Cap, veh/h	546	1177	189	544	1231	154	221	433	93	167	323	253
Arrive On Green	0.80	0.80	0.80	0.80	0.80	0.80	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1031	2942	473	1030	3078	384	300	1082	233	179	809	633
Grp Volume(v), veh/h	64	181	184	15	172	177	111	0	0	292	0	0
Grp Sat Flow(s),veh/h/ln	1031	1706	1708	1030	1721	1741	1615	0	0	1620	0	0
Q Serve(g_s), s	0.8	1.2	1.2	0.2	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.9	1.2	1.2	1.4	1.1	1.1	1.8	0.0	0.0	5.6	0.0	0.0
Prop In Lane	1.00		0.28	1.00		0.22	0.27		0.14	0.19		0.39
Lane Grp Cap(c), veh/h	546	683	683	544	688	697	748	0	0	743	0	0
V/C Ratio(X)	0.12	0.26	0.27	0.03	0.25	0.25	0.15	0.00	0.00	0.39	0.00	0.00
Avail Cap(c_a), veh/h	546	683	683	544	688	697	748	0	0	743	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.1	2.8	2.8	3.0	2.8	2.8	8.6	0.0	0.0	9.8	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.9	1.0	0.1	0.9	0.9	0.4	0.0	0.0	1.6	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.5	0.5	0.0	0.4	0.4	0.6	0.0	0.0	2.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	3.5	3.8	3.8	3.1	3.7	3.7	9.1	0.0	0.0	11.3	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	A			B		
Approach Vol, veh/h		429			364			111			292	
Approach Delay, s/veh		3.7			3.7			9.1			11.3	
Approach LOS		A			A			A			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		3.8		3.9		7.6		3.4				
Green Ext Time (p_c), s		0.4		2.1		1.3		1.8				
Intersection Summary												
HCM 7th Control Delay, s/veh				6.1								
HCM 7th LOS				A								

HCM 7th Signalized Intersection Summary
 PM Peak (Existing)

36: Merchant St & 6th Ave

10/15/2025

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	376	44	12	405	59	48	97	19	37	117	115
Future Volume (veh/h)	72	376	44	12	405	59	48	97	19	37	117	115
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1826	1900	1856	1900	1900	1900	1900	1856	1856	1900
Adj Flow Rate, veh/h	86	448	52	15	494	72	72	145	28	45	143	140
Peak Hour Factor	0.84	0.84	0.84	0.82	0.82	0.82	0.67	0.67	0.67	0.82	0.82	0.82
Percent Heavy Veh, %	1	2	5	0	3	0	0	0	0	3	3	0
Cap, veh/h	459	1280	148	488	1231	178	243	449	76	140	328	281
Arrive On Green	0.80	0.80	0.80	0.80	0.80	0.80	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	850	3199	369	910	3077	446	348	1121	190	123	821	703
Grp Volume(v), veh/h	86	248	252	15	282	284	245	0	0	328	0	0
Grp Sat Flow(s),veh/h/ln	850	1777	1792	910	1763	1761	1659	0	0	1646	0	0
Q Serve(g_s), s	1.7	1.7	1.8	0.2	2.1	2.1	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.8	1.7	1.8	2.0	2.1	2.1	4.1	0.0	0.0	6.4	0.0	0.0
Prop In Lane	1.00		0.21	1.00		0.25	0.29		0.11	0.14		0.43
Lane Grp Cap(c), veh/h	459	711	717	488	705	704	767	0	0	750	0	0
V/C Ratio(X)	0.19	0.35	0.35	0.03	0.40	0.40	0.32	0.00	0.00	0.44	0.00	0.00
Avail Cap(c_a), veh/h	459	711	717	488	705	704	767	0	0	750	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.5	2.9	2.9	3.2	2.9	2.9	9.3	0.0	0.0	10.0	0.0	0.0
Incr Delay (d2), s/veh	0.9	1.3	1.4	0.1	1.7	1.7	1.1	0.0	0.0	1.9	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.7	0.7	0.0	0.8	0.8	1.5	0.0	0.0	2.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	4.4	4.2	4.2	3.3	4.6	4.6	10.4	0.0	0.0	11.9	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B			B		
Approach Vol, veh/h		586			581			245			328	
Approach Delay, s/veh		4.3			4.6			10.4			11.9	
Approach LOS		A			A			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		6.1		5.8		8.4		4.1				
Green Ext Time (p_c), s		1.1		2.8		1.4		3.0				
Intersection Summary												
HCM 7th Control Delay, s/veh			6.7									
HCM 7th LOS			A									

Intersection												
Int Delay, s/veh	18.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕		↵	↕			↕			↕	
Traffic Vol, veh/h	18	121	81	76	219	32	43	128	68	10	36	9
Future Vol, veh/h	18	121	81	76	219	32	43	128	68	10	36	9
Conflicting Peds, #/hr	1	0	1	1	0	1	1	0	1	3	0	3
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	90	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	76	76	76	79	79	79	63	63	63
Heavy Vehicles, %	6	13	1	4	6	3	2	2	2	10	0	11
Mvmt Flow	24	161	108	100	288	42	54	162	86	16	57	14



















Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	331	0	0	270	0	0	640	796	139	723	829	169
Stage 1	-	-	-	-	-	-	264	264	-	510	510	-
Stage 2	-	-	-	-	-	-	376	531	-	213	318	-
Critical Hdwy	4.22	-	-	4.18	-	-	7.54	6.54	6.94	7.7	6.5	7.12
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.7	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.7	5.5	-
Follow-up Hdwy	2.26	-	-	2.24	-	-	3.52	4.02	3.32	3.6	4	3.41
Pot Cap-1 Maneuver	1197	-	-	1276	-	-	360	318	884	299	308	818
Stage 1	-	-	-	-	-	-	718	689	-	494	541	-
Stage 2	-	-	-	-	-	-	618	524	-	747	657	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1195	-	-	1274	-	-	258	287	881	112	278	815
Mov Cap-2 Maneuver	-	-	-	-	-	-	258	287	-	112	278	-
Stage 1	-	-	-	-	-	-	703	674	-	455	498	-
Stage 2	-	-	-	-	-	-	494	483	-	500	643	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.66	1.87	56.82	28.44
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	347	1195	-	-	1274	-	-	239
HCM Lane V/C Ratio	0.873	0.02	-	-	0.078	-	-	0.365
HCM Control Delay (s/veh)	56.8	8.1	-	-	8.1	-	-	28.4
HCM Lane LOS	F	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	8.3	0.1	-	-	0.3	-	-	1.6

HCM 7th Signalized Intersection Summary
AM Peak (Existing)

38: Mechanic St & 6th Ave
10/15/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	121	81	76	219	32	43	128	68	10	36	9
Future Volume (veh/h)	18	121	81	76	219	32	43	128	68	10	36	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1707	1885	1841	1811	1856	1870	1870	1870	1752	1900	1737
Adj Flow Rate, veh/h	24	161	108	100	288	42	54	162	86	16	57	14
Peak Hour Factor	0.75	0.75	0.75	0.76	0.76	0.76	0.79	0.79	0.79	0.63	0.63	0.63
Percent Heavy Veh, %	6	13	1	4	6	3	2	2	2	10	0	11
Cap, veh/h	501	758	476	531	1207	174	166	418	195	166	509	111
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1016	1895	1189	1092	3017	435	178	1044	487	178	1273	278
Grp Volume(v), veh/h	24	136	133	100	163	167	302	0	0	87	0	0
Grp Sat Flow(s),veh/h/ln	1016	1622	1462	1092	1721	1732	1709	0	0	1729	0	0
Q Serve(g_s), s	0.7	2.5	2.7	3.0	2.8	2.9	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.6	2.5	2.7	5.7	2.8	2.9	5.5	0.0	0.0	1.3	0.0	0.0
Prop In Lane	1.00		0.81	1.00		0.25	0.18		0.28	0.18		0.16
Lane Grp Cap(c), veh/h	501	649	585	531	688	693	778	0	0	786	0	0
V/C Ratio(X)	0.05	0.21	0.23	0.19	0.24	0.24	0.39	0.00	0.00	0.11	0.00	0.00
Avail Cap(c_a), veh/h	501	649	585	531	688	693	778	0	0	786	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.2	8.8	8.9	10.8	8.9	9.0	9.8	0.0	0.0	8.5	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.7	0.9	0.8	0.8	0.8	1.5	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.8	0.8	0.7	1.0	1.0	2.0	0.0	0.0	0.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	10.3	9.6	9.8	11.6	9.8	9.8	11.2	0.0	0.0	8.8	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B			A		
Approach Vol, veh/h		293			430			302			87	
Approach Delay, s/veh		9.7			10.2			11.2			8.8	
Approach LOS		A			B			B			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		7.5		5.6		3.3		7.7				
Green Ext Time (p_c), s		1.3		1.3		0.3		1.7				
Intersection Summary												
HCM 7th Control Delay, s/veh				10.2								
HCM 7th LOS				B								

Intersection												
Int Delay, s/veh	27.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕		↵	↕			↕			↕	
Traffic Vol, veh/h	31	314	61	46	293	25	71	96	56	7	40	17
Future Vol, veh/h	31	314	61	46	293	25	71	96	56	7	40	17
Conflicting Peds, #/hr	2	0	2	1	0	1	1	0	1	3	0	3
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	90	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	90	90	90	82	82	82	57	57	57
Heavy Vehicles, %	0	4	2	2	3	0	0	3	2	0	8	6
Mvmt Flow	36	369	72	51	326	28	87	117	68	12	70	30

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	355	0	0	443	0	0	783	938	226	763	960	182
Stage 1	-	-	-	-	-	-	480	480	-	444	444	-
Stage 2	-	-	-	-	-	-	303	458	-	319	516	-
Critical Hdwy	4.1	-	-	4.14	-	-	7.5	6.56	6.94	7.5	6.66	7.02
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.56	-	6.5	5.66	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.56	-	6.5	5.66	-
Follow-up Hdwy	2.2	-	-	2.22	-	-	3.5	4.03	3.32	3.5	4.08	3.36
Pot Cap-1 Maneuver	1215	-	-	1113	-	-	287	261	777	297	245	817
Stage 1	-	-	-	-	-	-	541	550	-	568	559	-
Stage 2	-	-	-	-	-	-	687	563	-	672	518	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1212	-	-	1111	-	-	180	241	774	133	226	813
Mov Cap-2 Maneuver	-	-	-	-	-	-	180	241	-	133	226	-
Stage 1	-	-	-	-	-	-	524	532	-	541	532	-
Stage 2	-	-	-	-	-	-	547	536	-	463	501	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.62			1.06			113.91			29.69		
HCM LOS							F			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	258	1212	-	-	1111	-	-	256
HCM Lane V/C Ratio	1.056	0.03	-	-	0.046	-	-	0.439
HCM Control Delay (s/veh)	113.9	8.1	-	-	8.4	-	-	29.7
HCM Lane LOS	F	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	11	0.1	-	-	0.1	-	-	2.1

HCM 7th Signalized Intersection Summary
 PM Peak (Existing)

38: Mechanic St & 6th Ave

10/15/2025

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	314	61	46	293	25	71	96	56	7	40	17
Future Volume (veh/h)	31	314	61	46	293	25	71	96	56	7	40	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1841	1870	1870	1856	1900	1900	1856	1870	1900	1781	1811
Adj Flow Rate, veh/h	36	369	72	51	326	28	87	117	68	12	70	30
Peak Hour Factor	0.85	0.85	0.85	0.90	0.90	0.90	0.82	0.82	0.82	0.57	0.57	0.57
Percent Heavy Veh, %	0	4	2	2	3	0	0	3	2	0	8	6
Cap, veh/h	508	1164	225	506	1312	112	259	328	161	117	458	178
Arrive On Green	0.80	0.80	0.80	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1043	2911	562	947	3280	280	384	820	401	70	1146	445
Grp Volume(v), veh/h	36	220	221	51	174	180	272	0	0	112	0	0
Grp Sat Flow(s),veh/h/ln	1043	1749	1724	947	1763	1797	1605	0	0	1661	0	0
Q Serve(g_s), s	0.6	1.5	1.6	1.6	3.0	3.0	0.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.6	1.5	1.6	3.2	3.0	3.0	5.0	0.0	0.0	1.9	0.0	0.0
Prop In Lane	1.00		0.33	1.00		0.16	0.32		0.25	0.11		0.27
Lane Grp Cap(c), veh/h	508	699	690	506	705	719	748	0	0	753	0	0
V/C Ratio(X)	0.07	0.31	0.32	0.10	0.25	0.25	0.36	0.00	0.00	0.15	0.00	0.00
Avail Cap(c_a), veh/h	508	699	690	506	705	719	748	0	0	753	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.6	2.9	2.9	9.6	9.0	9.0	9.6	0.0	0.0	8.7	0.0	0.0
Incr Delay (d2), s/veh	0.3	1.2	1.2	0.4	0.8	0.8	1.4	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.6	0.6	0.3	1.1	1.1	1.8	0.0	0.0	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	3.9	4.0	4.1	10.0	9.8	9.8	10.9	0.0	0.0	9.1	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B			A		
Approach Vol, veh/h		477			405			272				112
Approach Delay, s/veh		4.0			9.8			10.9				9.1
Approach LOS		A			A			B				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		7.0		5.6		3.9		5.2				
Green Ext Time (p_c), s		1.2		2.3		0.4		1.9				
Intersection Summary												
HCM 7th Control Delay, s/veh				7.8								
HCM 7th LOS				A								

Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	4	22	4	0	7	9	110	11	11	190	19
Future Vol, veh/h	7	4	22	4	0	7	9	110	11	11	190	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	55	55	55	79	79	79	83	83	83
Heavy Vehicles, %	0	0	10	0	0	14	0	6	0	9	3	5
Mvmt Flow	8	5	27	7	0	13	11	139	14	13	229	23

















Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	429	443	240	427	447	146	252	0	0	153	0	0
Stage 1	267	267	-	169	169	-	-	-	-	-	-	-
Stage 2	162	176	-	258	278	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.3	7.1	6.5	6.34	4.1	-	-	4.19	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.39	3.5	4	3.426	2.2	-	-	2.281	-	-
Pot Cap-1 Maneuver	540	512	779	542	509	870	1325	-	-	1386	-	-
Stage 1	743	692	-	838	763	-	-	-	-	-	-	-
Stage 2	845	757	-	751	684	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	521	502	779	508	499	870	1325	-	-	1386	-	-
Mov Cap-2 Maneuver	521	502	-	508	499	-	-	-	-	-	-	-
Stage 1	735	684	-	830	755	-	-	-	-	-	-	-
Stage 2	825	750	-	713	676	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v10.76		10.37	0.54	0.38
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	122	-	-	665	691	88	-	-
HCM Lane V/C Ratio	0.009	-	-	0.06	0.029	0.01	-	-
HCM Control Delay (s/veh)	7.7	0	-	10.8	10.4	7.6	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0	-	-

HCM 7th Signalized Intersection Summary
AM Peak (Existing)

24: Merchant St & 7th Ave
10/15/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	4	22	4	0	7	9	110	11	11	190	19
Future Volume (veh/h)	7	4	22	4	0	7	9	110	11	11	190	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1767	1900	1900	1693	1900	1811	1900	1767	1856	1826
Adj Flow Rate, veh/h	8	5	27	7	0	13	11	139	14	13	229	23
Peak Hour Factor	0.83	0.83	0.83	0.55	0.55	0.55	0.79	0.79	0.79	0.83	0.83	0.83
Percent Heavy Veh, %	0	0	9	0	0	14	0	6	0	9	3	5
Cap, veh/h	175	134	442	279	48	407	100	627	60	96	649	63
Arrive On Green	0.40	0.40	0.40	0.40	0.00	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	197	335	1104	427	120	1017	38	1568	150	31	1624	157
Grp Volume(v), veh/h	40	0	0	20	0	0	164	0	0	265	0	0
Grp Sat Flow(s),veh/h/ln	1635	0	0	1564	0	0	1755	0	0	1811	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.7	0.0	0.0	0.3	0.0	0.0	2.7	0.0	0.0	4.6	0.0	0.0
Prop In Lane	0.20		0.67	0.35		0.65	0.07		0.09	0.05		0.09
Lane Grp Cap(c), veh/h	750	0	0	734	0	0	788	0	0	808	0	0
V/C Ratio(X)	0.05	0.00	0.00	0.03	0.00	0.00	0.21	0.00	0.00	0.33	0.00	0.00
Avail Cap(c_a), veh/h	750	0	0	734	0	0	788	0	0	808	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.3	0.0	0.0	8.2	0.0	0.0	8.9	0.0	0.0	9.5	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.1	0.0	0.0	0.6	0.0	0.0	1.1	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.1	0.0	0.0	1.0	0.0	0.0	1.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	8.4	0.0	0.0	8.3	0.0	0.0	9.5	0.0	0.0	10.6	0.0	0.0
LnGrp LOS	A			A			A			B		
Approach Vol, veh/h	40		20				164			265		
Approach Delay, s/veh	8.4		8.3				9.5			10.6		
Approach LOS	A		A				A			B		
Timer - Assigned Phs	2		4				6			8		
Phs Duration (G+Y+Rc), s	22.5		22.5				22.5			22.5		
Change Period (Y+Rc), s	4.5		4.5				4.5			4.5		
Max Green Setting (Gmax), s	18.0		18.0				18.0			18.0		
Max Q Clear Time (g_c+I1), s	4.7		2.7				6.6			2.3		
Green Ext Time (p_c), s	0.7		0.1				1.1			0.0		
Intersection Summary												
HCM 7th Control Delay, s/veh			9.9									
HCM 7th LOS			A									

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	5	19	3	4	17	11	189	20	18	264	16
Future Vol, veh/h	12	5	19	3	4	17	11	189	20	18	264	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	69	69	69	75	75	75	86	86	86	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	0	1	0
Mvmt Flow	17	7	28	4	5	23	13	220	23	21	311	19

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	610	631	320	614	629	231	329	0	0	243	0	0
Stage 1	362	362	-	257	257	-	-	-	-	-	-	-
Stage 2	248	269	-	357	372	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	409	401	725	407	402	813	1241	-	-	1335	-	-
Stage 1	660	629	-	752	699	-	-	-	-	-	-	-
Stage 2	760	691	-	665	623	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	380	388	725	373	389	813	1241	-	-	1335	-	-
Mov Cap-2 Maneuver	380	388	-	373	389	-	-	-	-	-	-	-
Stage 1	648	616	-	743	690	-	-	-	-	-	-	-
Stage 2	725	682	-	620	610	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v12.87		11.21	0.4	0.47
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	88	-	-	510	612	107	-	-
HCM Lane V/C Ratio	0.01	-	-	0.102	0.052	0.016	-	-
HCM Control Delay (s/veh)	7.9	0	-	12.9	11.2	7.7	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.2	0	-	-

HCM 7th Signalized Intersection Summary
 PM Peak (Existing)

24: Merchant St & 7th Ave























10/15/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	12	5	19	3	4	17	11	189	20	18	264	16
Future Volume (veh/h)	12	5	19	3	4	17	11	189	20	18	264	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1870	1900	1900	1885	1900
Adj Flow Rate, veh/h	17	7	28	4	5	23	13	220	23	21	311	19
Peak Hour Factor	0.69	0.69	0.69	0.75	0.75	0.75	0.86	0.86	0.86	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	2	0	0	1	0
Cap, veh/h	264	135	341	126	146	467	97	649	65	103	676	40
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	394	338	853	91	366	1167	32	1622	163	45	1691	99
Grp Volume(v), veh/h	52	0	0	32	0	0	256	0	0	351	0	0
Grp Sat Flow(s),veh/h/ln	1585	0	0	1624	0	0	1816	0	0	1836	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.8	0.0	0.0	0.5	0.0	0.0	4.4	0.0	0.0	6.3	0.0	0.0
Prop In Lane	0.33		0.54	0.12		0.72	0.05		0.09	0.06		0.05
Lane Grp Cap(c), veh/h	740	0	0	739	0	0	811	0	0	819	0	0
V/C Ratio(X)	0.07	0.00	0.00	0.04	0.00	0.00	0.32	0.00	0.00	0.43	0.00	0.00
Avail Cap(c_a), veh/h	740	0	0	739	0	0	811	0	0	819	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.4	0.0	0.0	8.3	0.0	0.0	9.4	0.0	0.0	10.0	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.1	0.0	0.0	1.0	0.0	0.0	1.6	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.2	0.0	0.0	1.6	0.0	0.0	2.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	8.5	0.0	0.0	8.4	0.0	0.0	10.4	0.0	0.0	11.6	0.0	0.0
LnGrp LOS	A			A			B			B		
Approach Vol, veh/h	52		32				256			351		
Approach Delay, s/veh	8.5		8.4				10.4			11.6		
Approach LOS	A		A				B			B		
Timer - Assigned Phs	2		4				6			8		
Phs Duration (G+Y+Rc), s	22.5		22.5				22.5			22.5		
Change Period (Y+Rc), s	4.5		4.5				4.5			4.5		
Max Green Setting (Gmax), s	18.0		18.0				18.0			18.0		
Max Q Clear Time (g_c+I1), s	6.4		2.8				8.3			2.5		
Green Ext Time (p_c), s	1.1		0.2				1.5			0.1		
Intersection Summary												
HCM 7th Control Delay, s/veh			10.8									
HCM 7th LOS			B									

HCM 7th Signalized Intersection Summary
AM Peak (Existing)

3: Merchant St & 12th Ave
10/17/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	142	39	14	209	194	23	93	19	90	156	97
Future Volume (veh/h)	77	142	39	14	209	194	23	93	19	90	156	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1841	1900	1693	1885	1841	1900	1870	1663	1885	1885	1826
Adj Flow Rate, veh/h	77	142	156	14	209	194	92	93	19	90	156	97
Peak Hour Factor	1.00	1.00	0.25	1.00	1.00	1.00	0.25	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	4	0	14	1	4	0	2	16	1	1	5
Cap, veh/h	521	699	610	484	754	606	556	603	123	625	754	618
Arrive On Green	0.40	0.40	0.40	0.80	0.80	0.80	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	971	1749	1525	978	1885	1515	1144	1507	308	1289	1885	1545
Grp Volume(v), veh/h	77	142	156	14	209	194	92	0	112	90	156	97
Grp Sat Flow(s),veh/h/ln	971	1749	1525	978	1885	1515	1144	0	1814	1289	1885	1545
Q Serve(g_s), s	2.4	2.4	3.1	0.2	1.3	1.5	2.6	0.0	1.8	2.2	2.4	1.8
Cycle Q Clear(g_c), s	3.7	2.4	3.1	3.3	1.3	1.5	5.0	0.0	1.8	3.9	2.4	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	521	699	610	484	754	606	556	0	726	625	754	618
V/C Ratio(X)	0.15	0.20	0.26	0.03	0.28	0.32	0.17	0.00	0.15	0.14	0.21	0.16
Avail Cap(c_a), veh/h	521	699	610	484	754	606	556	0	726	625	754	618
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.7	8.8	9.0	3.6	2.8	2.9	10.5	0.0	8.6	9.9	8.8	8.6
Incr Delay (d2), s/veh	0.6	0.7	1.0	0.1	0.9	1.4	0.6	0.0	0.5	0.5	0.6	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.9	1.0	0.0	0.5	0.6	0.6	0.0	0.6	0.6	0.9	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	10.3	9.5	10.0	3.7	3.7	4.2	11.1	0.0	9.1	10.4	9.5	9.2
LnGrp LOS	B	A	B	A	A	A	B		A	B	A	A
Approach Vol, veh/h		375			417			204			343	
Approach Delay, s/veh		9.9			4.0			10.0			9.6	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		7.0		5.7		5.9		5.3				
Green Ext Time (p_c), s		0.7		1.8		1.2		1.7				
Intersection Summary												
HCM 7th Control Delay, s/veh			8.0									
HCM 7th LOS			A									

HCM 7th Signalized Intersection Summary
 PM Peak (Existing)

3: Merchant St & 12th Ave
 10/17/2025

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	142	39	14	209	194	23	93	19	90	156	97
Future Volume (veh/h)	77	142	39	14	209	194	23	93	19	90	156	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1841	1900	1693	1885	1841	1900	1870	1663	1885	1885	1826
Adj Flow Rate, veh/h	90	165	45	18	265	246	27	109	22	101	175	109
Peak Hour Factor	0.86	0.86	0.86	0.79	0.79	0.79	0.85	0.85	0.85	0.89	0.89	0.89
Percent Heavy Veh, %	3	4	0	14	1	4	0	2	16	1	1	5
Cap, veh/h	477	1089	287	541	754	606	536	604	122	608	754	618
Arrive On Green	0.40	0.40	0.40	0.80	0.80	0.80	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	879	2722	719	1059	1885	1515	1112	1510	305	1267	1885	1545
Grp Volume(v), veh/h	90	104	106	18	265	246	27	0	131	101	175	109
Grp Sat Flow(s),veh/h/ln	879	1749	1692	1059	1885	1515	1112	0	1815	1267	1885	1545
Q Serve(g_s), s	3.3	1.7	1.8	0.2	1.8	2.2	0.7	0.0	2.1	2.5	2.8	2.0
Cycle Q Clear(g_c), s	5.0	1.7	1.8	2.0	1.8	2.2	3.5	0.0	2.1	4.6	2.8	2.0
Prop In Lane	1.00		0.42	1.00		1.00	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	477	699	677	541	754	606	536	0	726	608	754	618
V/C Ratio(X)	0.19	0.15	0.16	0.03	0.35	0.41	0.05	0.00	0.18	0.17	0.23	0.18
Avail Cap(c_a), veh/h	477	699	677	541	754	606	536	0	726	608	754	618
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.2	8.6	8.6	3.2	2.9	2.9	10.1	0.0	8.7	10.2	8.9	8.7
Incr Delay (d2), s/veh	0.9	0.4	0.5	0.1	1.3	2.0	0.2	0.0	0.5	0.6	0.7	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.6	0.6	0.0	0.7	0.8	0.2	0.0	0.8	0.7	1.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	11.1	9.1	9.1	3.3	4.2	4.9	10.3	0.0	9.3	10.8	9.6	9.3
LnGrp LOS	B	A	A	A	A	A	B		A	B	A	A
Approach Vol, veh/h		300			529			158			385	
Approach Delay, s/veh		9.7			4.5			9.4			9.9	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		5.5		7.0		6.6		4.2				
Green Ext Time (p_c), s		0.6		1.3		1.3		2.3				
Intersection Summary												
HCM 7th Control Delay, s/veh				7.7								
HCM 7th LOS				A								

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	41	14	79	0	1	3	31	159	14	15	226	38
Future Vol, veh/h	41	14	79	0	1	3	31	159	14	15	226	38
Conflicting Peds, #/hr	2	0	2	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	90	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	100	100	100	91	91	91	72	72	72
Heavy Vehicles, %	2	0	0	0	0	0	0	7	0	13	2	5
Mvmt Flow	53	18	101	0	1	3	34	175	15	21	314	53

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	627	640	342	617	659	184	367	0	0	190	0	0
Stage 1	382	382	-	251	251	-	-	-	-	-	-	-
Stage 2	245	258	-	367	408	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.23	-	-
Critical Hdwy Stg 1	6.12	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4	3.3	3.5	4	3.3	2.2	-	-	2.317	-	-
Pot Cap-1 Maneuver	396	396	705	405	386	863	1203	-	-	1320	-	-
Stage 1	641	616	-	758	703	-	-	-	-	-	-	-
Stage 2	758	698	-	657	600	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	376	379	704	316	369	861	1203	-	-	1320	-	-
Mov Cap-2 Maneuver	376	379	-	316	369	-	-	-	-	-	-	-
Stage 1	630	606	-	737	683	-	-	-	-	-	-	-
Stage 2	732	678	-	536	590	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v15.34		10.61	1.23	0.42
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1203	-	-	519	646	1320	-	-
HCM Lane V/C Ratio	0.028	-	-	0.331	0.006	0.016	-	-
HCM Control Delay (s/veh)	8.1	-	-	15.3	10.6	7.8	-	-
HCM Lane LOS	A	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.4	0	0	-	-

Intersection												
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	41	18	79	13	5	3	31	159	27	15	226	38
Future Vol, veh/h	41	18	79	13	5	3	31	159	27	15	226	38
Conflicting Peds, #/hr	2	0	2	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	90	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	100	100	100	91	91	91	72	72	72
Heavy Vehicles, %	2	0	0	0	0	0	0	7	0	13	2	5
Mvmt Flow	53	23	101	13	5	3	34	175	30	21	314	53

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	629	654	342	627	666	192	367	0	0	204	0	0
Stage 1	382	382	-	258	258	-	-	-	-	-	-	-
Stage 2	247	273	-	369	408	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.23	-	-
Critical Hdwy Stg 1	6.12	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4	3.3	3.5	4	3.3	2.2	-	-	2.317	-	-
Pot Cap-1 Maneuver	395	389	705	399	383	855	1203	-	-	1304	-	-
Stage 1	641	616	-	751	698	-	-	-	-	-	-	-
Stage 2	757	688	-	655	600	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	370	371	704	307	366	854	1203	-	-	1304	-	-
Mov Cap-2 Maneuver	370	371	-	307	366	-	-	-	-	-	-	-
Stage 1	630	606	-	730	678	-	-	-	-	-	-	-
Stage 2	726	668	-	530	590	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v15.81			15.86		1.15		0.42	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1203	-	-	508	352	1304	-	-
HCM Lane V/C Ratio	0.028	-	-	0.348	0.06	0.016	-	-
HCM Control Delay (s/veh)	8.1	-	-	15.8	15.9	7.8	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.5	0.2	0	-	-

Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	49	2	36	5	5	17	118	291	2	4	204	55
Future Vol, veh/h	49	2	36	5	5	17	118	291	2	4	204	55
Conflicting Peds, #/hr	2	0	2	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	75	75	75	78	78	78	91	91	91
Heavy Vehicles, %	2	0	0	0	0	0	0	1	0	0	1	2
Mvmt Flow	58	2	43	7	7	23	151	373	3	4	224	60

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	944	941	256	913	970	376	285	0	0	376	0	0
Stage 1	263	263	-	677	677	-	-	-	-	-	-	-
Stage 2	681	678	-	236	293	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.12	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	242	265	787	256	255	675	1289	-	-	1194	-	-
Stage 1	742	694	-	446	455	-	-	-	-	-	-	-
Stage 2	440	455	-	772	674	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	200	233	786	211	224	673	1289	-	-	1194	-	-
Mov Cap-2 Maneuver	200	233	-	211	224	-	-	-	-	-	-	-
Stage 1	739	692	-	394	402	-	-	-	-	-	-	-
Stage 2	369	401	-	723	671	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v24.09		15.5	2.34	0.12
HCM LOS	C	C		

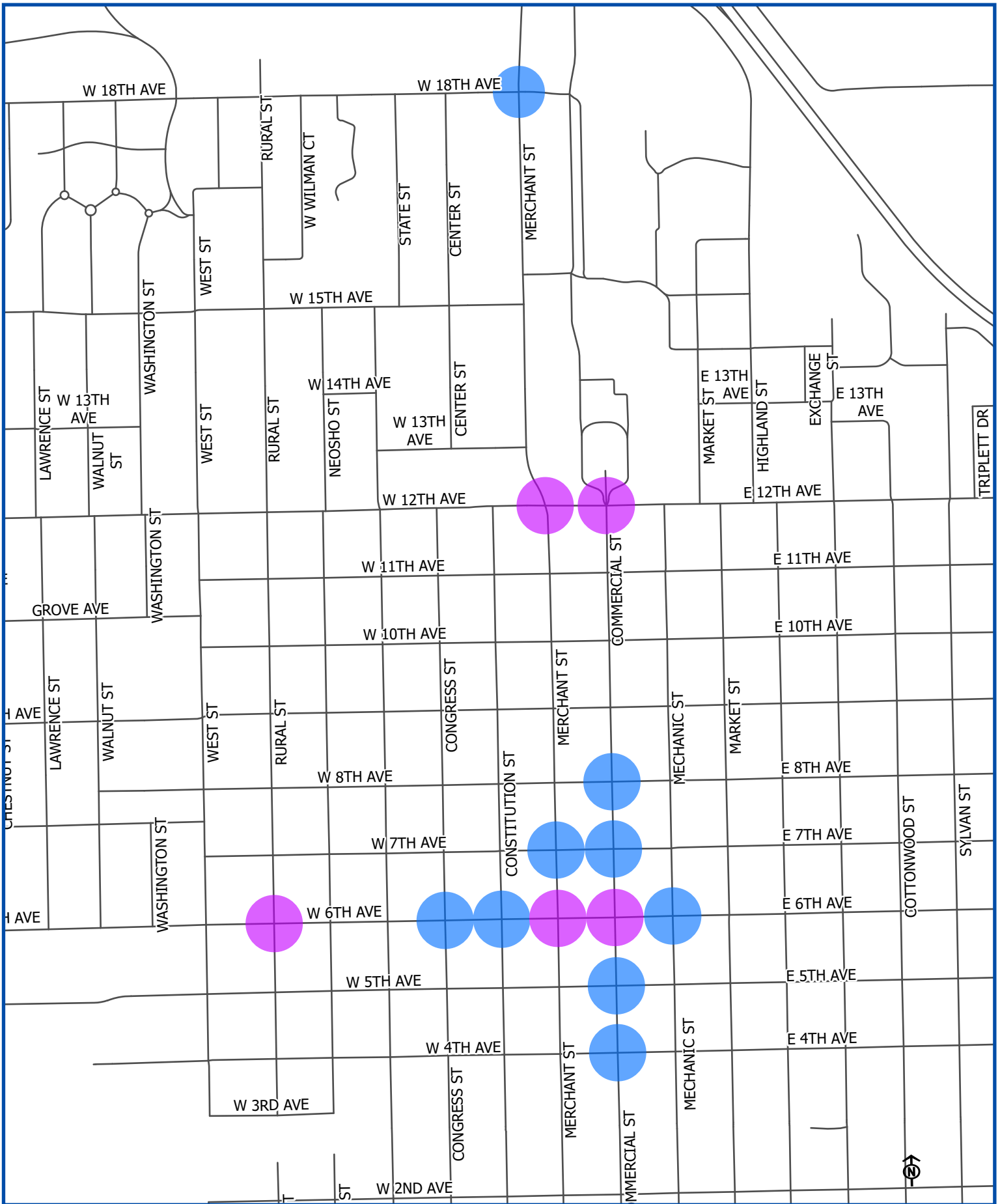
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1289	-	-	291	379	1194	-	-
HCM Lane V/C Ratio	0.117	-	-	0.356	0.095	0.004	-	-
HCM Control Delay (s/veh)	8.2	-	-	24.1	15.5	8	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	1.6	0.3	0	-	-

Intersection												
Int Delay, s/veh	9.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	49	20	36	57	23	17	118	291	54	4	204	55
Future Vol, veh/h	49	20	36	57	23	17	118	291	54	4	204	55
Conflicting Peds, #/hr	2	0	2	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	75	75	75	78	78	78	91	91	91
Heavy Vehicles, %	2	0	0	0	0	0	0	1	0	0	1	2
Mvmt Flow	58	24	43	76	31	23	151	373	69	4	224	60

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	956	1008	256	957	1004	410	285	0	0	442	0	0
Stage 1	263	263	-	710	710	-	-	-	-	-	-	-
Stage 2	693	745	-	247	293	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.12	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	238	242	787	239	244	646	1289	-	-	1128	-	-
Stage 1	742	694	-	427	440	-	-	-	-	-	-	-
Stage 2	434	424	-	761	674	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	175	213	786	179	214	645	1289	-	-	1128	-	-
Mov Cap-2 Maneuver	175	213	-	179	214	-	-	-	-	-	-	-
Stage 1	739	692	-	377	388	-	-	-	-	-	-	-
Stage 2	340	374	-	691	671	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v32.85		44.46	2.08	0.12
HCM LOS	D	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1289	-	-	251	214	1128	-	-
HCM Lane V/C Ratio	0.117	-	-	0.499	0.603	0.004	-	-
HCM Control Delay (s/veh)	8.2	-	-	32.8	44.5	8.2	-	-
HCM Lane LOS	A	-	-	D	E	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	2.6	3.4	0	-	-



DATA NOT SURVEY ACCURATE



T.E.A.P. Study Findings

- NOT WARRANTED
- WARRANTED



DATA NOT SURVEY ACCURATE

Staff Recommendations

- Remove from system
- Remain in service
- Stop Sign Modifications
- X Remove from consideration

← 402 Congress St
Emporia, Kansas

🕒 See more dates



← 423 Congress St
Emporia, Kansas

🕒 See more dates



Title: Strategic Direction Session One

Agenda Date: March 4, 2026

Presented By: Tayler Wash, Assistant City Manager

Background:

In 2024, the City Commission adopted the Strategic Plan for 2024–2026. Since that time, our community has experienced notable changes, and several new commissioners have joined the Commission. Staff is seeking to work with the Commission to revisit and refine the City’s strategic priorities and objectives, ensuring they reflect current community needs and focus on areas where the City can meaningfully move forward.

Discussion:

The 2024 plan was called a “Strategic Plan,” which implied a comprehensive roadmap for the entire community. In practice, it served more as a guide for City staff to prioritize efforts. As we move forward, the intent is to shift toward a Strategic Direction, which is a concise set of high-level objectives under each strategic priority.

This document will:

- Focus on areas where the City has influence through policy, funding, operations, systems, or programs.
- Provide guidance for staff decisions and resource allocation without attempting to capture every action or project.
- Allow the Commission to set emphasis and direction while leaving operational details to staff.

During the upcoming session, the Commission will review the current strategic priorities, discuss whether they remain relevant, and begin identifying the high-level objectives that will shape the City’s focus for 2026–2028.

Attachments:

Strategic Direction Session 1 Slides

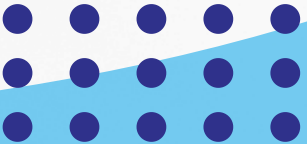
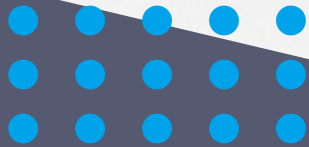
2024-2026 Strategic Plan

Potential Strategic Priorities List

STRATEGIC DIRECTION 2026-2028

*GUIDING COMMISSION PRIORITIES
FOR A THRIVING EMPORIA*

Session One





STRATEGIC PLAN VS. STRATEGIC DIRECTION

In 2024, the City adopted a Strategic Plan intended to guide priorities from 2024–2026. While it outlined goals and objectives, the plan was largely aspirational, broad, and difficult to translate into actionable work. Many items were outside the City’s direct control, making it hard to measure progress or hold ourselves accountable.

To ensure our next document drives real, meaningful outcomes, we are transitioning to a Strategic Direction.



STRATEGIC PLAN

A traditional strategic plan sets broad goals and long-term aspirations for an entire city. It often includes many objectives, measures, and initiatives to guide organizations and communicate priorities to the community. Strategic plans are valuable for vision-setting, but can be difficult to execute if they try to cover everything.



STRATEGIC DIRECTION

A strategic direction focuses on a smaller set of high-level priorities that the City can meaningfully move forward on. It emphasizes actionable focus, accountability, and alignment across departments. Rather than listing everything we do, it guides decisions, resource allocation, and staff efforts toward measurable impact.

WHAT DID WE LEARN FROM THE 2024-2026 PLAN?

THINGS IN OUR CONTROL WORKED WELL



SOME THINGS WERE TOO BROAD OR ASPIRATIONAL



LONG LISTS OF OBJECTIVES=DIFFICULT TO SUSTAIN



FRAMING MATTERS



MOVING TOWARDS STRATEGIC DIRECTION



2024 Strategic Plan	2026 Strategic Direction
Broad list of goals and objectives, many outside the City's direct control	Focus on what the City can meaningfully move – through policy, funding, operations, enforcement, systems, or programs
Exhaustive coverage of all ideas and aspirations	Prioritization over exhaustiveness – guidance for emphasis, not a list of everything we do
Objectives often lacked actionable clarity for departments	Clarity for action – each direction guides departmental decisions, resource allocation, and alignment
Success often measured by intent or perception rather than impact	Accountability and measurability – success tied to tangible outcomes, not aspirational hopes

STRATEGIC PRIORITIES

Strategic priorities are the high-level themes that guide our work as a City. They aren't a list of every action or project; they're the areas where we focus our energy, resources, and decision-making. The priorities shape departmental alignment, guide resource allocation, and help us measure meaningful progress over time

The current strategic priorities are listed below. Do these still represent what matters most to the City today? Should we adjust, remove, or add any priorities to better reflect where we want to focus over the next two years?

*RESPONSIBLE
STEWARDSHIP*

*COMMUNITY
GROWTH*

*QUALITY OF
LIFE*

*ENGAGE & INFORM
CITIZENS*





2024 STRATEGIC PLAN



City of Emporia Strategic Plan 2024-2026

Executive Summary

The Strategic Plan for the City of Emporia, Kansas outlines our commitment to responsible stewardship, community growth, quality of life, and citizen engagement. Informed by insights gathered from community and employee surveys conducted late 2023 and early 2024, this plan reflects our dedication to meeting the current needs of Emporians while preserving resources for future generations.

Strategic Priorities

1. [Responsible Stewardship of Resources](#) efficiently managing and allocating funds, resources, and assets to meet current needs without compromising the ability of future generations of Emporians to meet their needs.
2. [Community Growth](#) Fostering a community that is conducive to population growth by either maintaining the current population level or ensuring a 0.5% yearly increase. Improving the overall appeal of our community to attract newcomers and retaining current residents.
3. [Quality of Life](#) maintaining a high quality of life for residents through exceptional provision of essential services and enhanced livability.
4. [Engage and Inform Citizens](#) engaging the public, offering clear information and educational resources on community matters. Working together to foster understanding and partnership to address local challenges and promote community well-being.

Implementation

To achieve these priorities, we will focus on objectives that emphasize:

- Efficient resource management to ensure sustainability and long-term viability.
- Initiatives to attract newcomers and retain current residents, enhancing community appeal.
- Continuous improvement of essential services to enhance quality of life for all residents.
- Transparent communication and active engagement to inform and involve citizens in decision-making processes.

The Strategic Plan for the City of Emporia, Kansas represents our commitment to building a thriving and sustainable community for current and future generations. By working together and leveraging the insights gathered from our community and employees, we are confident in our ability to realize our collective aspirations and ensure a bright future for all Emporians.

Vision Statement

“The City of Emporia is a thriving community where every citizen enjoys a high quality of life. Committed to excellence and good stewardship of our resources, we provide quality essential services and foster an environment where families and businesses flourish.”

Organizational Values

<i>Transparency</i>	<i>Openness in operations and decision-making processes, providing clear and accessible information to the public about government actions, policies, and finances.</i>
<i>Collaboration</i>	<i>Working together with stakeholders, residents, businesses, and other governmental agencies to address community needs, solve problems, and achieve common goals through shared efforts.</i>
<i>Efficiency</i>	<i>Optimizing resources and processes to achieve desired outcomes with minimal waste, ensuring that services are delivered in a timely and cost-effective manner.</i>
<i>Accountability</i>	<i>Holding municipal officials and employees responsible for their actions, decisions, and performance and ensuring that actions are taken in the best interests of the community.</i>
<i>Equity</i>	<i>Ensuring fair and impartial treatment of all residents, regardless of their background, socioeconomic status, or demographics, and striving to eliminate disparities, providing equal access to opportunities and services for everyone.</i>
<i>Continuous Improvement</i>	<i>Committing to ongoing evaluation, learning, and adaptation to enhance the effectiveness and responsiveness of municipal operations and services, striving for excellence and innovation in serving the evolving needs of the community.</i>



RESPONSIBLE STEWARDSHIP



Responsible Stewardship of Resources

Effectively managing and allocating funds, resources, and assets to meet current needs without compromising the ability of future generations of Emporians to do the same.

Objective 1: Invest in sustainable city infrastructure and assets.

Goals	
1.A	Improve condition of streets, curbs, sidewalks, and bridges on neighborhood and major streets
1.A.1	Conduct a Pavement Condition Index Analysis of All City Maintained Streets
1.B	Conduct an evaluation/master plan for Water Treatment Plant
1.C	Conduct an evaluation/master plan for Wastewater Treatment Plant
1.D	Underground Utilities Analysis or Evaluation
1.E	Increase adequacy of stormwater and drainage infrastructure
1.F	Conduct an evaluation/master plan for all City owned buildings

Objective 2: Invest in sustaining and developing our workforce.

Goals	
2.A	Maintain compensation and benefit plans that meet the needs of our workforce.
2.B	Develop and adhere to a strategic plan that guides the work of the organization.
2.C	Increase recruitment efforts and onboarding activities to increase the workforce and retain new employees.
2.D	Enhance internal communication, visibility of leadership, and collaboration amongst all departments.
2.E	Develop an employee recognition program.
2.F	Host regular morale boosting activities for employees and their families.
2.G	Identify and maintain opportunities for employees to express their opinions.
2.H	Invest in tools and processes that alleviate challenges faced by the workforce.
2.I	Successfully implement the pay-for-performance plan.
2.J	Increase opportunities for leadership development and team-building training for employees.
2.K	Increase opportunities for job specific training.
2.L	Work to develop clear paths of advancement, especially for specialized divisions.

Objective 3: Budget City finances responsibly, efficiently, and transparently.

Goals	
3.A	Maintain reserves for all funds at the level designated by policy
3.B	Ensure that the finalized budget and the budget process are accessible for the community
3.C	Implement the Tyler ERP to increase efficiency and streamline processes
3.D	Develop an enhanced Capital Improvement Plan process



COMMUNITY GROWTH

Community Growth

Fostering a community that is conducive to population growth by either maintaining the current population level or ensuring a 0.5% yearly increase. Improving the overall appeal of our community to attract newcomers and retain current residents.

Objective 4: Boost local employment opportunities and workforce viability.

Goals	
4.A	Collaborate with stakeholders to increase the number of well-paying jobs in the community.
4.B	Foster collaborative programs and partnerships with local education institutions to cultivate a skilled workforce that aligns with the needs of our community and industries.
4.C	Cultivate a thriving environment for grassroots entrepreneurial growth by fostering collaborative programs and partnerships with local business organizations and the broader community.

Objective 5: Increase business and industry growth.

Goals	
5.A	Encourage the circulation of capital within the community to bolster local economic resilience and prosperity.
5.B	Promote the longevity and expansion of our existing industrial partners through proactive support and collaboration.
5.C	Offer attractive incentives to encourage the establishment of new industrial projects.
5.D	Allocate resources and support towards the development of cycling and disc golf as industries within our community.
5.E	Explore the Emporia Municipal Airport as a potential driver of increased economic development.

Objective 6: Efficiently expand housing options.

Goals	
6.A	Encourage and invest in the development of new viable housing opportunities.
6.B	Promote revitalization and renovation of the existing housing stock.
6.C	Offer targeted incentives and assistance to stimulate housing development.
6.D	Strengthen code enforcement to maintain property standards and prevent deterioration or uninhabitability.
6.E	Streamline the permitting and licensing process to expedite developer progress.



QUALITY OF LIFE



Quality of Life

Maintaining a high quality of life for residents through exceptional provision of essential services and enhanced livability.

Objective 7: Increase resident satisfaction with delivery of essential services.

Goals	
7.A	Maintain an overall high feeling of safety in the community.
7.B	Maintain an overall high level of satisfaction with the quality of our drinking water
7.C	Increase resident satisfaction with street maintenance (including infrastructure, snow removal, etc.)
7.D	Increase resident satisfaction with animal control efforts.
7.E	Maintain an overall high level of satisfaction with Fire Department services.
7.E.1	Make considerable progress on the construction of the new fire station.
7.F	Maintain an overall high level of satisfaction with trash and recycling services.
7.G	Increase adequacy of accessibility for pedestrians with disabilities.
7.H	Maintain or increase the level of satisfaction with City parks and facilities.

Objective 8: Increase overall livability in our community.

Goals	
8.A	Invest in and support efforts to improve the quality of retail and shopping options in Emporia.
8.B	Invest in and support efforts to improve the quality and diversity of restaurants in Emporia.
8.C	Invest in and support efforts to improve the quality of the Emporia Public Library.
8.D	Invest in and support efforts to improve the quality of Downtown Emporia.
8.E	Invest in and support efforts to improve the quality of the Emporia Recreation Center.
8.F	Invest in the development of improved pedestrian and bike infrastructure.
8.G	Offer support and assistance to community organizations to facilitate high-quality community events.
8.H	Improve city enforcement of mowing and weed ordinances.



ENGAGE AND INFORM CITIZENS

Engage and Inform Citizens

Engaging the public, offering clear information and educational resources on community matters. Working together to foster understanding and partnership to address local challenges and promote community well-being.

Objective 9: Maintain high standards of communication between the City and residents.

Goals	
9.A	Enhance satisfaction with efforts to keep residents informed.
9.B	Enhance satisfaction with usefulness and accessibility of information on City website.
9.C	Enhance social media presence and engagement.

Objective 10: Amplify community engagement and interaction.

Goals	
10.A	Maintain a high level of satisfaction with customer service from the City.
10.B	Empower and enhance the functionality of Boards and Commissions.
10.B.1	Increase the amount and diversity of membership for Boards and Commissions.
10.C	Conduct outreach events and initiatives to cultivate a meaningful rapport between all residents and the municipality.
10.D	Continue to administer community surveys.

Objective 11: Establish and sustain programs and initiatives aimed at educating residents about the functions of their government.

Goals	
11.A	Sustain and enrich the Citizen's Academy.
11.B	Establish and maintain the Civic Leadership Institute.
11.C	Solicit public input for ideas on preferred avenues to educate about government processes.



IMPLEMENTING THE PLAN



Implementing the Plan and Evaluating Our Progress

Where do we start? Outlined below are the steps that we should take to ensure that the plan is viable.

1. **Communicate the Plan:** Ensure that all stakeholders understand the strategic plan, including the objectives and goals. Clear communication is essential for gaining buy-in and alignment.
2. **Assign Responsibilities:** All in all, the strategic plan is everyone's responsibility. However, every member of the organization should be able to see where they fit into this plan and how the work they do contributes to progress in each area.
3. **Monitor Progress:** We should work to not just regularly monitor progress but also prioritize sharing said progress with internal and external stakeholders.
4. **Adapt and Adjust:** This plan should be a living document that grows and evolves as the needs and circumstances of our community do.
5. **Celebrate Successes:** Recognize and celebrate achievements and milestones along the way to keep morale high and maintain momentum.

How do we measure our progress?

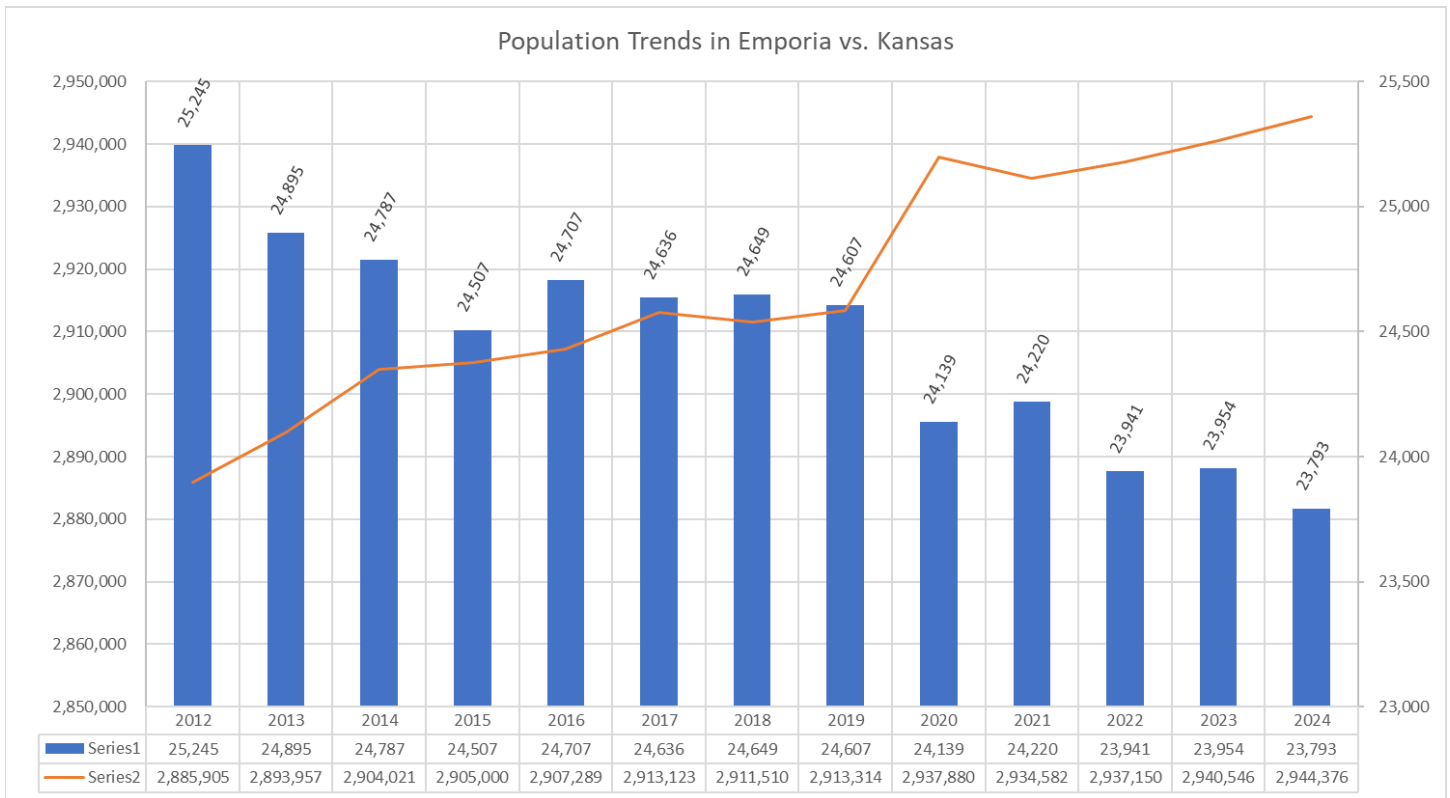
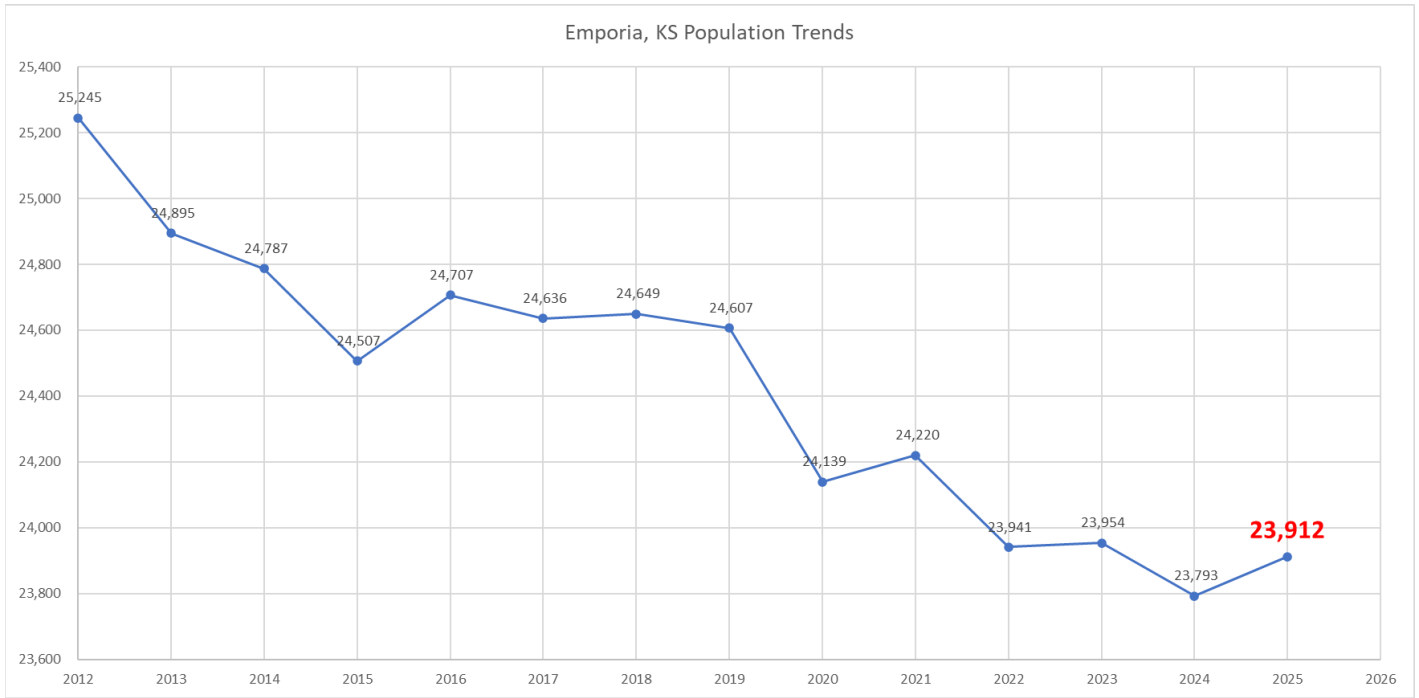
This strategic plan should serve as the compass for the City's decision-making processes and priorities. Our primary goal should be to ensure that our actions and choices are in harmony with the objectives outlined within it. To gauge our progress effectively, our initial focus lies in aligning our decision-making practices with the principles and goals set forth in this plan. This includes aligning every item on our Commission Agendas with an objective from this plan. Furthermore, updates regarding this plan will be based on the actions that have been taken in relation to each objective.

However, the true measure of progress goes beyond mere alignment; it stems from the data points that informed the development of this plan. We rely on insights gleaned from sources such as the community survey, the employee satisfaction survey, and anecdotal observations from the Commission. These sources provide invaluable perspectives on the needs, aspirations, and concerns of our community members, as well as the internal dynamics and morale of our workforce.

By anchoring our progress assessment in these foundational elements, we ensure that our strategic endeavors remain firmly rooted in the realities and aspirations of those we serve.

Appendix

Appendix A: Emporia, KS Population Trends 2012-2024



List of Potential Strategic Priorities to Consider:

1. **Responsible Stewardship** – Managing City resources wisely, ensuring sustainability, accountability, and efficient use of funds, assets, and staff.
2. **Community Growth** – Supporting economic development, population stability, housing, and workforce opportunities that align with community needs.
3. **Quality of Life** – Enhancing livability, public safety, amenities, and services that contribute to residents’ overall well-being.
4. **Engage and Inform Citizens** – Ensuring transparent communication, meaningful public engagement, and resident education about government.
5. **Infrastructure & Mobility** – Investing in roads, bridges, sidewalks, utilities, and transit systems to ensure safe and reliable movement and services.
6. **Economic Resilience** – Strengthening local business, supporting innovation, and diversifying revenue and industry to withstand economic shifts.
7. **Public Safety & Emergency Preparedness** – Ensuring effective police, fire, and emergency services, and preparing for disasters or emergencies.
8. **Environmental Sustainability** – Promoting responsible environmental practices, conservation, and climate resiliency across City operations.
9. **Equity & Inclusion** – Ensuring fair access to services, resources, and opportunities for all residents, regardless of background.
10. **Health & Wellness** – Supporting initiatives that improve public health, recreation, and mental and physical well-being in the community.
11. **Housing & Neighborhood Vitality** – Encouraging quality, affordable, and diverse housing options and supporting vibrant neighborhoods.
12. **Technology & Innovation** – Leveraging technology to improve efficiency, service delivery, and civic engagement.
13. **Arts, Culture, and Community Identity** – Supporting cultural programs, public art, and initiatives that strengthen local identity and civic pride.
14. **Regional Collaboration & Partnerships** – Building cooperative relationships with other governments, organizations, and institutions to achieve shared goals.
15. **Organizational Excellence** – Strengthening staff capacity, internal systems, training, and leadership to deliver high-quality services.
16. **Fiscal Responsibility & Financial Sustainability** – Maintaining long-term financial stability through disciplined budgeting, reserves, and investment strategies.
17. **Tourism & Visitor Engagement** – Promoting attractions, events, and experiences that draw visitors and support the local economy.

18. **Innovation in Service Delivery** – Continuously improving processes and approaches to meet evolving community needs efficiently.
19. **Community Safety Beyond Policing** – Addressing traffic, fire, environmental, and social hazards that affect resident safety.
20. **Youth & Education Engagement** – Partnering with schools and programs to foster education, skills, and opportunities for young residents.
21. **Resilience & Disaster Preparedness** – Ensuring the City can anticipate, respond to, and recover from natural or manmade crises.
22. **Customer Service & Community Experience** – Ensuring residents, businesses, and visitors have positive, responsive interactions with City staff and services, emphasizing accessibility, problem-solving, and satisfaction.

Write your own or edit any of the above to impart more of what you're thinking we need: